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CONTENTS

FOREWORD	7
SOCIOECONOMIC CHALLENGES OF THE FUTURE WORLD	9
CHALLENGES FACING THE EDUCATIONAL SYSTEM, SCHOOL EFFECTIVENESS AND SCHOOL PRINCIPALS IN CROATIA Dijana Vican, Nikša Alfirević, Jurica Pavičić	11
MUNICIPAL MERGERS: THEORETICAL CONSIDERATIONS, PRACTICAL EVIDENCE AND POTENTIAL IMPLICATIONS Primož Pevcin	31
POST-WAR RECONSTRUCTION AND DEVELOPMENT IN CAMBODIA AND THE DESTRUCTIVE ROLE OF MICROCREDIT Milford Bateman	45
THE INTERPRETATION OF THE DUTY OF CARE BY LENDERS TO THE POOR IN DEVELOPED AND DEVELOPING COUNTRIES: ANTITHETICAL APPROACHES Lesley Sherratt	75
THE CHALLENGES OF ENVIRONMENTAL ETHICS IN GLOBAL WORLD: A PHILOSOPHICAL-ETHICAL VIEW Anton Jamnik	93
ECONOMICS TRACK	125
SPECTRAL ANALYSIS OF MACROECONOMIC SERIES FOR CROATIA Daniel Tomić, Saša Stjepanović	127
FINANCE AND ACCOUNTING TRACK	145
EVALUATING ALTERNATIVE SOLUTIONS FOR A NEW FINANCIAL SYSTEM Ines Karagianni Ladasic	147
WEIGHTED MONETARY AGGREGATES FOR CROATIA Alen Belullo, Moris Ivančić	175
MEASUREMENT AND MITIGATION OF COUNTRY RISK: THE ROLE OF QUANTITATIVE AND QUALITATIVE FACTORS, INSURANCE MARKET TRENDS Máté Pap, Dániel Homolya	193

A TEST OF CAPM IN SHARE VALUATION: THE CASE OF CROATIAN STOCK EXCHANGE Dean Učkar, Manuel Benazić, Anita Radman Peša	213
TOURISM TRACK	253
CHANGES IN VAT RATE AND LIQUIDITY INDICATORS IN THE HOSPITALITY AND CATERING INDUSTRY IN THE REPUBLIC OF CROATIA Marica Klarić Pisačić, Luka Mladineo	255
TOURISM AND HOSPITALITY PROFESSIONALS' CROSS-CULTURAL COMMUNICATION COMPETENCE: TOURISTS' AND TOURISM PROFESSIONALS' PERSPECTIVES Moira Kostić Bobanović, Maja Novak	275
THE ROLE OF ORGANIZATIONAL CULTURE IN TOURIST DESTINATION DEVELOPMENT Antonela Frank Medica, Danijela Križman Pavlović	305
SUSTAINABLE DEVELOPMENT POTENTIAL OF FORTIFIED HERITAGE IN CROATIA Kristina Afrić Rakitovac, Nataša Urošević	327
ANALYZING CSR RELATED ISSUES IN THE HOTEL INDUSTRY - A SUPPLY CHAIN APPROACH Kadriye Cigir	353
MARKETING AND MANAGEMENT TRACK	385
MEASURING AND MANAGING EMPLOYEE ENGAGEMENT - THE PATH TO 2050 Sabina Lacmanović	387

FOREWORD

The global business environment is facing many significant challenges, and this was the guideline for our 8th International Scientific Conference "Future World by 2050", held in Pula, Croatia from 1st to 3rd June, 2017. The aim was to bring together researchers, scientists, and students to exchange and share their experiences, views, new ideas, and research results on all aspects of Economics, and to discuss the practical challenges encountered and the solutions proposed.

The focus of this eighth conference was to explore how economics, as a science, will face global challenges in the future; challenges such as *poverty, aging population, (un)employment, (dis)integration, environmental catastrophes, innovations, etc.* Through six sessions: *Socioeconomic Challenges of the Future World; Economics; Finance and Accounting; Marketing and Management; Tourism; and Innovation and Competitiveness*, the participants discussed the presented research findings, and we are sure that the presented ideas and suggestions were priceless to all participants. Our thoughts were also inspired by appreciated keynote speeches delivered by Prof. Soumitra Sharma, emeritus professor from Juraj Dobrila University of Pula, Dr. Nawazish Mirza from S P Jain School of Global Management, Dubai Campus, UAE, and Dr. Daphna Kariv from School of Business, Administration, the College of Management Academic Studies (COMAS), Rishon Lezion, Israel, which gave participants educative and valuable insights into the necessary considerations on the present that will be reflected in the future as well. Two panel discussions on future business and innovation opportunities were dedicated to both practice and examples from different countries, and gave us the opportunity to bring science closer to the local community.

Huge effort was given to the selection process of received papers. Sixteen papers were selected altogether to be published in this Conference Proceedings Book; other selected papers will also be published in one of our scientific journals: "Economic Research" and "Review of Innovation and Competitiveness". These Proceedings represent the work of contributors to the 8th International Scientific Conference "Future World by 2050", and the selected papers reflect the truly global research of our future world. On behalf of the Program and Organizing Committee, we would like to thank all the authors, keynote speakers and panelists. Their high competence, enthusiasm, dedication and knowledge enabled us to successfully complete the conference and prepare these Conference Proceedings in which, we are sure, you will find important topics and issues that will give you new insights and a glimpse into the future.

Editors

Danijela Krizman Pavlović, Morena Paulišić, Katarina Kostelić

SOCIOECONOMIC CHALLENGES OF THE FUTURE WORLD

CHALLENGES FACING THE EDUCATIONAL SYSTEM, SCHOOL EFFECTIVENESS AND SCHOOL PRINCIPALS IN CROATIA

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ABSTRACT

This paper explores the theoretical determinants and the results of an empirical research, related to the opinion of the Croatian public on the quality of the national educational system. In addition, an assessment of the role of school principals in the Croatian educational system has been discussed from the viewpoint of challenges, related to the professionalization of their role. The paper is based on a nationally representative survey of public opinion, based on the Computer-Aided Telephone Interviewing. Its results show an overestimation of the national educational system's effectiveness, as compared to the results of the international benchmarking studies. It should also be noted that the Croatian public negatively perceives the influence of the majority of institutional actors on the educational system, and regards the school principals as 'political actors' (and not as an independent profession).

Keywords: Educational system; School principals; Quality of education; Public opinion; Croatia

JEL Codes: I25; I28

1. INTRODUCTION

With the OECD Programme for International Student Assessment (PISA) results obtained in the 2015 survey cycle, the public discourse in Croatia has critically received the 37th place on the global PISA scoreboard, both regarding the scientific, reading and mathematical skills, as well as students' scientific beliefs, engagement and motivation. Nevertheless, another PISA finding has not been reported widely: namely that 24.4% of the students with low socio-economic status are characterized by high educational achievements, which is comparable to, e.g. Lithuania and Sweden. On the other hand, based on students' self-reporting, Croatia is in the first place as regards to the differences among advantaged and disadvantaged school populations. Those with the advantaged socio-economic background are more likely (with a difference of more than 25%) to attend at least one science class, compared to the OECD school average (OECD, 2016a).

The media highlighted the fact that the overall score for Croatian 15-year-old students, tested by the PISA survey, has decreased in science, which has been interpreted as a disaster of the national educational policy. The fact is that Croatian education has many weaknesses and still lags behind the OECD average (OECD, op.cit.), which requires a thorough and systematic improvement of the educational system. According to the results achieved, Croatia is comparable to Austria, Jordan, the Netherlands and Sweden, while the worst performance is found in Australia, the Czech Republic, Greece, Hong Kong (China), Hungary, Iceland and New Zealand (OECD, 2016b).

The global PISA experience shows that the governance at school level, i.e. the work of school principals (head teachers) and their autonomy are highly correlated to students' educational outcomes in science (OECD, 2016c). The same applies to the influence of teachers, who are expected to collaborate and create a positive school climate. This can be linked to other studies, emphasizing the need for interactive learning and transformation of traditional teaching practices in South East Europe (Sahlberg and Boce, 2010).

A smaller, but still positive influence is exerted by the local/regional educational authorities and policies, while the influence on school effectiveness by the school boards is found to be mostly negative, especially when they are allowed to influence school admissions. It is interesting that, as a rule, *centralized decision-making (by the national education authority)*, is, in general, *highly negatively correlated to students' school performance in science* (op. cit.). This OECD finding clearly speaks in favor of decentralization of the school governance system and the need for strengthening and professionalizing the principals' role in the school system. The same applies to the school boards, which should transform into the actors supporting the principals, instead of serving as an 'extended arm' of the regional and national education authorities.

Although, it should be noted that OECD recommendations could be challenged from the methodological/theoretical viewpoint so as to improve their accuracy

(Creemers, 2006). On the other hand, the entire notion of international benchmarking in education could be viewed as socially, politically and/or ideologically constructed (Sjøberg, 2015). Nevertheless, the policy impact of international student assessment studies is a tangible and politically relevant reality (Breakspear, 2012; Meyer & Benavot, 2013), calling for additional research and independent analysis (Anderson et al., 2007). In this study, *the PISA results are used as a (more or less objective) benchmark for comparison with the public perception, as analyzed on a nationally representative sample of households in Croatia.*

The OECD PISA study is selected due to its popularity in mass media, although other international studies, such as the OECD Education at Glance (OECD, 2016d), or Eurydice Key Data Series publications¹ prove to be influential as well (Scheerens, 2004). In addition, the choice of the PISA study is based on qualitative findings by Grek (2009), who argues that the PISA results are often used as the 'externalized excuse' for the policy interventions, as well as a signal to the EU (and other multilateral organizations) on the agenda of modernization (in the sociological sense).

2. INTERNATIONAL COMPARATIVE STUDIES AND PUBLIC POLICIES IN EDUCATION

The PISA study in 2000 has already had extensive influence on, e.g. Danish and German public policies in education (which is usually referred to as the 'PISA shocks'), as well as on Japanese policies after the 2003 survey cycle (Breakspear, 2012). Nevertheless, it is interesting that the U.S. responded to its poor national educational rankings, implied by the PISA 2000 cycle results, only in 2010. Martens and Niemann (2013) argue that two processes are relevant for the policy outcomes. The *public perception of the comparative national position, versus the actual results obtained*, creates the initial motivation for policy change, while the actual momentum has to be maintained by the adequate 'frame', which highlights the issue of inadequate education as a source of risk for national economic competitiveness, cultural development and prestige. Education, as a potential source of economic growth and social costs, is especially emphasized by the OECD (2010). Nevertheless, the other motives for a policy intervention should not be underestimated either. In the specific, Central and Eastern European (CEE) context, the educational policy has been focusing on 'deideologization' and the establishment of modern and efficient governance systems (Halasz, 2015). This included the re-establishment of some traditional educational institutions (such as gymnasias in the Croatian secondary education) and the return to 'traditional values'. Unfortunately, such policy trends have 'decoupled' education from the applied social role of stimulating economic and social development, leading

¹ All data from the series freely available on the following Eurydice webpage: http://eacea.ec.europa.eu/education/Eurydice/key_data_en.php.

to educational outcomes which emphasize knowledge of facts instead of their application and skill development (Halasz, op. cit.).

The policy consequences are visible even today, with low PISA scores, since the PISA tests emphasize problem-based and applied thinking, considered to be essential for life-long learning and ensuring an active role of an individual in the economy and society. Nevertheless, it is interesting to note that many of the educational reforms in the 1990s might have followed (another) 'ideological route', which can be inferred from the relatively high scores of the Czech Republic, Slovenia, and some other CEE countries in the early international comparative surveys, such as those conducted by the International Association for the Evaluation of Educational Achievement (Strajn, 2008).

3. RESEARCH OBJECTIVE AND METHODOLOGY

This paper deals only with the *public perception of the Croatian national educational system and the role of principals in school effectiveness*, which prove to be only a part of the entire system, required for the successful policy intervention. Other studies and political analyses, which may only partially belong to the field of education, are required to obtain the overall assessment of the Croatian educational system and the initiatives for its reform.

The well-established Computer-Aided Telephone Interviewing (CATI) methodology (Pavičić, Alfirević, Žnidar & Sorić Zelinšček, 2009) was used to create the weighted, nationally representative sample of Croatian households. The weights were derived from national census and used so as to achieve national representation according to the criteria of age, gender, education and geographical location. In order to avoid the influence of political events, the data collection was conducted in multiple waves throughout 2016, with the final sample consisting of 591 respondents.

A simple questionnaire was used as a research instrument. It consisted of several items, related to: (a) the perceived effectiveness of the Croatian educational system and its results (in terms of quality of academic training, education and preparation for the labor market); (b) the perceived drivers of educational effectiveness, formulated in terms of individual and institutional actors; (c) a comparison with the perceived results of other national educational systems and (d) the perception of the role of school principals within the educational system.

The data, collected by previously trained interviewers, were directly entered into the SPSS (Statistical Package for Social Sciences) software, after the completion of the individual wave of telephone interviews. The same software package has been used by authors to produce the statistical analysis and results, discussed in the following section of the paper.

The further discussion on the empirical results will be based on the publicly available OECD PISA reports, which will be considered as (relatively) objective measures of national educational effectiveness. Those will be compared with the opinion of the Croatian public, based on a nationally representative sample of households. Therefore, such a comparison does not necessarily constitute a completely reliable empirical assessment of the Croatian educational system, but rather, provides an initial result, which could be useful both for the educational policy discussion, as well as for guiding future educational research.

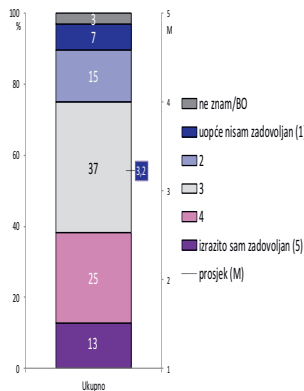
4. RESULTS OF EMPIRICAL RESEARCH

The survey conducted was focused on the subjective, comparative evaluation of the Croatian school system and the perceived drivers of school effectiveness, including the role and the autonomy of school principals. The respondents were asked to conduct a summative assessment of the entire school system, excluding institutions of higher education.

4.1. PERCEIVED SCHOOL EFFECTIVENESS

The *perceived effectiveness of Croatian schools can be described as an average (Mean = 3.2 on the standardized, five-point Likert scale)*, which is contrasted to the media reports, often describing the performance of the Croatian educational system as 'tragic', as well as to the overly optimistic government reports (see Figure 1.). The public perception seems to be rather balanced, which follows the patterns of the PISA 2015 report and represents a relevant starting point for a comprehensive educational reform.

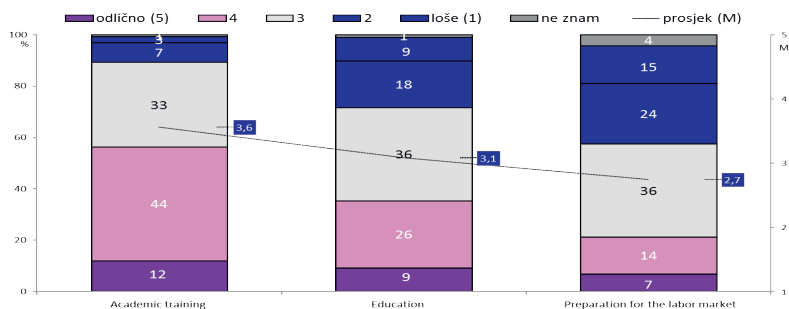
Figure 1.: Perceived effectiveness of the Croatian educational system



Source: Research results.

The authors were further interested in the perception of Croatian educational performance according to different functional perspectives of the educational system results (i.e. training, education and preparation for the labor market). The Croatian public opinion seems to confirm the average grades that have been previously presented, as well as the belief that practical competences, related to the labor market success, are not being adequately developed in the educational system. The academic training (conceptualized in terms of the liberal academic tradition) has been evaluated as average (Mean = 3.6), while the educational function has been assessed as somewhat poorer, although still at the average level (Mean = 3.1), which can be associated with social problems and challenges in the national landscape, still characterized by the political and cultural transition (see Figure 2.).

Figure 2.: Perceived effectiveness of the results produced by the Croatian educational system

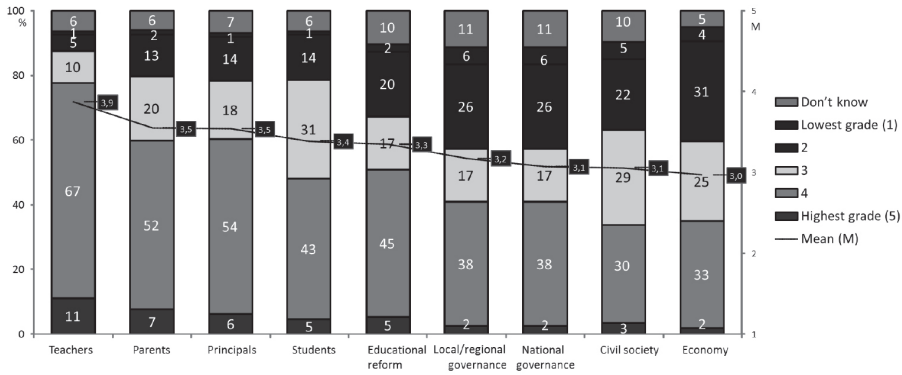


Source: Research results.

4.2. PERCEIVED DRIVERS OF SCHOOL EFFECTIVENESS

Since it is exceptionally difficult to provide an adequate explanation of the school effectiveness theory to the general public being surveyed (with a telephone interview lasting approximately 5 to 6 minutes), an approximation has been used. The respondents were asked to assess the influence of several well-known social actors, relevant for educational processes, on the effectiveness of the Croatian educational system. Those included: teachers, parents, school principals, students, the comprehensive school report (being well covered by the mass media), the local/regional, as well as national educational authorities, the civil society and the economy. The obtained results are presented in Figure 3.

Figure 3.: Perceived drivers of school effectiveness in Croatia



Source: Research results.

The obtained results are predictable and follow the patterns well-established by the mass media reporting and the popular political discourse, which tell the story of neglected, but motivated educators. Therefore, teachers (Mean = 3.9) and parents (Mean = 3.5) are perceived as the most positive drivers of the educational system's effectiveness, along with the school principals (Mean = 3.5). Students are also perceived well (Mean = 3.4), as well as the educational reform itself (Mean = 3.3). It is interesting that *the general public has a neutral attitude toward the educational authorities*, both at the local/regional (Mean = 3.2) and national levels (Mean = 3.1). In other words, the negatively directed media campaign, emphasizing (or even constructing) the image of an inefficient and corrupted public sector, by referring to the notion of an 'uhljeb' (i.e., a person being 'given bread' by being granted a position in the public sector by the sponsoring political elite)², does not seem to apply to the educational institutions.

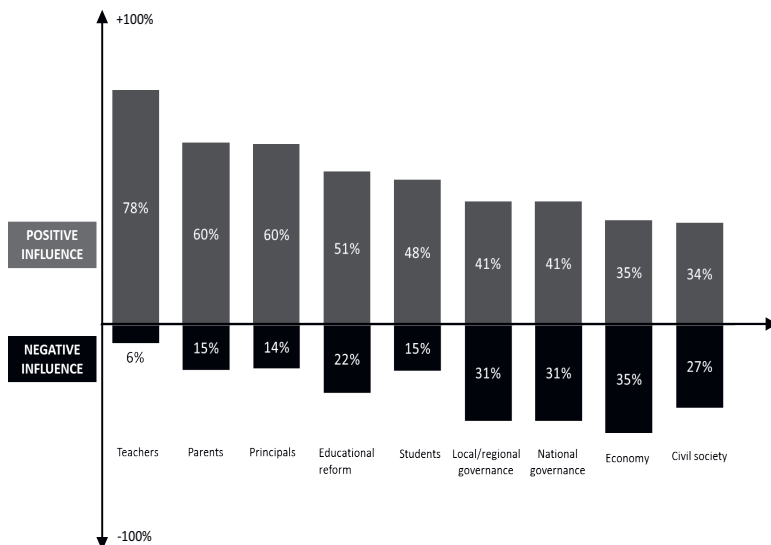
The civil society (Mean = 3.1) and the economy (Mean = 3.0) are perceived as being the least powerful actors in the social arena as regards to the educational effectiveness, which confirms the well-documented problems with the practical applicability/skill-building and the civic education (Naval, Print and Verdhuis, 2002; Spajić Vrkaš, 2003; Quaynor, 2012) in Croatia.

If the obtained responses are transformed into the simplest, three-point Likert scale, representing a negative, a neutral and a positive attitude toward each of the previously listed social actors, a comparable insight is obtained (see Figure 4). However, it should be noted that the perceived negative influence is based on a summative evaluation, which simultaneously takes into account both the influence and the effects of social actors' influence on the educational system. In this context, it is more likely that the public estimates the governance institutions as powerful (but negative)

² See, e.g.: <http://www.total-croatia-news.com/editorial/10774-a-tale-of-two-croatias-before-and-after-the-uhljeb-discovery>; <http://www.balkaninsight.com/en/article/derogative-term-for-public-workers-dominates-croatian-media-12-03-2015>.

and the actors from the economy and civil society as less powerful/influential.

Figure 4.: Simplified assessment of social actors' influence on school effectiveness in Croatia



Source: Research results.

4.3. COMPARATIVE EVALUATION OF THE CROATIAN EDUCATIONAL SYSTEM

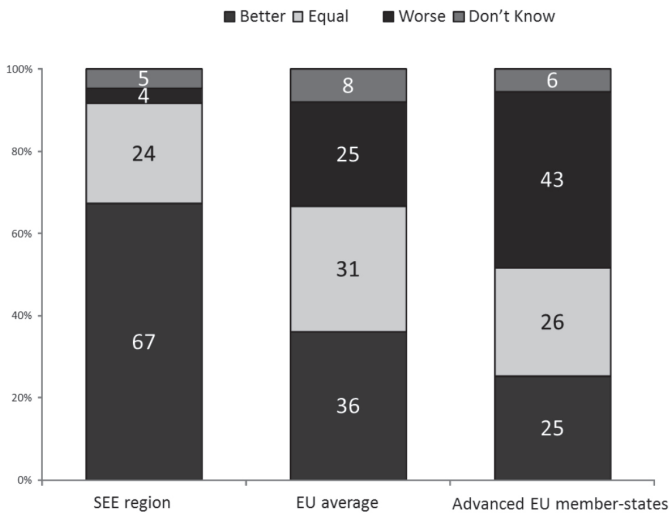
Once again, so as to compare the scores obtained in the PISA survey, which were below the OECD average, the respondents were asked about their perception of the comparative score of the Croatian educational system. From the methodological viewpoint, the empirical comparison of public perception(s) and the international benchmarking results should provide a 'litmus test' of the level of rationality found in the public discourse, related to the Croatian educational policy discussion.

The countries selected as benchmarks were the other nations in the South-East European (SEE) region, the average EU member-states and the most developed member-states of the EU. Figure 5 presents the obtained results.

As much as 67% of the respondents evaluate the Croatian educational system as more effective than those in other SEE countries, which is in accordance with the PISA 2015 results, placing Croatia (Science - 475 points, Reading - 487 points and Mathematics - 464 points) in the leading position, as compared to Bulgaria (446/432/441 points), Romania (436/434/444), Albania (427/405/413), Montenegro (411/427/418), FYROM/Macedonia (384/352/371) and Kosovo (378/347/362). Nevertheless, Slovenia has a much better position on the PISA 2015 list (the 13th position, with 513/505/510 points).

It is interesting that, among the EU member-states, the positions on the PISA 2015 list are held by the often praised Estonian (the 3rd, with 534/519/520 points) and the Finnish (the 5th, with 531/526/511 points) educational systems. Slovenia, although being a new EU member-state, holding the 13th position, is the next among the EU countries on the PISA list. It is followed by the UK (the 15th, 509/498/492), Germany (the 16th, 509/509/506), the Netherlands (509/503/512) and other countries.

Figure 5.: Subjective comparative assessment of the Croatian educational system



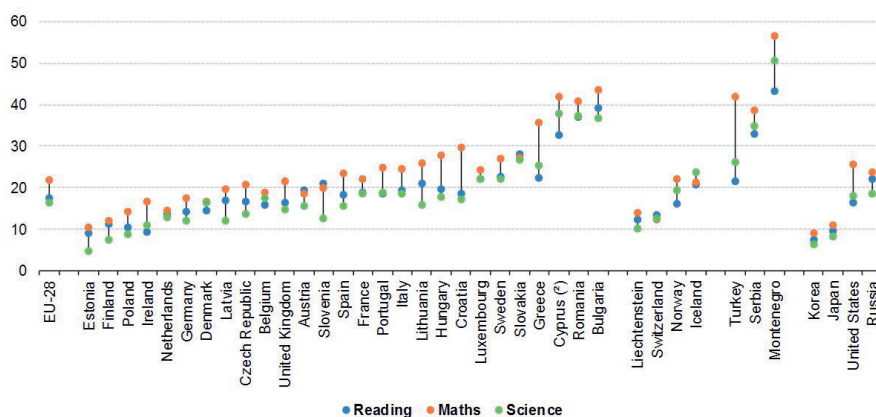
Source: Research results.

The EU average for the amount of low-achieving students in science and reading is somewhat higher than 20%, but the majority of individual member-states (except Estonia, Finland and Slovenia) do not meet the European benchmark for the area of education and training. Considering that it sets the amount of such students not to exceed 15% by 2020 (European Commission, 2016), the educational reform can still be considered a major task for the majority of EU countries. The Croatian position on the comparative, PISA-based chart, produced by the official agency for EU statistics - EUROSTAT (see Figure 6), shows that Croatia lags behind both the existing EU average and the EU 2020 education & training objectives, with Estonia, Finland, Slovenia, Ireland, Denmark, Poland, Germany, Latvia, Portugal, the UK, Spain, the Netherlands and Belgium being above both EU averages (and Croatia). The Czech Republic, Austria, Sweden, France and Italy are positioned below the EU-28 average, but exhibit a better performance regarding the low-achieving students than Croatia, which is followed by Lithuania, Luxembourg, Hungary, Slovakia, Malta, Greece, Bulgaria, Romania and Cyprus (also compare: European Commission, 2016, p. 5).

The Croatian survey shows that the general public perceives the Croatian educational institutions as generally better or equal to the EU average (67%), with only 25% of the respondents being correctly informed (or guessing) the PISA-based facts on educational performance (with Croatia lagging, approximately, 5% behind the EU average and 10% behind the EU 2020 objective, related to the amount of low-achieving students in science, reading and mathematics).

It is interesting that the comparison becomes more realistic when the advanced (i.e. the 'old') EU member-states are selected as the benchmark, which brings about the perception of 51% of the general public that the Croatian educational system is better than, or equal to, the selected group of EU countries. This is, once again, another sign of 'unchecked optimism', with 43% of the respondents perceiving the Croatian educational system as worse than the educational system of the most developed EU countries. With Estonia being somewhat below and Finland somewhat above the 10%-line of the low-achieving students in science (according to PISA 2015), and Slovenia exactly at the EU 2020 objective of 15%, *the Croatian lag (both in relation to the EU average and the EU 2020 objective) does not seem to be recognized by the general public.*

Figure 6.: Comparative, PISA-based assessment of the EU educational systems



(*) EU-28 data are estimates.

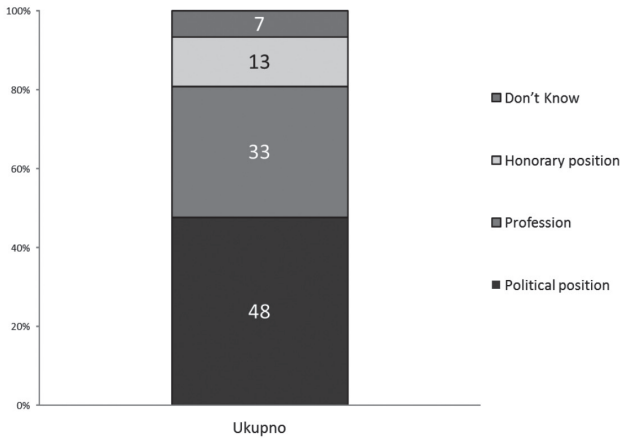
(†) Data relate to the area under the effective control of the Government of the Republic of Cyprus.

Source: Eurostat (obtained from: http://ec.europa.eu/eurostat/statistics-explained/images/d/dd/Low_achievers_in_reading%2C_maths_and_science%02C_by_country_2012.JPG).

This creates a rather paradoxical situation, in which the general public seems to overestimate the effectiveness of the educational system and its comparative position in EU terms (although it has a rather correct perception, as related to the SEE region), while blaming almost all the institutional actors in the Croatian society for their negative influence on education. Only individual actors, such as school prin-

cipals and parents are perceived to be the drivers of school effectiveness in Croatia (with 60% of the positive evaluations, which can be compared only to the positive perception of teachers, held by 70% of the respondents). When it comes to school principals, the public opinion on their position in the national educational system is illustrated by Figure 7.

Figure 7.: Perceived position of school principals in the Croatian educational system



Source: Research results.

As much as 48% of the respondents in our sample recognize the role of principals as an extension of either the local/regional, or the national educational governance, i.e. as a 'political' position. It does not seem to matter that OECD data show an extremely high correlation between the decentralization and professionalization of principal positions in OECD member-countries, and student performance (see previous discussion in the introduction to this study), since only 33% of the respondents recognize principalship as a separate profession within the realm of education. Another 13% of the respondents believe that principalship is an 'honorary position', adequate as a reward for the efficient senior teachers before they are retired.

5. DISCUSSION AND IMPLICATIONS FOR EDUCATIONAL POLICY

The most important findings of our survey, performed on a nationally representative sample of Croatian households, are related to overestimation of the educational effectiveness of the national educational system, in comparison to the EU member states. In addition, there is a negative perception of the role of the educational governance institutions and the economy, as related to quality of the national educational system. The school principals are perceived as political actors, performing the role of 'transmitting' the centralized educational policy to the school level.

On the other hand, the OECD discussion, presented in the theoretical part of the paper, clearly encourages decentralization and professionalization of the principals' role. The same applies to school governance, which should be characterized by a more independent role of school boards, which would replace the centralized decision-making at the level of the Ministry of Education. Although the (de)centralization of the educational system(s) is not a central tenet of this paper, it should be noted that, since the 1990s, decentralization has been a popular venue of educational policy (McGinn & Welsh, 1999). The decentralization theme is an especially popular policy option, as complementing the theoretical concept of distributed educational leadership (Leithwood, Harris & Hopkins, 2008) and being connected to comprehensive school reforms (Camburn, Rowan & Taylor, 2003).

Without prejudice to any of the alternatives to be potentially implemented in the educational reform in Croatia (or elsewhere), the OECD recommendations should be taken in serious consideration. This is especially applicable to the topic of *principal professionalization*, which can be traced to 2005, when the first initiative for a national program of school principals' education and licensing was launched³. It has not resulted in an actual program, although it has been followed up by a pilot program, implemented by the Education and Teacher Training Agency. In co-operation with the *Nederlandse School voor Onderwijsmanagement (NSO)*, a modular program was produced and implemented in the 2007-2009 period, with 24 participants. It followed some good practices from the NSO's attempt to deliver educational training in the wider area of South East Europe (Kastanje & Webber, 2008). The program has not been officially adopted and the licensing issue remained unsettled as well. Other international organizations, involved in the topic of developing educational management in Croatia by conducting separate projects, included the *British Council* and the Austrian *Kulturkontakt*⁴. These initiatives did, however, lead to the consensus among the educational policy actors, related to the positive general attitude toward the professionalization of school principals.

The adoption of the new national *Strategy of Science, Education and Technology*⁵ in 2014 did emphasize the need for the principals to become licensed professionals, but it has not been followed by relevant policy documents, or actions. In 2015, within the framework of the European Social Fund tender for the improvement of higher education, with the implementation of the Croatian Qualification Framework (CroQF), the University of Zadar successfully applied for a project aimed toward the develop-

3 Formal documents, produced in the 2005-2007 period by the committee in charge of this initiative are still available on the Website of the Croatian Education and Teacher Training Agency (in Croatian only): http://www.azoo.hr/images/AZOO/Ravnateljji/RM/1_Program_osposobljavanja_ravnateljja.pdf; http://www.azoo.hr/images/AZOO/Ravnateljji/RM/2_Izvedbeni_program_osposobljavanja_ravnateljja.pdf.

4 Source: http://www.azoo.hr/images/AZOO/Ravnateljji/RM/Sudjelovanje_ravnateljja_u_projektima_i_usavsavanju_-_2014._HUIROS.ppt (available in Croatian only).

5 Available at: <https://vlada.gov.hr/strategija-obrazovanja-znanosti-i-tehnologije/151> (in Croatian only).

ment of national, competency-based educational standards for principals of educational institutions. During the project implementation (in the 2015-2016 period), the required educational and vocational standards were produced and a postgraduate program for educational leadership was founded. In addition, five academic textbooks for program participants were developed as well⁶.

Unfortunately, the project results have not yet been accepted on the national level, with the latest changes in legislature postponing the deadline for professionalization and licensing of school principals (and those of other educational institutions), until January 1st 2021, which has already been the fourth rescheduling for the principals' professionalization initiative. Clear international policy evidence, related to the value of decentralizing educational policy and providing school principals with managerial competencies and autonomy, have been acknowledged in academic literature as well. One of the studies, conducted on a sample of Croatian primary school principals, acknowledges that their current managerial practices are not in line with the contemporary educational approaches, as well as that the principals' resistance could be a significant barrier to further reform, if not carefully considered (Alfirević, Pavičić & Relja, 2016). Similar studies, conducted in the specific Croatian context, are not yet available.

The topic of school boards, including their recruitment, evaluation and improvement of their work, has been completely neglected, both in the Croatian academic literature and in the educational practice. Except for a single book item on the involvement of parents in school governance (Kovacs Cerović, Vizek Vidović & Powell, 2010) and a conference paper with a proposal of methodology for evaluation of the school board activities (Alfirević, Pavičić & Koludrović, 2015), the literature search has not produced relevant studies conducted in Croatia.

The only pilot program for school board training, that the authors are currently aware of, is conducted within the activities of the *Scientific Center of Excellence for School Effectiveness and Educational Management*, hosted by the University of Zagreb, Faculty of Economics and Business.

The background facts, related to professionalization of school management and governance in Croatia, do show the existence of adequate awareness and initiatives among the professional and academic audiences. However, our empirical results cannot verify that the wider Croatian public has been adequately informed about the importance of this topic in educational policy.

The other dimension of this study relates to external benchmarking as a trigger for policy changes and modernization of the national educational system. In this context, one also needs to review previous similar initiatives, aimed at educational reform.

In 2005, a World Bank project was considered in order to address the Croatian *Education Sector Development Plan 2005-2010*. This action plan had the objectives of:

6 More information is available from the project Website: <http://www.ravnatelj-profesija.eu> (in Croatian only).

(a) modernizing school curricula; (b) increasing the duration of compulsory education; (c) introducing a single shift into schools; (d) improving vocational education; (e) improving tertiary education; (f) improving the statistics regarding the participation of national minorities in the educational system; (g) strengthening the capacity of the relevant Ministry; (h) fostering decentralization of the educational policy; (i) improving the efficiency of the education investments and (j) improving school enrollment rates.

The *Education Sector Development Program Project*, supported by the World Bank, had a range of activities, including: (a) the development of new school curricula; (b) supporting the national school leaving examination ('*matura*'), conducted by the newly established *National Center for External Evaluation of Education*, including the development of a new national educational information system; (c) the improvement of national and regional educational policy capabilities; (d) the introduction of educational leadership and management; (e) a re-organization of school activities, so as to fit a single shift (if possible) and (f) teacher training in Information & Communication Technology (ICT) and supply of ICT equipment to Croatian schools.

A part of the projects' objectives were related to improved student learning, which was linked to PISA results and the expected improvement in this international benchmarking project. This output was not achieved, which led the World Bank to conclude that the overall bank performance was moderately unsatisfactory, while the Croatian government's performance was moderately satisfactory⁷. Such an evaluation was probably motivated by the Croatian success in structural educational reforms, including⁸: (a) the adoption of the National curriculum framework in 2010; (b) the introduction of the sector councils and the initial work being done on the reform of vocational education and training (VET); (c) the creation of the first university programs for teacher training, based on the equivalent of 60 ECTS points and the introduction of an on-line training tracking and management system by the Education and Teacher Training Agency and (d) the introduction of the national *E-matica* education management information system.

These systemic changes were rated as 'substantial' by the World Bank, although the final evaluation of the project acknowledged that the external benchmarking data had not been the best choice for the evaluation of student learning, especially with the adoption of the relative performance indicators (as compared to the other EU countries)⁹.

7 Source: <http://documents.worldbank.org/curated/en/544061468246325350/pdf/ICR22540Box3670disclosed04023020120.pdf>.

8 Ibid.

9 Source: <http://documents.worldbank.org/curated/en/270481474905684762/pdf/000020051-20140625184909.pdf>.

The described experience of the comprehensive World Bank project, aimed at comprehensive restructuring of the educational system, has not been discussed among the Croatian professional and academic audience at all. On the other hand, implications of the experience is significant, since it seems that *successful structural improvement of the educational system (as conducted in the 2008-2011 period), has not been followed by an improvement in student learning*. The lack of long-term results, in terms of improved student outcomes, is a disturbing indicator, which supports the need for systemic reform of the educational system.

The other option, which should be considered as well, *might be related to the (in)adequacies of measuring student learning and school effectiveness in Croatia*. With the absence of relevant empirical studies at the national level¹⁰, the international benchmarking studies, such as PISA, remain the only source of policy data. *Their relevance, or adequacy, simply cannot be questioned, as there are no alternative sources of data*. The international comparative data can be contested, but such a course of action loses any legitimacy if no national project(s)/initiative(s) are available to deliver comparable results.

On the other hand, we have demonstrated that *the public opinion does not seem to be informed, or adequately interpret the consequences of international benchmarking studies*. The overall evaluations of school effectiveness and its drivers appear to be based on very broad and general preconceptions of the socio-economic development of the EU and different groups of its member states.

The negative opinion on educational policy institutions resonates the 'anti-institutional', 'anti-establishment' political patterns, easily recognizable in the public discourse throughout the recent years. Individual social actors, such as teachers, parents, principals and students, remain to be perceived as the 'positive' drivers of school effectiveness by the general public, although it remains unclear how they are supposed to influence and improve the educational system, if the institutional actors from the government, profit and civil society sectors are ignored. Such developments could be linked to the inflammatory, derogatory media campaigns against the public sector and its employee, labeled 'en masse' as the 'uhljeb' (i.e. a person 'stealing the bread' from the taxpayers by means of public employment)¹¹. Such a social climate makes

10 Some empirical projects on the topics of learning and educational aspirations *have been conducted at the local, or regional level only*. Some of the most relevant ones are conducted by the Institute for Social Research in Zagreb (<http://www.idi.hr>), which analyzed the learning patterns, aspirations and support to primary school students in the City of Zagreb (see: <https://www.idi.hr/ucenje2014/oprojektu.html>; in Croatian only). This project has been expanded to four Croatian counties (the Counties of Zagreb, Međimurje, Varaždin and Krapina), with the objective of analyzing educational aspirations of primary school students in the 2015-2016 period (see: <http://www.idi.hr/aspiracije/oprojektu.html>; in Croatian only).

11 See additional discussion in: <http://www.balkaninsight.com/en/article/derogative-term-for-public-workers-dominates-croatian-media-12-03-2015>.

it extremely difficult to pursue an effective discussion on the professionalization and further reform of the educational institutions, belonging mostly to the public sector.

6. INSTEAD OF A CONCLUSION

This study has identified several dimensions of the public discourse and social environment in Croatia, which serve as barriers to the effective reform of the national educational system. Those include: (a) a lack of relevant national studies and data on educational effectiveness; (b) public perceptions of the national educational effectiveness, being incompatible with the international benchmarking studies and recommendations of the international educational policy community; (c) a lack of motivation for the professionalization of school principals and (d) public opinion tendencies, which could be linked to 'Thatcherism' and 'Reaganism' of the 1980s and their negative legacy toward the public sector.

The observed trends should be accounted by the educational policy actors and the political elites if further educational reform initiatives in Croatia are expected to succeed. Further educational and sociological research could be recommended in order to determine the drivers of public opinion and support to the reform processes, as well as design the relevant tools/approaches to policy implementation.

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MUNICIPAL MERGERS: THEORETICAL CONSIDERATIONS, PRACTICAL EVIDENCE AND POTENTIAL IMPLICATIONS

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ABSTRACT

Economic and fiscal crisis has put additional pressures on the efficient management of resources at the sub-national levels of government as well. Under the circumstances of fiscal austerity, policymakers are very inclined towards reorganization within the government, and this also includes possible consolidation (amalgamation) of local government units, i.e. municipal mergers. These mergers form part of the structural reforms of local self-government, where technical aspects of local government operation are targeted. To be specific, it is assumed, among other things, that municipal mergers and the subsequent consolidation of local government units would enable achieving economies of scale and subsequently reduce costs. This paper presents theoretical considerations on the reasons for municipal mergers, and subsequently, practical evidence on the outcome of these processes in various countries is also presented. The paper also focuses on the driving factors of mergers and extrapolates them for the potential of municipal mergers in the Slovenian context. Moreover, the empirics of the paper also focus on the application and validity of classical arguments for municipal mergers.

Keywords: Efficiency; Local self-government; Municipal mergers; Structural reforms

JEL Codes: H70

1. INTRODUCTION

Recent economic and fiscal crisis has put additional pressures on the efficient management of resources at all levels of government. This is also true at the local government level, where this issue is related to the appropriate creation and size of local jurisdictions. This can be put in the context of the decentralization theorem (Oates, 1972), which is based on the competing theory, and which states that excess fragmentation of government leads to inefficiencies in the provision of local public services, such as various duplications, problems in achieving economies of scale, etc. This means that the size of local government units should efficiently combine scale and congestion effects in order to minimize local authority costs (Bises and Sacchi, 2011).

Specifically, the main advantages of smaller local government units are related to various allocative advantages, such as greater ability to fulfill diverse preferences; the existence of the so-called "geographical proximity effect", where the level of information on production costs of individual public goods and services is higher at the local level; and greater political participation of voters at the local level, which implicitly results in greater political accountability of the local authorities. However, one has to bear in mind that smaller local government units have some problems, which can be generally described as technical disadvantages, such as lost economies of scale; the inability to properly internalize spillover effects; and the negative effect of greater political participation of voters on local government spending because voting is a normal good (see Bailey, 1999; Borck, 2002; Gilbert and Picard, 1996).

Under the circumstances of fiscal austerity, policymakers are inclined towards reducing costs of public sector organizations, and this also includes the reorganization of local government units. This means that technical aspects of local authority operation are targeted, since it is assumed that consolidation of local government units would enable achieving economies of scale and subsequently reduce costs. Consequently, this paper discusses theoretical considerations and presents practical evidence on the processes of local government consolidations, specifically in the context of municipal mergers. Moreover, potential implications of this process in the context of Slovenia are also stressed, as the issue of municipal consolidation has just recently become political issue in Slovenia, under the circumstances of fiscal austerity. In this context, the idea and thesis of the paper relate to extrapolation of factors causing municipal mergers, and to the identification of potential inhibitors limiting the practical implementation of mergers in Slovenia.

2. THEORETICAL BACKGROUND AND LITERATURE REVIEW ON MUNICIPAL CONSOLIDATION PROCESSES

The label consolidation of local government units consists of two different processes. The first process is called annexation, which means that smaller units are incorporated into the already existing, larger units. The second process is called amalgamation, where smaller units are merged together to get larger units. The end result of both processes is the same: lower number of larger local government units (Vojnovic, 1997). Local government consolidation forms a part of the structural reform of local government, where reconfiguration of local government in terms of the number, size and type of municipalities is the question (Garcea and LeSage, 2005). In fact, advocates of the structural reform of local government achieved through consolidation hold that bigger should be better, cheaper, more efficient and financially viable (Dollery and Grant, 2013a).

The existing literature provides several arguments in favor of municipal amalgamations. For instance, Dollery and Crase (2004) state that those arguments are: ensuring economies of scale and scope, administrative and technical capacity achievement, and administrative costs reduction. Dahlby (2011) argues that since democratic bias exists to the formation of additional local government units, it is reasonable to occasionally reverse the process, especially if excessive fragmentation of local government units is experienced.

The process of local government consolidation has been particularly intensive at the municipal level. It should be noted that amalgamation, i.e. municipal mergers as a process is more often experienced in practice and literature covers it more in detail. Municipal amalgamations are not a new process. They were implemented in most old industrialized countries and recently in some post-socialist countries of Central and Eastern Europe as well. Countries most often cited in literature are Japan, Nordic countries, Anglo-Saxon countries, and recently particularly Baltic countries among the post-socialist ones.

Actually, the first wave of municipal amalgamations was predominantly inspired by the notion that municipalities should not be too small in order to benefit from the economies of scale (De Ceuninck, Reynaert, Steyvers and Valcke, 2010). Amalgamations were particularly intensive after World War II (Vojnovic, 2000). This process was eased in the 1970s and once again became more intensive during the 1990s, and again over the last few years when economic slowdown has been experienced. This trend of municipal mergers, together with its outcomes, can be observed from Table 1.

Table 1.: The number of municipalities in selected European countries, 1950 -

Country	Number of municipalities	Number of municipalities (2009 or later)	Change (in %)
Greece	5,774 (1950)	325 ¹	-94
Denmark	1,387 (1950)	98	-93
Lithuania	581 (1990)	60	-90
Sweden	2,281 (1950)	290	-87
Latvia	570 (1990)	118	-79
Netherlands	1,015 (1950)	44 ³	-56
Germany	25,930 (1950)	12,229	-53
Austria	3,999 (1950)	2,100 ²	-47
Finland	547 (1950)	311 ³	-43
Switzerland	3,097 (1950)	2,758	-11
Estonia	254 (1990)	227	-11

Source: adapted from Osoian et al. (2010).

3. PRACTICALITY OF MUNICIPAL MERGERS

Two comments should be given concerning the practical aspects of municipal amalgamations. First, large variations exist among countries on the practical motives for municipal amalgamation. Economies of scale were not always the main practical reason for amalgamation of municipalities in practice, although they are clearly put forward as the most important reason for amalgamations in theoretical literature.

The evaluation of different amalgamation processes has put forward different reasons for the implementation of reforms. For instance, the main reason for municipal amalgamation in Australia was associated with the possible improvement of administrative and technical capacities of municipalities, as well as with rounding up of "natural" boundaries of municipalities (Dollery, Byrnes and Crase, 2007). Furthermore, Sweden implemented amalgamation of municipalities in the 1950s; the main goal was to alleviate the problem of depopulating trends experienced predominantly by smaller municipalities (Hanes and Wikström, 2010). Similar reasons are also cited for Japan, where five rounds of municipal amalgamation were imple-

1 The data for Greece relate to 2011, when the number of municipalities was reduced from 1,034 to 325 according to the Kallikratis plan (Law n. 3852/2010).

2 The data for Austria refer to 2017, since the last, still ongoing process of municipal amalgamations started in 2011 (see Österreichischer Gemeindebund, 2017, <http://gemeindebund.at/Zahlen-Fakten>).

3 The data for Finland refer to 2017, as the last process of amalgamations that lasted from 2005 to 2017 reduced the number of municipalities from 444 to 311 (see Statistics Finland, 2017, http://www.stat.fi/index_en.html).

mented from the late 19th century onwards (the number of municipalities fell from more than 70,000 in 1889 to 1,820 in 2006), and the last wave was driven primarily by rising fiscal constraints and drastic demographic changes that Japan is facing in recent decades (Nomoto, 2006).

Denmark implemented the last major amalgamation process in 2006, and the reason for this was to assure higher quality of municipal services (Lotz, 2006). Interestingly, the process of municipal amalgamation in Latvia coincided with the onset of the financial and economic crisis in 2008. The main reason for amalgamation was not to reduce costs of municipalities, but to enable them to actively contribute to the economic development of the country (Bane, 2008).

Second, countries under the consideration also varied in the initial levels of local authorities' fragmentation. In particular, Page and Goldsmith (1987) have identified two distinct traditions in Europe, a northern and a southern organization of government. One of the main distinctions between the two is presented by the size of municipalities and the number of functions allocated to them. That is to say, in comparison to the southern type, the northern type of local government should have, on average, larger municipalities with more functions and responsibilities allocated to them. Actually, in the southern type of organization, municipalities are taken more as political units, whereas in the northern type, municipalities are usually taken as service providers (see De Ceuninck, Reynaert, Steyvers and Valcke, 2010). The variations in the average size of municipalities can be observed from Osoian et al. (2010), as the authors show that countries of the southern Europe tend to have smaller municipalities (both in the number of residents as well as in the spatial size) compared to the countries in northern Europe.

4. PROCESSES AND OUTCOMES OF MUNICIPAL MERGERS

If processes of municipal mergers are analyzed, large variations can be observed among countries on the pace and magnitude of structural reforms being implemented, and also the experience differentiates (see De Ceuninck, Reynaert, Steyvers and Valecke, 2010). In fact, structural reforms seem to appear now and then on political agenda in the majority of countries, which means that they represent a continuous issue (e.g., Scandinavia, Japan, etc.), yet in some countries this process seems to be completed (e.g., Switzerland, Belgium, etc.). Literature portrays that the reforms were at first inspired by the proposition that municipalities should have at least a certain size to benefit from economies of scale.

The outcomes of mergers indicate interesting challenges as well. The results of several empirical studies suggest that amalgamation by itself does not lead to a reduction in operating costs of local governments as the majority of services provided by local governments are actually labor-intensive. This limits the valid-

ity of classical argument for municipal mergers that is the achievement of scale economies. For instance, the Finnish experience with amalgamation indicates that only average expenditures on administration (i.e. overhead costs) significantly decreased after the amalgamation happened, and this decrease was heavily outweighed by an increase in other categories of expenditures, like e.g. expenditures on health and education (Dollery and Grant, 2013b; Moisio and Uusitalo, 2013). Kettunen (2014) has also stressed that the efficiency of municipalities in service provision is not necessarily positively correlated with their size, but it depends more on the dynamics of municipal economy. In this context, it is also difficult to achieve a greater professionalization and specialization in providing services only on the account of amalgamation, since bureaucrats pursue other goals such as maximizing the size of the budget (see Niskanen, 1971). And this is exactly contrary to the concept of specialization.

Furthermore, since the amalgamation of municipalities is mainly a political issue, the outcomes of technical engineering on which municipal amalgamations are usually based, seem to be rather poor (Kjaer, Hjalmar and Olsen, 2009). Besides, some authors tend to put forward possible negative effects related to amalgamation, as a potentially negative effect on the level of democracy exists, meaning that municipal amalgamation might be associated with lower electoral turnout, reduced trust in politicians, etc. (Copus, 2006).

5. DRIVERS AND IMPLICATIONS OF MUNICIPAL MERGERS

As already noted, municipal mergers have often been on the political agenda in several countries, although the magnitude of the processes and the outcomes of the mergers differentiated substantially, if we follow the above presented evidence. Askim, Klausen, Vabo and Bjurstrom (2016) have proposed several factors that should contribute to municipal mergers, and those factors include:

- The aforementioned fiscal stress, that is, the necessity to implement fiscal austerity policies, which forces spending cuts, and subsequently, structural reforms within governments that enable cost reductions.
- Urbanization, which corresponds to the movement of people towards urban areas, which also affects the population of peripheral areas. In this context, population losses lead to the inability to utilize scale economies in service provision, and might suggest necessity for structural reforms and municipal mergers.
- Decentralization, which corresponds to the ever-increasing responsibilities of local (subnational) governments, which can be efficiently implemented only if an appropriate size of those units is achieved. Again, this might imply the necessity for municipal mergers.

- Recent history of structural reforms, which suggests that the ongoing process of reforms perpetuates additional reforms, since it is unlikely that reforms per se contribute to the achievement of the steady-state status. Put differently, once mergers are implemented, one might expect that the outcomes might not be suitable to all parties involved, and additional reforms will be implemented, as suggested by the aforementioned continuity of mergers in the sampled countries.

Besides, the above mentioned authors have also proposed the so-called filtering factors that either contribute to or inhibit the potential for implementing structural reforms at the local government level, i.e. municipal mergers. Those factors should involve, among others:

- Historical absence of municipal mergers. Since mergers are often self-reinforcing, the absence of mergers might work as a missing driver for reforms per se.
- Protection of local self-government. As is commonly known, the majority of European countries have ratified the European Charter of Local Self-Government (ECLSG), and this ratification acts as a strong preserver of local government independence. Consequently, this implies difficulties in implementing structural reforms, as political aspects of local-self-governance are emphasized much more strictly in contrast to the economic ones.
- Existence of consensual democracies. In the political systems where political decision-making is more consensual, i.e. classical majority rule is limited, it might be expected that municipal mergers should be less likely, as they represent a rather radical form of reforms.

6. PROSPECTS FOR MUNICIPAL MERGERS IN SLOVENIA

The idea of municipal amalgamation is being put forward in Slovenia as well. The last major reform of local self-government was implemented in 1994, when the transformation of existing "communal" municipalities was envisaged. From 1995 onwards, the number of municipalities increased from 60 to the current number of 212, and this transformation was implemented predominantly on the voluntary basis. The structural reform of 1994 was inspired by possible improvements in local democracy (see, e.g., Čokert, 2005). This inspiration was rather natural, as the country was just in the process of democratizing itself, so democracy issues were more politically viable.

However, the result of the process was not just greater fragmentation of the local self-government, but also the fact that more than one half of municipalities have less than 5,000 residents (SORS, 2016), which is actually the legally prescribed minimum size of a municipality. Although municipalities can be of smaller size, this in-

dicates that exceptions have become the rule. Consequently, the necessity to implement structural reforms of the local self-government in Slovenia has been stressed, and this idea has also started to be politically promoted (see MPA, 2016).

The arguments favoring municipal amalgamations stressed that the country has become too fragmented and municipal amalgamation would enable the reduction of (administrative) costs, and increase efficiency as well as the quality of services provided. In fact, this argumentation clearly identifies that scale economies should also be the reason for municipal amalgamation. Therefore, this study would like to portray how important scale economies are, a classical argument favoring municipal amalgamations, for the functioning of Slovenian municipalities.

The real question is what the actual prospects of implementing major, i.e. radical structural reforms of the local self-government in Slovenia are. If we inspect the drivers of the reform, it is only evident that the existence of fiscal stress might be the only major driver of reforms. Other factors, like urbanization, decentralization and recent history of structural reforms do not seem to be in favor of mergers in this particular context, as the country is still highly fiscally centralized, the urbanization change rate is rather low, and there is practically no history of major structural reforms.

Moreover, the existing empirical evidence suggests that if municipal amalgamation (merger policy) is to be implemented in order to achieve economies of scale and reduce "operating" costs, scale economies can be put forward as an argument for municipal amalgamation for only 15 municipalities (out of the existing 212). The partition of the optimal frontier, based on Data Envelopment Analysis estimation, into three parts reflecting the increasing, constant, and decreasing returns to scale (see, e.g., Banker and Thrall, 1992), suggests that 15 municipalities operate under the increasing returns to scale technology, which might put forward the argument on scale economies existence and therefore indicate the potential for beneficial effects of amalgamations for those municipalities (for details on the estimation, see Pevcin, 2017). Furthermore, scale economies existence based on the aforementioned estimation can be observed only in very small municipalities, so some extent of merging to benefit from scale economies may be one of the alternatives particularly for those municipalities. Therefore, one of the classical arguments for municipal amalgamation, achieving economies of scale, can only be applied on a limited scale, which puts further the limitations on justifying potential municipal mergers.

Furthermore, even the filtering factors do not give any real potential for implementing municipal mergers, as ECLSG has been ratified in Slovenia, and any non-voluntary status change of municipalities is not allowed even by constitutional arrangements. Besides, there is no practical evidence on municipal mergers and the existing political system is strongly based on consensual decision-making.

7. CONCLUDING REFLECTIONS

This paper presents theoretical and practical aspects of the processes and outcomes of municipal mergers. The paper also focuses on the driving factors of mergers, and extrapolates them for the potential of municipal mergers in the Slovenian context. As the discussion suggests, municipal mergers are not a new phenomenon, as several countries experienced an ongoing process of mergers. However, several potential drivers of this process exist, and the implications are that they are either promoters or inhibitors to experiencing municipal mergers. If we scrutinize the specific context and potential for municipal mergers in Slovenia, it can be observed that the status of drivers mainly acts as an inhibitor to the reforms, which can explain the lack of such initiatives. Therefore, the policy proposal is to scrutinize more thoroughly those factors in order to ensure and enable mergers in the future. Besides, it should be stressed that empirical evidence suggests that one of the classical arguments for municipal mergers, i.e. achieving of scale economies, can only be applied on a limited scale in Slovenian municipalities, which indicates that other arguments for the justification of municipal mergers should be put forward in this specific context.

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POST-WAR RECONSTRUCTION AND DEVELOPMENT IN CAMBODIA AND THE DESTRUCTIVE ROLE OF MICROCREDIT

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ABSTRACT

The microcredit model was introduced into Cambodia in the 1990s and it was expected to make a major contribution to rebuilding and developing the country in the aftermath of a bitter civil war. Thanks to various commercializing (or 'neoliberalizing') reforms introduced in the early 2000s, in the form of a new for-profit business model and a deregulated and de-supervised 'enabling environment', after 2010 the microcredit sector began to experience explosive growth, and it soon became one of the world's largest and most profitable micro-credit sectors. The standard narrative emerged to the effect that it has been responsible for a large number of positive outcomes, especially with regard to poverty reduction, rural agricultural development and all-round sustainable local economic development. As in very many developing countries of late, however, and against the background of a mounting over-indebtedness-driven microcredit crisis in Cambodia that could potentially destroy the sector, this positive interpretation has come under serious independent scrutiny for perhaps the first time. The author finds that the upbeat narrative governing Cambodia's microcredit sector does not hold true in practice. The paper reflects on what the major drawbacks to the microcredit model are, that have emerged in recent years. It concludes that microcredit has contributed to frustrating and blocking Cambodia's post-war reconstruction and development objectives while, not coincidentally, spectacularly enriching the narrow domestic, expatriate and foreign elite that now manages and owns Cambodia's microcredit sector.

Keywords: Microcredit; Poverty; Cambodia; Reckless lending; Local economic development

JEL Codes: O16; G21

1. INTRODUCTION¹

“People took the money from the microfinance institutions. They thought they could return it . . . but they could not because of the crisis. Now the institution has taken their land and house . . . many more households here will become homeless soon.”

“We sell whatever we have to get the money to cope with the loan, but it is still not enough . . . we are afraid of the credit agent like we are afraid of a tiger. Any time they come we leave our home and go somewhere else.”

Comments to World Bank researchers reported in the rural areas of Cambodia in the aftermath of the global financial crisis - see Heltberg, Hossain, Riva and Turk (2012: 46).

This article looks at the astonishing rise of the microcredit sector in Cambodia since the early 1990s. From an original humanitarian NGO-driven model, aiming to support demobilized soldiers find basic paid work, by 2016 Cambodia’s microcredit sector had become one of the world’s largest and most profitable, and also largely owned by foreign corporate financial institutions. In spite of rapid growth and its insertion into the everyday lives of the poor in Cambodia, the basic fact remains that there is very little, if any, real evidence to support the contention that Cambodia’s microcredit sector has achieved what it was set up to achieve - poverty reduction through sustainable and equitable local economic development. On the contrary, as this article will show, there is actually a steadily growing body of evidence suggesting that the microcredit sector has acted to disadvantage, exploit and increase the poverty and vulnerability of Cambodia’s poor, and has thus acted as a significant headwind, militating against Cambodia’s overall development and poverty reduction prospects. Pointedly, these negative outcomes for the poor stand in stark relief to the spectacular financial gains realized by the narrow financial elite that now manages and owns Cambodia’s microcredit sector. Not least because of reckless lending practices, which have given rise to an individual and household debt overhang that today threatens to collapse the entire microcredit sector, a careful appraisal of the evidence confirms that the microcredit experiment in Cambodia has been a stunning commercial success (at least so far) but also, at the same time, a significant development policy failure.

¹ This is a slightly revised version of a paper presented in Pula in June 2017. It draws extensively on Bateman (forthcoming). Thanks to those in Cambodia who provided data for the paper, and special thanks to those who helped illuminate the important land-loss issue raised here. Thanks to all those, including those in Pula, and then later in Bergen, Norway, at the EADI 2017 Conference, who provided feedback on this work. Of course, all remaining mistakes and misunderstandings are mine alone.

2. BACKGROUND

Cambodia's microcredit movement was born in the early 1990s. In a country racked first by a long and bitter civil war and then four years of the murderous Pol Pot's regime, the international development community began to arrive in the early 1990s to fund and manage a major post-conflict reconstruction and development exercise. The early arrivals included most of the international development community institutions advocating microcredit elsewhere around the world - USAID, ILO, UNDP, and Agence Française de Développement - along with some of the most important non-governmental agencies, including Catholic Relief Services and World Vision.

Perhaps the most important project that gave rise to the microcredit sector in Cambodia, however, did not actually start out with this objective in mind. This was a \$US 4.3 million flagship intervention undertaken by UNDP, specifically designed to promote small enterprise development among the many demobilized soldiers. The idea was that creating new forms of employment and income-generation would gradually incorporate back into society one of the most severely disaffected groups. It was also hoped that the project would help kick-start local economic development and growth. The project aimed to achieve its laudable goals by establishing a network of four Local Economic Development Agencies (LEDAs). These LEDAs would be structured as commercial bodies that would, for a fee, provide the sort of business advisory support, training, marketing information, contacts and other useful services that potential and existing small-scale entrepreneurs generally require.

However, as with almost all such commercialized LEDA projects around the world (see Bateman 2014a), the LEDA project in Cambodia was unable to achieve full financial sustainability on the fee income it was able to generate. With such a high-profile project in danger of collapse, the four original LEDAs were merged together, in 1993, to form one central LEDA - ACLEDA (Association of Cambodian LEDAs). Crucially, ACLEDA was instructed to immediately drop all of its unprofitable business advisory and support work, and focus instead on becoming a microcredit institution (hereafter MCI). By providing microcredit at an interest rate commensurate with financial self-sustainability, it was hoped that this would ensure ACLEDA's long-term survival and subsequent growth, while also ostensibly addressing the original problem that had earlier given rise to the four LEDAs - the need to create employment in the community for the most vulnerable groups (Clark, 2006). But rather than achieving this goal through business support and advice, ACLEDA would provide an arguably even more important input - credit.

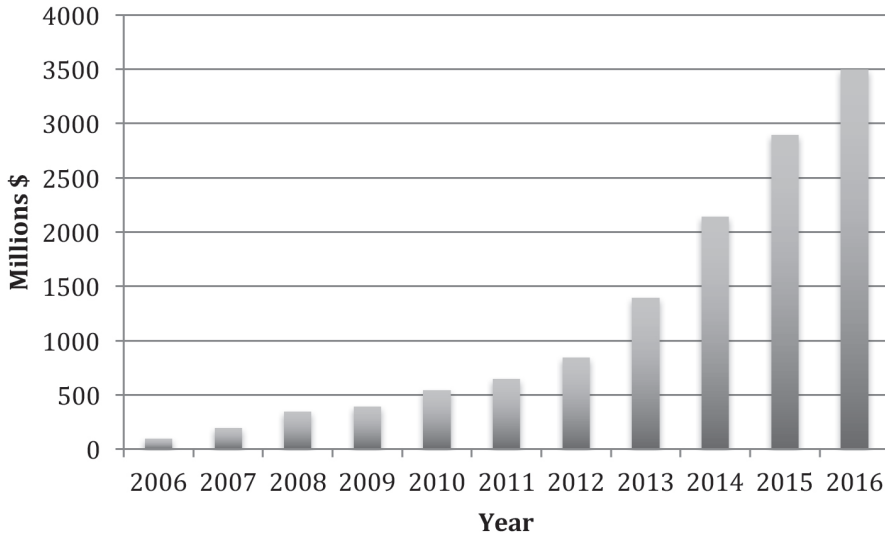
The changed mandate was indeed very successful and ACLEDA began to grow fast. It was soon being described by microcredit advocates as one of the most impressive MCIs in the world (Clark, 2006). By 2000, ACLEDA opted to convert into

a specialized bank and then, in 2009, it became a fully private commercial bank. With rapid growth in the volume of microcredit disbursed and with rising profitability, funding further growth, by 2010 ACLEDA had become Cambodia's largest and most profitable commercial bank, and also one of the largest and most profitable MCIs in the world. ACLEDA's growing profitability also served to attract commercial financial institutions from abroad, and it was soon raising funds from, and selling off part of its equity to, some of the world's highest-profile investment institutions. With its entry into mainstream commercial banking activities, and even though even a cursory analysis of its activities shows that its main business still very much remained microcredit, ACLEDA ceased calling itself a microcredit bank.

With ACLEDA showing the way forward, from 2000 onwards many of the earliest NGO-style MCIs also began to convert over to for-profit status. In addition, a growing number of for-profit MCIs also began to be established from scratch, many financed by for-profit financial institutions and investors based abroad. Cambodia's microcredit sector was eventually to be dominated by seven deposit-taking microcredit institutions that control about 90 per cent of the total market. The 'big seven' operate alongside the giant ACLEDA with its still very large microcredit portfolio, and also compete against an expanding raft of smaller commercial and NGO-structured MCIs.

From 2010 onwards, the largest MCIs in Cambodia began a completely new phase in their development, one that is having major repercussions today. This change came about because foreign investors discovered Cambodia's microcredit sector. Very substantial funding and investment was soon coming its way in the hope of generating a healthy investment return. As a result, Cambodia today receives just short of 10 per cent of *all* microcredit investments in the world, which is only just exceeded by India with its nearly 100 times larger population (Symbiotics, 2016: 23). Very much thanks to this inflow of funding, the microcredit sector was able to opt for exponential growth. The statistics are quite staggering. The number of clients officially served by Cambodia's MCIs went from around 300,000 in 2005 to nearly 1.6 million in 2013, making it one of the largest microcredit sectors in the world. Average annual growth since 2004 has been of the order of 45 per cent, turning what were once relative minnows into very large MCIs. Still, the growth has continued. The growth registered in 2015 alone - \$US 1.4 billion - was actually larger than the entire market as recently as 2011, and by the first quarter of 2016, there was an astonishing 41 per cent year-on-year growth in microloan volume (Rozas, 2016a). With such massive volumes of microcredit pumped into the poorest communities, as Figure 1. shows, it became clear that the once 'holy grail' of the microcredit sector - full outreach, or every poor individual who wants a microloan can easily get one - had been reached many times over.

Figure 1.: Growth in microcredit outstanding in Cambodia in \$US from 2005 to the end of 2016 (excluding ACLEDA)



Source: Cambodia Microfinance Association.

The massive expansion in loan volumes, along with constantly lowering unit costs, has helped bring spectacular profitability for almost all of the largest MCIs. Much of the profit generated to date has been used to further expand the MCIs, several of which are now among the most profitable in the world. However, a good deal of it has been converted into growing remuneration for the CEOs and senior management, as well as growing returns to shareholders. Indeed, as elsewhere in the increasingly deregulated global business sector of late (Black, 2013; Galbraith, 2014), it is *precisely* the potential to dramatically increase staff remuneration and dividend payments out of growing revenues and short-run profits that accounts for the impulse behind the rapid expansion of Cambodia’s MCIs.

Pointedly, rapid expansion and significant profit-taking have continued in spite of many flashing red lights being raised by knowledgeable microcredit advocates with extensive experience in Cambodia, such as Rozas (2016b). The most obvious indicator that all is not well is that over-indebtedness in Cambodia’s poor population directly related to the microcredit sector is now at an all-time high. Many are aware of this problem and numerous studies have been commissioned to provide a more accurate picture of what is going on (see the discussion below).

Less publicized, but still a sign that the microcredit sector has entered a new dangerous phase in its expansion, is the fact that average size of a microloan has also been rising quickly in recent years (*ibid*). This is a typical sign that, in conditions of over-indebtedness and the lack of new clients, a Wall Street-style ‘extend and pretend’ pro-

cess has begun in an effort to cover up the mounting problems. The technique involves MCIs agreeing to provide an additional larger microloan to both existing and new clients. This offer achieves two important things. First, a potentially defaulting microloan on the books of an MCI can be booked down as 'successfully repaid', which helps keep its hugely important repayment rate high, while the 'new' microloan extended makes it look as if there is still some growth potential left in the market. Both outcomes help to gin up the financial and operational figures for the MCI, which helps in providing a rationale for continued salary hikes and bonus payments whilst also maintaining shareholder and investor confidence. Second, with new clients becoming increasingly scarce, it is now common for a microloan to be offered to the clients of another MCI in order to facilitate them to switch suppliers. The new clients use the larger microloan to repay their old microloan, and they may find that they have a little left over to repay the first couple of installments due on their new microloan, or to facilitate some additional spending. In this case, there is real growth of the MCI obtaining the new client, but merely client poaching from the point of view of the MCI losing a client. Overall, by constantly rescheduling microloans into the future and keeping clients on a treadmill of debt, both of these forms of 'extend and pretend' help to maintain the surface appearance of individual microcredit institution success and continued market expansion.

Perhaps the most worrying sign that things are starting to go very seriously wrong is that the microcredit sector appears to have begun to enter into a final Ponzi stage of financing - Cambodia's poor are increasingly taking out new microloans simply in order to repay the repayments due on existing microloans (see below). Combined with the possibility of an idiosyncratic event leading to the funding for MCIs being cut back, concern is mounting that, like the dilemma that faced Bangladesh's enormous microcredit sector around 2009-10 (Chen and Rutherford, 2013), Cambodia's microcredit sector must somehow pull, or be pulled, back from the edge, or else it will face catastrophe.

Increasingly fearing that a microcredit meltdown was not far off and that the government of Prime Minister Hun Sen would be sucked into the vortex, that idiosyncratic event might just have arrived. Starting in late 2016, the Cambodian government began, finally, to take some action to deal with mounting individual over-indebtedness among the poor and the negative impacts of microcredit, especially the land-loss issue (see below). The initial action taken was to insist upon higher capital reserves,² followed in early 2017 by a campaign to disassociate all state institutions

2 The Cambodian government issued a proclamation, or prakas, that formally obliged MCIs to quickly increase the amount of reserve capital they hold and that might internally cover for eventual losses (rather than require a state bail-out). For example, deposit-taking MCIs must now hold reserves of \$US 30 million rather than just \$US 2 million, while non-deposit-taking MCIs must hold \$US 1.5 million as compared to only \$US 622,000 before. See the report by Cam McCraht, 'NBC raises capital requirements for Kingdom's banks', Phnom Penh Post, 25th March, 2016. Retrieved from: <http://www.phnompenhpost.com/business/nbc-raises-capital-requirements-kingdoms-banks>.

from the once hugely celebrated microcredit sector. This latter action was based on the fear that a coming crisis of repayment would not just need the state to bail-out the over-indebted poor, or the MCIs, or both, but that it could also very well metastasize into a full-blown financial crisis. This would arise if the over-indebted poor thought that the government would be forced to repay their microloans for them or cancel them,³ or if the clients realized that no new microloans would be forthcoming. Both of these situations typically encourage voluntary default, sometimes en masse.

The most dramatic development, however, took place in March 2017 when the National Bank of Cambodia announced a ceiling on MCI interest rates of 18 per cent beginning April 1st, which nearly halves what many of Cambodia's MCIs are charging their poor clients.⁴ This latest announcement sparked a fight-back from Cambodia's microcredit sector to be spearheaded by its lobbying arm, the Cambodian Microfinance Association (CMA). Moves immediately began to get the Cambodian government to back-down on the interest rate cap. The CMA hired a high-profile microfinance lobbyist and employee of the European Microfinance Platform, Daniel Rozas, to defend their members.

The main initial tactic Rozas deployed was to circulate a number of claims, or 'scare stories', to the effect that the interest rate cap would mean the end of virtually all forms of credit for Cambodia's poor, which would then mean they would be forced into the clutches of the local money-lender if they still wanted credit (see Rozas, 2017). Although both logic and subsequent events very quickly demonstrated that these claims were entirely unfounded (see Bateman, 2017a, 2017b; Kunmakara, 2017), alarm nevertheless spread across the microcredit sector and into government circles. Another scare tactic involved an attempt by Rozas to directly undermine the work (and career) of a leading Cambodian researcher, Kimty Seng (2017a), who had produced an influential article arguing that microcredit was producing a negative impact on his country. Because the Cambodian government had taken to quoting this article in its attempts to confront the out-of-control microcredit sector, steps were taken by Rozas to destroy its credibility as much as possible. This involved a round-robin email prepared by Rozas that was to be quietly sent to a select number of high-profile and mainly US-based microfinance advocates, asking them to cooperate behind the scenes by identifying all the possible flaws in Seng's analysis. These flaws were to be collected and written up by Rozas into a formal note to be quietly circulated

3 The government required that MCI officials tell their clients that they (the MCIs) are fully private bodies and are not part of the state, so that, among other things, clients could not expect the state to repay any defaulting microloans. State officials were also instructed to no longer get involved in helping an MCI take possession of collateral to be forfeited, such as land, as a result of a microloan going bad. See 'Stay out of loan disputes, officials told', *Khmer Times*, 20th February. Retrieved from: <http://www.khmertimeskh.com/news/35604/stay-out-of-loan-disputes--officials-told/>.

4 See 'Central Bank sets interest rate cap', *Khmer Times*, 14th March. Retrieved from: <http://www.khmertimeskh.com/news/36430/>.

to all key Cambodian stakeholders, but especially to leading officials within the Cambodian government and regulatory agencies overseeing the microcredit sector.⁵

At the time of writing (November 2017), it is too early to say if these and other underhand tactics will succeed in getting the Cambodian government to reverse the measures it has taken to try to head off a microcredit sector meltdown. Although the signals are pointing to massively increased risk, Cambodia's microcredit sector might yet still avoid an outright collapse. Given that the government (and the IMF among others) is extremely fearful of the consequences to Cambodia's financial system if the microcredit sector were to go under, a more likely scenario is for a bail-out of the sector and a further tightening up of the regulations at some point in order to deter continued reckless lending. Either way - collapse or bail-out - the result will be less than optimum for Cambodia's poor. As I point out below, the poor have actually gained very little from the microcredit sector's rise to power, while the managers and investors have spectacularly profited, but the poor could now be stuck with the bill (higher taxes or lower social spending) to keep the financial system going if it all goes sour.

3. ASSESSING THE IMMEDIATE IMPACT OF MICROCREDIT

Right from the very start, the expectation was raised that the growth of Cambodia's microcredit would very soon see poverty reduced and that the poor would finally emerge from their impoverishment and deprivation. However, the evidence for this remains very weak indeed.

As in almost every other developing country where the microcredit model has become well-established, the international development community and individual MCIs have sponsored a variety of studies and impact evaluations of Cambodia's microcredit sector, with the purpose of assessing the benefits of the growing supply microcredit. What these purport to show, in general, is that microcredit has many benefits, including poverty reduction, support for many new informal microenterprises that might not have otherwise emerged, and gains in terms of the empowerment of women (Clark, 2006; Sinha, 2008; Nguyen and Vogel, 2011; Lun, 2013; Simanowitz and Knotts, 2015a). There are also other traditional early Bangladesh-style benefits tied to being able to obtain lower cost microloans from a formal microcredit provider compared to using the local money-lender (Mekong Strategic Partners, 2015).

The majority of these econometric studies and impact evaluations are, however, actually of little use in determining the real net benefits of microcredit to Cambodia's poor. This is because of the manifest tendency of the authors, if not their outright aim

5 The existence of the round-robin letter project was widely leaked by many of those on the recipient list (including to this author by three individuals on the circulation list), and so it is possible that the idea may have been abandoned for fear of creating adverse publicity.

(see below), to programmatically underplay and/or ignore all of the most important downsides to the microcredit model in Cambodia. With no downsides to the microcredit model factored into an analysis, it is almost inevitable that one is left with only the upsides to report (on how this technique is routinely deployed in microcredit evaluations, see Bateman, 2013).

There is much evidence of such fraudulent and unethical practices with regard to the evaluation of Cambodia's microcredit sector. For example, there is the 'case study' of ACLEDA produced by the Asian Institute of Finance (2015), which is in reality nothing more than a paid-for PR exercise designed to roundly celebrate the achievements of ACLEDA. Nonetheless, as was intended, it added to the celebration of ACLEDA as an institution that has supposedly helped the poor. An even more problematic case here is the book-length exploration of one of Cambodia's largest MCIs - AMK - paid for by AMK. This output - Simanowitz and Knotts (2015a) - was not only a paid-for PR exercise masquerading as an 'independent' examination, it was accompanied by many unethical actions in order to try to publicize and validate the book as much as possible. For example, the two authors agreed to pen a blog for the UK's *Guardian* newspaper, which focused upon the dangerously rising debt situation in Cambodia (Simanowitz and Knotts, 2015b), but although the fast-growing AMK is actually one of the drivers behind this dangerous level of over-indebtedness, this fact was carefully skirted around as the authors sought to portray AMK as genuinely concerned for its clients.⁶ Moreover, the very latest developments at AMK in late 2017 - the planned sale of a majority stake in AMK to an aggressively profit-seeking Taiwan-based commercial bank was announced (see below) - contradicts almost everything written by Simanowitz and Knotts just a few years earlier about the supposedly 'socially-concerned' AMK.

Clearly, then, individuals and groups paid to promote the microcredit sector are hardly the most reliable sources when it comes to providing reliable information on the question of impact. More forgivable but still somewhat problematic are those mainstream researchers that are brave enough to admit that the microcredit model had had little to no positive impact on poverty in Cambodia, but they still only arrive at that important conclusion by stepping over or ignoring the most important downside factors. This is the case with Seng's (2017a) important study. This study sees little real value in microcredit, but Seng arrives at this important conclusion by omitting to factor in almost all of the adverse issues that have undermined the microcredit model's functioning in Cambodia (though he quickly corrected himself and

6 Another extremely problematic intervention was on 25th May 2015, when Mr. Marcus Fedder penned a very positive review of Simanowitz and Knotts' book on Amazon's US website. See https://www.amazon.co.uk/review/R3ITUVS2FIW5M9/ref=cm_cr_dp_title?ie=UTF8&ASIN=1853398659&channel=detail-glance&nodeID=266239&store=books. In his review, Mr. Fedder made no mention whatsoever of two rather pertinent facts, however: first, that at this time he was a Director of AMK, Chairperson of its Risk Committee and a member of its Audit and Finance Committee, and, second, that he personally commissioned the book produced by Simanowitz and Knotts.

began to refer to just such downside issues in later outputs - see Seng, 2017b) (see the discussion below).

Thus, from the many studies and impact evaluations undertaken in Cambodia to date, it is not really possible to derive an accurate conclusion as to the net impact of microcredit. A much more accurate assessment of the full impact of microcredit in Cambodia therefore - at the very least - needs to uncover and discuss the main problematic areas. Since likely problems are common to most of the other microcredit sectors around the world (see Bateman, 2010), the process is actually not too onerous. A number of problems are particularly important in Cambodia and, I would argue, they completely swamp the minimal upsides highlighted to date by microcredit advocates and mainstream researchers.

Efforts to firmly establish a causative link between the dramatically rising supply of microcredit in Cambodia (especially in recent years) and important achievements in terms of poverty reduction and sustainable local economic development have largely come to a naught. For a start, as noted above, the evidence already presented to this effect is biased and incomplete. For a start, the recent impressive economic growth in Cambodia is overwhelmingly attributable to the rapidly expanding garment industry (see Dasgupta and Williams, 2010), aided by rising tourism (especially around the Angkor Wat temple complex in northern Cambodia), and expansion in the rice industry (including for export). While expansion of the rice sector has had some tentative connection to the microcredit industry in the past (see below), the other sectors have little direct connection to microcredit.

Instead, the main initial outcome of an increasing supply of microcredit was a flood of new informal microenterprises and self-employment ventures in the simple services and trading sectors. This had little direct impact on poverty, however, because these sectors were already struggling in the 1990s. Stimulating further competition with easily available microcredit simply reduced the average turnover pertaining to all participants in a particular market and also created downward pressure on local prices. This combination inevitably generated limited additional rewards for all of those directly involved. The situation was made even harder after 2008 when the global financial crisis reached Cambodia and when the microcredit sector was being widely touted as one of the proximate solutions to the economic damage washing across so many developing countries. As Hab and Kunmakara (2009) summarized (see also National Institute of Planning and Ministry of Planning, 2015), increased competition in the informal sector as a result of the rise in desperation-driven and microcredit-enabled new entry led to quite rapidly falling informal sector incomes across a range of simple activities. Notably, this was the case in retail, street food and personal transport. Many of those working in informal microenterprises had to substantially increase the hours they worked in order to generate enough of an income upon which to survive (Mendizabal et al., 2012: 106). Urban areas, where there was

much in-migration from the rural provinces, and where many new simple microenterprises were thus established as survival mechanisms, were predictably most hit by the resulting over-supply of microenterprises. As the quotes cited at the head of this article highlight, World Bank researchers Heltberg, Hossain, Riva and Turk (2012) found that easy access to microcredit at the time of the global financial crisis, rather than acting as a safety mechanism, often plunged the poor in Cambodia into an even deeper world of poverty, deprivation and asset-dispossession.

In the agricultural sector in particular, still the mainstay occupation and income source for the majority of Cambodians, the entry of microcredit into the agricultural cycle has resulted in some marginal productivity gains and some new forms of non-farm self-employment, which together contributed to raising average incomes. However, such short-run gains have come at the cost of a pronounced long-run dependency on expensive formal and informal microcredit, as well as the inability (because the microcredit provided is simply too small) to begin to scale-up into more productive forms of semi-commercial farming. The worst sector in this regard is also by far the largest agricultural sector in Cambodia - rice. In their study in Takeo province, Ovesen et al. (2012: 5) point out that microcredit did not provide the hoped-for once-only initial investment many farmers wanted and could use to escape their poverty, such as up-scaling into larger farms through land purchase or rental. Instead, their engagement with the microcredit sector has become a permanent and increasing drain on their limited incomes. More farmers have thus been 'included' within the financial sector, one of the initial goals of the whole microcredit exercise, but largely at a serious disadvantage to them.

Moreover, with most profitable microenterprise opportunities soon drying up because of new microcredit-induced competition, it was inevitable that the rapidly expanding supply of microcredit would be increasingly diverted into supporting simple consumption spending needs instead. Thus, the study by Seng (2017a: 15) finds that most microcredit in Cambodia is now taken out for consumption spending. This is one of the central reasons he finds that microcredit "has at best no effect on household welfare, and may have an adverse effect" and also "finds no evidence that the expansion of microcredit benefits borrowers." The result is that all of Cambodia's poor are now also increasingly 'included' within the local financial system, which is otherwise a major goal of the international development community, but they are using the increased availability of expensive microcredit simply to purchase needed consumption goods and healthcare services. Interest rate payments must now be budgeted into the daily or weekly spending needs of the poor, and because interest rates are often quite high when all the various fees and hidden charges are included, the poor find themselves gradually transitioning to an even more precarious situation than ever. The inevitable result of this gradual build-up of household debt is more vulnerability into the longer term.

Neither has the massive increase in the supply of formal microcredit substituted for more expensive informal credit obtained from the local money-lender, as was long thought to be one of the main benefits of the microcredit model (Yunus, 1998). In Cambodia, it appears that the growth in formal microcredit is symbiotically linked to informal credit (Bylander, 2015). For example, it is well known that formal microcredit is often used simply to repay more expensive informal loans, which is a good thing. But at the same time, as Ovesen and Trankell (2014) found to be quite common, informal loans are increasingly taken out to repay one's monthly repayment to the MCI, because otherwise the client would have to forfeit the land certificate lodged previously as collateral (see the discussion below). The informal money-lender has thus not been replaced by formal microcredit, but actually given a completely new lease of life and renewed validity within the local financial system.

The short-run impact of microcredit is thus likely to be very limited in terms of poverty reduction. As even CEOs and senior managers working in Cambodia's microcredit sector sometimes quite openly admit when challenged,⁷ there is simply no solid evidence that microcredit has played a role in Cambodia's recent impressive record of poverty reduction.

4. MICROCREDIT UNDERMINES SUSTAINABLE DEVELOPMENT AND GROWTH

With most impact evaluations showing little to no immediate benefit from microcredit, a fall-back argument began to be deployed by the global microcredit industry, suggesting that the real benefit of microcredit was its ability to underpin development and growth, which would sustainably reduce poverty into the longer-run (for example, see Sachs, 2005). However, in fact, the microcredit model also drives forward a number of other deleterious longer-term developments that undermine its claim to having achieved important gains for Cambodia's poor.

4.1. SATURATED LOCAL MARKETS

Development of the formal sector in Cambodia has been severely undermined by the overwhelming presence of so many informal microenterprises, which is a part function of the ubiquity of microcredit. Informal enterprises in Cambodia (as everywhere else - see Farrell, 2004) gain an unfair advantage over formal enterprises

7 Some surprisingly frank admissions on the lack of evidence that microcredit has positively impacted on poverty were forthcoming from a number of senior personnel working in the microcredit sector. For example, then CEO of AMK, Paul Luchtenberg, openly admitted that the microcredit sector had no evidence that their microloans were reducing poverty, but after many years spent building AMK up into one of the most profitable MCIs in Cambodia, he tellingly added that it would actually be "important to know". See Stephen Kurczy, 'Micro-lenders run reality check', *Asia Times On-line*, 5th March, 2009.

by avoiding taxes, paying minimal wages, refusing to invest in order to meet normal health and safety regulations, and so on. Among other things, this unfair advantage allows the informal enterprise sector to take valuable market demand away from the formal sector SMEs operating in the same sector (even if just temporarily), thus preventing them from operating at the most efficient scale. As the World Bank's Enterprise Survey (2016: 10) found, formal enterprises in Cambodia held the practices of the informal sector to be by far the most important business constraint (28 per cent of enterprises compared to 16 per cent and below for a range of other potential barriers). Predictably, small- and medium-sized enterprises were the worst affected (29 per cent and 31 per cent, respectively), while large enterprises were little affected. Cambodia's least productive informal enterprises thus serve to unfairly displace, or 'crowd out', the far more efficient formal SMEs upon which we know that sustainable development and growth largely depend.

A second adverse form of 'crowding out' is that related to the intermediation of a country's financial resources. Cambodia today represents probably the most microcredit-dominated financial sector in the world, with as much as 45 per cent of its financial resources intermediated into microcredit applications (Sinha, 2013). This situation arose because in the 1990s microcredit lending began to prove itself to be a highly profitable and low-risk business activity when compared to lending to formal SMEs. Financial institutions thus began to invest into building up the microcredit sector, while existing commercial banks began to 'downscale' into microcredit lending and neglect or even abandon their SME lending portfolios. This particular form of financial sector 'crowding out' has been exceedingly damaging to Cambodia's hopes of developing into the longer term. The shortage of capital for formal SMEs was registered as extremely severe as far back as the 1980s, but because growth in the financial sector has overwhelmingly involved the expansion of microcredit, this funding gap has actually grown quite considerably. Even today, the availability of credit for formal SMEs remains one of the biggest problems in Cambodia (World Bank, 2016a), clearly stunting the development of its formal SME sector. Adverse financial intermediation has therefore resulted in a very small starved-for-capital formal SME sector standing alongside an over-expanded and stuffed-with-capital, low productivity informal microenterprise sector. With the offer of microcredit continuing to increase compared to bank loans mainly targeted at formal SMEs (World Bank, 2016b: 28), it is clear that this adverse financial disintermediation trend has become damagingly embedded.

4.2. MASS OVER-INDEBTEDNESS NOW THREATENS THE STABILITY OF THE ENTIRE ECONOMY

Following growing unease at the extent to which individual and household over-indebtedness was beginning to emerge in Cambodia in the early 2010s, several of the

leading financial institutions providing finance to Cambodia's MCIs got together and commissioned a more detailed examination of the main drivers of over-indebtedness (Liv, 2013). The Liv study identified the extent of market saturation in Cambodia as a whole,⁸ finding that 6 per cent of villages were saturated, 9 per cent had very high market penetration, 17 per cent had high penetration and 62 per cent had moderate penetration (*ibid*: 13). The study went on to find high levels of multiple borrowing from a range of MCIs, and it found that this factor was clearly linked to over-indebtedness. The extent of over-indebtedness was evidenced in the most saturated villages, where Liv found that nearly a quarter of MCI clients were insolvent, defined as having a repayment commitment on a microloan higher than their net monthly income. Insufficient income arising from the microenterprise activity funded by a microcredit (which mainly referred to agricultural activities, including rice) was also linked to over-indebtedness, though it was also found that most individuals actually repaid their microloan out of waged income. Finally, coping strategies used to repay a microloan in the event of insufficient income include lower food quality and intake, migration, drawing down savings, and, perhaps most worrying of all, simply accessing a new microloan in order to repay an outstanding one (*ibid*: 52).

Liv's study emphasized the growing over-indebtedness problem as seen in 2012 and it usefully illuminates several of the key issues, notably multiple borrowing, which it sees as one of the principal endogenous drivers of over-indebtedness in the studied regions. By all accounts, too, Liv's data points to the important fact that up to 2012 virtually anyone in Cambodia wishing to access a microloan had been able to do so quite easily. Indeed, if Liv was finding damagingly high levels of over-indebtedness in the data up to early 2012, *when the total loan volume in Cambodia was around one sixth of what it reached in 2016*, one can begin to understand why analysts such as Rozas (2016a) are warning of how dangerous the microcredit *over-supply* problem in Cambodia is at present.

Further important support for Liv's negative conclusions then came from the Cambodia Socio-Economic Survey 2014 (CSES, 2014) that highlighted the quite staggering rise in over-indebtedness in the country in just a few years. While incomes have been rising in recent years, this was more than offset by the fact that the average Cambodian was by 2014 spending around 45 per cent of disposable income on debt servicing. The ADB (2014: 14-15) also expressed its deep concern at the growing level of debt in the very poorest communities in Cambodia but that, for obvious shame and humiliation reasons, much of it goes unreported. The ADB's conclusion (*ibid*: 15) was that "the high and potentially underreported level of indebtedness among the poor and the significant share of loans of an unproductive nature suggest that the issue of vulnerability is more significant than existing poverty analyses recognize".

8 Liv defined a village as 'saturated' if the total number of microloans supplied was greater than the total number of households (which would give a penetration rate of 100 per cent).

But perhaps the most worrying aspects of the rapidly increasing level of borrowing is that, as noted above, there has been a dramatic rise in new borrowing (albeit from a low base) simply to repay previous borrowing, with borrowing simply to repay previous borrowings having doubled between 2013 and 2014 alone.⁹ Rozas (2016b) also points to the rapidly rising average microloan size as one of the ways that the MCIs get around regulations governing the number of microloans any individual may possess. Rather than trying to sell another microloan to an individual already possessing one or more microloans, Rozas points out that most MCIs are now offering a much larger microloan that a new client can use to repay all of their existing microloans, with a little left over for consumption spending or to restock one's microenterprise. By all accounts, however, it would appear that the classic Minskyian debt dynamic, whereby one is forced into more borrowing simply in order to fund the repayments due on previous borrowings, has become embedded in Cambodia's rural regions.

So what caused such monumental levels of microdebt to arise in Cambodia in the first place? Clearly a very powerful force is both driving the increased supply of microcredit but also, crucially, encouraging often reluctant individuals to get way over their heads in debt in order to absorb this increased supply.

In fact, it is not difficult to identify the most powerful driver of over-indebtedness in Cambodia. As in the case of the mortgage credit excesses engineered by Wall Street that precipitated the Great Financial Crash in 2008 (Galbraith, 2014), and as we have seen in places like South Africa of late (see Bateman, 2014c), the spectacularly rapid expansion of the microcredit sector in Cambodia in recent years was essentially made possible by the wholesale adoption of reckless lending practices. Defined as the situation where a credit provider pumps out as many loans as possible without regard for the quality of those loans or the eventual consequences of client over-indebtedness, reckless lending has become a pervasive driving factor in pumping up Cambodia's microcredit sector. Responsibility for adopting this approach to lending principally lies with the MCI's CEO and senior managers and its owners. Why might they do this? One reason is that many of the CEOs, senior managers and expatriate advisors employed at Cambodia's leading MCIs have been very focused on increasing their own compensation and benefits (see below), and it was realized very early on that the best way to achieve this goal was to ensure the very rapid expansion of the MCI. Among other things, this would generate the increased revenues and profits out of which increased salaries and bonuses are typically paid.

Important additional pressure towards reckless lending was also provided by external, mainly foreign, investors. The increasing need to see high dividends and capital appreciation in order to maximize shareholder returns is a global investment

9 See the report by Ananth Baliga - 'Burden of debt eats into incomes', *Phnom Penh Post*, 21st October, 2011. Retrieved from: <http://www.phnompenhpost.com/business/burden-debt-eats-incomes>.

imperative today. These foreign investors have thus added to the internal pressure for reckless lending strategies to be adopted by the MCIs. It is also noteworthy that many foreign investors are based in some of the richest developed countries, also enjoying the lowest taxes and weakest regulation of financial institutions doing business abroad. Their willingness to provide local MCIs with as much credit as they require for on-lending has clearly provided the fuel behind the reckless lending episode. With a compliant international development community on hand to offer further support and validation,¹⁰ the stage was thus set for a spectacular episode of reckless lending-driven expansion of Cambodia's microcredit sector. As a recent rush of new investments makes clear, the downsides of such a reckless lending strategy have yet to fully impact on the Cambodian economy. What is sure from all similar examples of financial sector excess, however, is that what goes up must also come down. The final outcome is therefore likely to be messy.

For example, by funding their recent rapid expansion with foreign loan finance, the MCIs have created a fragile structure that some analysts fear could collapse at any time if the local or global environment changes in some way.¹¹ The scenario would be that foreign capital will quickly head for the exit, and this will precipitate a liquidity crisis and a marked slowdown in lending. Clients might begin to default en masse if they feel that no further microcredit will be coming their way (a growing proportion of new and larger microloans are used simply to help repay outstanding microloans - see below), and this will then quite quickly turn into a solvency crisis. Yet another 'microcredit meltdown' will ensue and Cambodia's poor will be the main casualties.

4.3. LAND LOSS FACILITATED BY THE MICROCREDIT SECTOR

The loss of land constitutes one of the most important factors accounting for why the poor are so often plunged into irretrievable and chronic poverty (Hulme, Moore and Shepherd, 2001), very notably in India (Bhide and Kapur Mehta, 2004). In Cambodia, land was once fairly equally distributed and landlessness a rarity. In more recent times, however, and for a variety of reasons, there has been an accelerating trend towards the concentration of land into fewer and fewer wealthy hands (Williams,

10 For example, as well as providing important technical support and advice, the World Bank's IFC investment arm has been a major investor into Cambodia's microcredit sector from very early on in its development. For a long time, IFC held a very profitable 12.5 per cent equity share in ACLEDA, and it has also provided various loans to such as PRASAC, offered at comparatively high interest rates, for on-lending as microcredit. Not unimportantly, IFC also provides important ideological cover to justify the enormous profitability of Cambodia's microcredit sector, thus defending it against the Cambodian government and others who might see such large profits as incompatible with a mission to serve the poor.

11 For example, the growing amount of external funding compared to local deposits has resulted in the loans-to-deposits (LTD) ratio in the microcredit sector rising to an all-time high in 2014, standing at 193 per cent (see IMF, 2015: 4).

1999; Brown, 2000: 34; Springer, 2015). The data are patchy, but all seem to confirm growing landlessness. A major survey in Cambodia's rural areas found that landless households accounted for just over 4 per cent of the sample in 1969, rising to around 10 per cent by 1999, and the figure was expected to touch 15 per cent by 2001 (Biddulph, 2000: 27). In 2007, landless households overall (including families that do not rent land) were 38 per cent of the total, but this figure increased to 40 per cent in just a few years (Dalis et al., 2015: 1). In spite of numerous programs designed to resolve the problem, such as the LMAP (Land Management and Administration Project) (see below), the gradual loss of land by the poor has continued. Landlessness is now a key factor in helping to explain rural poverty and vulnerability in Cambodia (ADB, 2009: 3).

This issue of landlessness is raised here because it is now becoming clear that one of the main mechanisms whereby the poor in Cambodia are gradually being detached from their land very much involves the microcredit model. It is now almost standard practice in Cambodia that, in order to obtain a microcredit, one must lodge one's land certificate with the MCI as collateral.¹² While some of the poor in Cambodia have benefitted from rising land prices and their ability to access a microloan to purchase a small plot of land in order to expand their own land plots,¹³ such positive cases would appear to be relatively trivial in impact compared to those many more individuals that have lost their land as a result of this collateral requirement.

The simplest way to detach an individual from their land is where that individual is forced to sell land in order to repay a microloan taken out to finance a business project that is failing or has failed. Biddulph (2000: 30) was perhaps the first to report at the very start of the microcredit movement in Cambodia in the mid-1990s that getting entangled with microloans could result in the loss of one's family land. He found in his early studies that nearly four per cent of those having lost their land did so on account of a microcredit-supported business going bad. Interestingly, Biddulph's (2000: 52) study identified the increasingly commercial nature of MCIs in the sample regions, and he asked very pertinent questions about whether the MCIs, as they moved in that commercializing direction, would always take enough care in offering microloans to individuals who might predictably default and then lose their land (see also Biddulph, 2014: 2).

The warnings raised in 2000 by Biddulph (2000) turned out to be very prescient indeed. By the mid-2000s, with Cambodia's microcredit sector now extensively commercialized, So (2011:137) reported that a large and growing number of cases were beginning to emerge where the poor had indeed lost their land after having

12 See 'In Cambodia, you cannot get a loan from a bank without a land title', *Khmer Times*, 11th December, 2014. Retrieved from: <http://www.khmertimeskh.com/news/6963/in-cambodia--you-cannot-get-a-loan-from-a-bank-without-a-land-title/>.

13 See 'New MFI aims to target small businesses' *KhmerTimes/Sum Manet*, 4th February 2016. Retrieved from: <http://www.khmertimeskh.com/news/21033/new-mfi-aims-to-target-small-businesses/>.

lodged the land certificate with the MCI, or even just the application receipt given the claimant after having submitted a land title claim.¹⁴ As part or full repayment of a defaulting microloan the land certificate, or application receipt, is simply forfeited and the MCI then sells it on to a third party at the most appropriate time. Chhay (2011: 1128) confirmed that this process was well advanced and that “indebtedness is one of the major causes of land sales and of an increasing gap between the poorest and the rich”.

The data we have on this deleterious development is somewhat unclear. For obvious reasons, the growing landlessness and land-grabbing issues are politically extremely sensitive, while the MCIs for their part have gone to great lengths to obscure what collateral they collect and how they dispose of it and to whom. Nonetheless, some analysts claim that as much as 10-15 per cent of Cambodia’s rural land has been obtained from the poor in this microcredit-facilitated manner.¹⁵ Moreover, the value of the land taken is almost inevitably very much higher than the remaining value of the microloan it was used as collateral against. This provides an obvious incentive for the more unscrupulous MCIs to push clients into default in order to seize their valuable land, or, even worse, to advance a microloan on a small business project knowing in advance that it was very likely to fail.¹⁶

One indication of the problem is that in the mid-2010s one in three of the new microloans issued by ACLEDA were backed by land titles,¹⁷ and that through the regular default of these land collateralized microloans, ACLEDA ended up becoming a major force in the property field. As Dell’Asin (2011) reports on the process from Kampot Province, “People easily access funds, but with no long-term plans, they are quickly unable to repay the loan and are left with only one option: giving the land to ACLEDA, now the primary land owner in the province.” Another example is the case of a village in Kampot Province in southern Cambodia, where a group of villagers lost

14 This was an even better and quicker method the MCIs found of doing business, especially at a time when land values were rising on account of rising demand for land for tourism sites, plantation agriculture, middle class apartments, and so on.

15 See George Steptoe, ‘Cambodian flood victims drowning in debt’, *The Diplomat*, October 22nd, 2013. Retrieved from: <http://thediplomat.com/2013/10/cambodian-flood-victims-drowning-in-debt/>

16 In the course of preparing the paper that formed the basis of this article, I interacted by email with a number of Cambodia-based human rights researchers and development NGOs. I was informed that some of Cambodia’s MCIs appear to be deliberately seeking to benefit themselves by advancing microcredit for clearly unsustainable business projects, which will later allow them to dispossess clients of particular plots of land and make a healthy profit selling it on to developers. In India, this hugely disruptive process is known as ‘debt farming’ (Roth, 1983) and it is not an uncommon phenomenon in other parts of South Asia. While its emergence in Cambodia cannot be confirmed as yet, based on the anecdotal evidence obtained, it would not be an entirely unexpected development.

17 See: ‘Congressional hearing in the US pushes cut Cambodian aid’, *The Cambodia Daily*, July 13th, 2013. Retrieved from: <http://www.opendevdevelopmentcambodia.net/news/congressional-hearing-in-us-pushes-cut-to-cambodian-aid/>.

their land and houses to several local MCIs when a bad harvest meant they could no longer repay their microloans. Pointedly, even after taking out microloans from their local money-lender to repay at least part of what they owed to the MCIs, they were unable to halt the land seizure process (Kurczy, 2009).

Interestingly, the aforementioned LMAP project has failed to avert this tide of land-losses, and may even have contributed to the problem. Informal ownership of land generally presented no barrier for the local money-lender to make a microloan, since they generally had other means of extracting payment than seizing land in the event of problems. In fact, as already noted above, Ovesen and Trankell (2014) found that many individuals in deep debt to a local MCI come to the local money-lender in order to obtain their monthly repayment amount, because otherwise they would forfeit their land certificate lodged previously with the MCI as collateral. Many MCIs tend to act somewhat differently, however. Newly-titled land is, as intended, very easily transferable yet it is immovable, and so it can be readily used as collateral by the MCIs when providing a microcredit. Indeed, this transaction was exactly what perhaps the world's most famous promoter of land titles for the poor, Hernando de Soto (2001), had in mind. But what De Soto failed to understand was that land titles make it much easier for the poor to lose their land when their microenterprise goes under, which we know a very large number actually do. And this is exactly what has been happening in Cambodia, as Biddulph (2000) first reported. Interestingly, those helping implement the LMAP project appeared to have anticipated just such an adverse outcome, with Bugalski (2012: 37) asking the pointed question, "Is it likely that titled land used as collateral for credit will lead to an increase in unmanageable debt burdens, and more frequent defaulting on interest repayments, and thus the acquisition of land by creditors?"

Reactions to the emerging problem of microcredit-driven landlessness have been mute until quite recently. Moreover, the recent reaction of some MCIs to the problem they have had a hand in creating might actually be exacerbating the situation. As Bylander (2013) reports, many MCIs have taken to funding the migration of individuals attempting to escape their poverty predicament, which is often related to land loss, with relatives remaining in Cambodia repaying the microloan for them, sometimes with remittances. Some MCIs are funding those who are desperately seeking work abroad in order to earn emergency cash to repay what they owe *before* their land is seized as collateral. One might say that the problem created by the microcredit sector is being resolved, rather neatly, by helping to export the casualties to neighboring countries.¹⁸ Of course, growing remittance flows back into Cambodia,

18 This migration issue creates, among other things, one very obvious practical research problem that helps to bias any impact evaluation. This is that those achieving some success with a microloan tend to remain in Cambodia and can be interviewed and otherwise incorporated into any impact survey, while those whose microenterprise failed, or who lost land as a result of repaying a microloan, can no longer be interviewed or otherwise included in a data set because they have left the region.

approaching \$US 1 Billion in 2014, of which half comes from Thailand, has clearly generated some benefit for those migrating and for family members left behind in Cambodia. But the fact remains that forced migration driven by a failed microenterprise project and subsequent loss of land, is the definition of a failed intervention, not a successful one.

More recently, against the background of a major drought affecting many parts of Cambodia, and fearful of the obvious potential to foment social unrest, this particular problem has finally elicited some action by the Cambodian government. When it was reported that some MCIs were relieving many of the drought victims of their land in return for cancelling a now unrepayable microloan, it was obvious to all that the negative impact of the drought on the communities in question was being multiplied many times over by taking land from those in debt. Meanwhile, the MCIs appeared to be benefitting from obtaining this land since they could quickly sell it on to eager developers for a handsome profit. After first requesting in late 2015 that the MCIs cease such actions,¹⁹ a much more robust statement was made by Cambodian Prime Minister Hun Sen at the 'National Summit on the Development of Microfinance Sector in Cambodia', held in Phnom Penh in March of 2016. Several media sources reported the Prime Minister as having "Blast(ed) certain unnamed microfinance institutions (MFIs) and NGOs (and) he accused (them) of gouging consumers with high-interest loans and confiscating land assets when they failed to pay them back."²⁰ It was clear that public anger at the obvious profiteering by a number of MCIs was beginning to create 'blowback' for the entire microcredit sector, as well as for the important international financial institutions that back the microcredit sector and upon which the Cambodian government depends for financial and technical support in other areas.

Overall, the gradual loss of land resulting from an unrepayable microloan stands as one of the potentially most deleterious outcomes associated with the rise of the microcredit model in Cambodia. While the extent of the problem remains under-researched to date, the fact remains that mounting debts associated with the microcredit model are very clearly, but quietly, being translated into growing landlessness, and thereafter inevitably into rising poverty and deprivation among the already poorest citizens of Cambodia. If we recall that the Grameen Bank was founded as an institution primarily to help Bangladesh's very poorest - its landless - (Versluysen, 1999: 75), it is disturbing, to say the least, to find that the microcredit sector in Cambodia is increasingly driving the poor into landlessness.

19 See Sonia Kohlbacher and Aisha Down, 'Debt and drought', *The Cambodia Daily*, September 3rd, 2016. Retrieved from: <https://www.cambodiadaily.com/weekend/debt-and-drought-117521/>.

20 For example, see 'Cambodia: Microfinance sector praised, but some lenders called out', *Syminvest*, March 15th. Retrieved from: <https://www.syminvest.com/news/cambodia-microfinance-sector-praised-but-some-lenders-called-out/2016/3/15/5783>.

4.4. VALUE AND WEALTH ARE BEING DRAINED FROM THE POOREST LOCAL ECONOMIES

From the 1990s onwards, the global microcredit industry was pressured to convert into a for-profit business model that would be financially self-sufficient and run according to 'efficient' private sector imperatives. The perhaps unintended result of this conversion process, as Mader (2015) points out, is that the global microcredit sector is now extracting very significant value from those poor individuals languishing at the so-called bottom of the pyramid. But it is the elite group of CEOs, managers, advisors, consultants, investors and shareholders that are enjoying the results of this value extraction, not the poor clients of an MCI. As Harvey (2004) argues using a now famous term he coined to describe the main wealth creation mechanism that emerged from the 1980s onwards under 'financialized' capitalism, the microcredit industry has become one of the most adept institutions of all in promoting the process of 'accumulation by dispossession'. This is the process of accumulating wealth not by producing something of value, but by carefully dispossessing others in society of their individual and collective wealth (see also Foroohar, 2017 for an examination of how Wall Street's banks were central to this process).

In several ways, this 'accumulation by dispossession' process is very advanced in Cambodia. Some of the very first NGO-style MCIs were soon converted over to for-profit respectability, starting with ACLEDA. As was the case all over the global south (Bateman, 2010; Sinclair, 2012) the senior NGO employees that pushed this process through were very soon turned into wealthy CEOs and senior managers and, in some cases, part-owners of their MCI. More important to Cambodia, however, was the arrival of many individuals with microcredit and banking experience hoping to get rich by working with Cambodia's poor. While always downplaying their own personal financial rewards and stressing their great commitment to Cambodia's poor, the generous salaries and lavish lifestyles of many of the foreign managers and advisors working and privately investing in Cambodia's microcredit sector has been an open secret for many years. The recent emergence of reckless lending has, as intended, increased this level of private reward. While the salaries and bonuses of senior management are rarely publicized, it is notable that many of the early managers and advisors working in the main MCIs have gone on to become members of Cambodia's wealthiest elite.²¹

The global financial investment community has also invested heavily in Cambodia's microcredit sector, believing that it represented a major opportunity to realize very high returns on their investment. Foreign investors have taken major stakes

21 For example, see 'Phnom Penh's wealthy seek a quieter life', *The Cambodia Daily*, April 25th, 2013. Retrieved from: <https://www.cambodiadaily.com/archives/phnom-penh-s-wealthy-seek-a-quieter-life-18778/>.

in several of the largest MCIs, using their own capital and skills to turn the MCI acquired into a major generator of profit and dividend. This trend essentially started with ACLEDA's decision in 2009 to sell an equity stake to the international investment house Jardine Matheson Holdings.²² Subsequently enjoying in some years as much as a 30 per cent Return on Equity (ROE), this investment very handsomely paid off for ACLEDA's wealthy foreign shareholders. A number of other MCIs began to follow ACLEDA's strategy and engage with foreign equity partners, and in some cases went much further by selling out the entire MCI to a foreign entity. In 2012, for example, Sathapana Microfinance was bought by Japan's Maruhan Bank, in 2015 Amret became majority-owned by a Luxembourg-based venture capital firm,²³ and in early 2017 Lanka Orix Leasing Company (LOLC), a Sri Lankan conglomerate, acquired another 48 per cent of Prasac, Cambodia's largest MCI, for \$US 186 million, thus gaining majority ownership.²⁴

All such foreign investments simply would not have been undertaken were it not for the expectation that very high rates of return were possible working in the Cambodian microcredit sector. Has this been the case? For sure, the financial return statements of most of the big MCIs record very impressive profits indeed, and Cambodia's MCIs are among the most profitable in the world. Just occasionally, too, spokespeople for some of Cambodia's MCIs let the cat out of the bag that they have been making extraordinary profits from working with Cambodia's poor. This was the case, for example, when the Phnom Penh Post decided to do an interview with John Brinsden, a UK citizen, former senior banker at Standard Chartered Bank and long-time Vice Chairman and then Chairman at ACLEDA.²⁵ Further important evidence

22 Jardine Matheson Holdings paid \$US 34 million to obtain a 12.25 per cent stake in ACLEDA. See 'Jardine invests \$34 million in Cambodia's ACLEDA', *Phnom Penh Post*, 2nd August, 2010. Retrieved from: <http://www.phnompenhpost.com/business/jardine-invests-34m-cambodia-s-acleda>.

23 See 'Cambodia - Sathapana to become a commercial bank', *Syminvest*, 23rd March, 2016. Retrieved from: <https://www.syminvest.com/news/cambodia-sathapana-to-become-a-commercial-bank/2016/3/23/5824>.

See also 'Cambodia - AMRET moves up the ratings ladder', *Syminvest*, 22nd March, 2016. Retrieved from: <https://www.syminvest.com/news/cambodia-amret-moves-up-the-ratings-ladder/2016/3/22/5827>.

24 See 'Sri Lankan Firm Buys Majority Ownership of Largest MFI', *Asean Breaking News*, march 20th, 2017. Retrieved from: <https://www.aseanbreakingnews.com/2017/03/sri-lankan-firm-buys-majority-ownership-of-largest-mfi/>.

25 Looking back on his long career at ACLEDA, Brinsden openly boasted about the spectacular profits they were making at the time. The most pointed comment he made was to relate to the interviewer the story on being asked by his former Chairman at Standard Chartered Bank why he was working in the microcredit sector. His reply was, "When you get a 24 per cent return on investment, you can come and see me I might give you a job!" There was no comment from Brinsden, however, on how much poverty reduction ACLEDA had really achieved, had they promoted development or whether they made any sort of developmental difference in Cambodia. See 'Cambodia Economic Report', *Phnom Penh Post*, October 11th, 2011, pages 8-9.

showing the large returns possible when investing in Cambodia's microcredit sector was provided in 2015, when Jardine Matheson Holdings eventually disposed of its shareholding in ACLEDA to two Japanese investment bodies. Receiving almost \$US 164 million for its initial outlay of \$US 34 million, this represented an astonishing five-fold financial gain for Jardine Matheson Holdings, making their foray into the world of microcredit more than worth the investment.²⁶ By the same token, having paid such a large sum for just a share in Cambodia's largest microcredit bank, the expectation held by the two Japanese investment bodies is also that the returns to be made from working in Cambodia's poorest communities will be more than enough to justify their investment.

The very latest proposed sell-off of equity in a Cambodian MCI is potentially the most damaging of all to the validity and reputation of the microcredit sector in Cambodia. This is because it involves the one MCI held up above all others to be the most 'socially concerned' and 'pro-poor' - AMK (see Simanowitz and Knotts, 2015a). In September 2017, the Shanghai Commercial and Savings Bank, announced that it was on the way to purchasing a majority stake in AMK.²⁷ With a reputation as one of the most aggressive banks in Asia, the indications are that AMK will be further commercialized, further expansion planned, and its poor clients 'sweated' for any remaining value that can be extracted from them. Parallel to this, of course, we might logically expect, as is the norm in the global microcredit sector (see Bateman, 2010:112-153), that the existing core shareholders and senior management will carefully have put themselves in line to get their own personal 'top dollar' financial rewards for offloading their stake in AMK to this new commercial partner.

As elsewhere around the world (see Mader, 2015), Cambodia's microcredit sector has proved adept at creating and appropriating major revenue stream based on the ability of the very poorest in Cambodia to service high interest microloans. This revenue stream serves to channel a large and growing amount of value up and out of the very poorest communities in Cambodia and it flows into, as we have seen, the hands of a narrow managerial and investment elite. Furthermore, much of this value ends up in the hands of high-end financial institutions and wealthy investors located *outside* of Cambodia, thus also depriving Cambodia of important demand. Providing a justification for exacting such a tribute would be difficult to make even if it could be shown that an important benefit was being delivered to the poor in Cambodia (which, as I have shown above, is not the case). The only conclusion to

26 See 'Japan's SMBC, Orix to raise stakes in Cambodia's Acleda Bank' *Nikkei Asian Review*, August 24th, 2015. Retrieved from: <http://asia.nikkei.com/Business/Companies/Japan-s-SMBC-Orix-to-raise-stakes-in-Cambodia-s-Acleda-Bank>.

27 Reported by Reuters here: <https://www.reuters.com/article/brief-shanghai-commercial-savings-bank-t/brief-shanghai-commercial-savings-bank-to-buy-stake-in-amk-microfinance-institution-idUSL4N1LZ33J>.

make, therefore, is that such a tribute serves to undermine and impoverish the weakest communities in Cambodia for which the entire exercise involving micro-credit is supposed to benefit.

5. CONCLUSION

The analysis above has indicated that the Cambodian microcredit sector is in a major dilemma, one that is all too familiar to many other countries in the global south, as much as it is to the citizens of the advanced capitalist countries. The microcredit sector has proved itself to be a highly commercial and profitable business sector, which not just fails to achieve the original poverty reduction objectives it ostensibly set out to achieve, but the evidence strongly points to the fact that it has actually undermined the fulfillment of these objectives. Some marginal gains in terms of ease of access to finance and the establishment of new microenterprises are minimal gains compared to the many serious downsides that have emerged, but which, with some honorable exceptions, have been largely ignored by most MCIs in Cambodia and the largely foreign microcredit advocates that support them. Urgent measures are clearly needed to head off a rapidly approaching 'meltdown' and to fundamentally restructure Cambodia's local financial system on a much more sustainable, developmental and genuinely pro-poor foundation.

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THE INTERPRETATION OF THE DUTY OF CARE BY LENDERS TO THE POOR IN DEVELOPED AND DEVELOPING COUNTRIES: ANTITHETICAL APPROACHES

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ABSTRACT

This paper argues that if credit is to be offered ethically to the poor in developing countries, a duty of care of the lending institution to the borrower needs to be recognized. In developed countries, the offer of credit is generally made as if such a duty of care were recognized: this paper argues, originally, that it is the use of the group liability system in microfinance that explains why this is often not the case in developing countries. The paper argues for two criteria to be met to establish a duty of care, and concludes that microfinance meets these, and specifies how microfinance institutions might meet it. The importance for policymakers and regulators is that much more must be done to flesh out what is required by way of client protection for microfinance lenders to fulfill their moral duty of care.

Keywords: Duty of care; Microfinance; Absence of duty of care in developing countries

JEL Codes: G21; K15

1. INTRODUCTION

This paper argues for a moral duty of care to be recognized as holding on lenders to the poor, for whom the potential harms from the extension of credit are the greatest. I examine why this is not clearly recognized and what it would take to fulfill it, and consider the prospects of the financial inclusion movement doing so more successfully than the microfinance movement has done.

If a potential borrower wants to take out a loan in a developed country¹, the likelihood is that he or she will go to a lending institution that is part of the formal financial sector and is regulated. The lender will begin by assessing how much it thinks the borrower is capable of repaying and set the loan amount accordingly. It will calculate a reasonable repayment term and check the client's credit record. It will typically require proof of income and details of any other loans. Although the sub-prime mortgage debacle in the US showed that these rules could be trashed if the broking agent has sufficient incentive, sub-prime was the exception that proved the general rule. And although it is still possible to take out payday loans at exorbitant interest rates in developed countries, advertising is regulated, safety measures have been introduced and even interest rate caps used. In general, though not without exception, in developed countries the lender's interest in being repaid has ensured that he at least tries to ensure that the borrower does not borrow more than he can afford to repay.

Contrast this with a borrower seeking a loan in a developing country, where in many cases the formal sector serves only 5-20% of the population.² A major source of financial provision to the poor in developing countries over the past forty years has been microfinance, which has grown from lending to 13.5 million borrowers in 1997 to lending to 204 million borrowers in 2012³. In contrast to the individually assessed system in developed countries, here the basic model has, historically, been to make loans in groups, with no collateral, no credit or income checks, and few checks on other outstanding debts. Because the lender can look to the borrower's group to make good their payments in the event of default, his interest in being repaid does not re-

1 This paper follows the country classifications of the World Economic Situation and Prospects (WESP), which is prepared by the Development Policy and Analytics Division (DPAD) of the Department of Economic and Social Affairs of the United Nations Secretariat (UN/DESA). This classifies all countries of the world into one of three broad categories: developed economies, economies in transition, and developing economies. Developed countries are those high-income countries with a gross national income (GNI) per capita of \$12,745 and above. WESP then subdivides all other countries into low-income countries (GNI per capita of \$1,045 or less), lower middle income countries (\$1,046-\$4,125) and upper middle income countries (\$4,126-\$12,745). Where 'developing countries' is used here, it refers to all those countries that are not classified by WESP as developed. See World Economic Situation and Prospects 2015, pp 137-144 at: http://www.un.org/en/development/desa/policy/wesp/wesp_archive/2015wesp_full_en.pdf.

2 Gallardo et al., *Comparative review of microfinance*.

3 Reed et al., *Resilience*.

quire him to ensure that every individual borrower is able to repay. It is sufficient that the group can cover any default.

The claim of microfinance institutions (MFIs) is that their provision of credit has the social aim of raising the borrower out of poverty. Yet far less effort goes into establishing the affordability of the loan for the borrower than is the case in developed countries.

This paper examines why this is so, and argues that MFIs owe a duty of care to their borrowers and specifies how this might be met. It proceeds by (i) laying out what I mean by a duty of care, and who owes it to whom, before (ii) examining whether it is a duty required of microfinance lenders and why it does not seem, historically, to have been practiced by these lenders. I will then (iii) examine how a duty of care on a lender should be met, and consider to what extent the Client Protection Principles (CPPs) of the SMART Campaign have been a move towards doing so. Finally, I consider the prospects for the world of financial inclusion overseeing a step change from microfinance in recognizing and implementing a duty of care to its most vulnerable borrowers before concluding.

2. METHODOLOGY & LITERATURE REVIEW

This paper draws primarily on the results of an extensive literature review, taking place in three stages. The philosophical literature, and then the social science disciplines literature, was reviewed for relevant concepts as outlined below. The literature search was continuously updated during this paper's development, last current as of March 2017. The entirety of this material was then brought together in an interdisciplinary analysis, and applied to an illustrative case study.

First, the concepts of "paternalism" and a "duty of care" were examined using an iterative search strategy of the body of philosophical literature. These concepts are used and discussed in multiple branches of philosophy, for example in medical ethics, legal ethics, and applied ethics. In the Western tradition, much of this stems from the 19th century work of John Stuart Mill. Therefore, the initial remit of the search included all major philosophy journals and libraries, with an evolving search strategy outlined as follows.

- All literature searched for analyses of "paternalism" in a setting where it coincides with a "duty of care".
- The results from this search were refined to include only that which explicitly focuses on transactional settings. This largely excluded the medical and bioethics literature.
- To reflect nuance in the use of terms by different philosophical disciplines, the search was extended to literature which distinguished a moral duty of care from the legal one.

Second, a literature search was conducted to review financial inclusion, microfinance lenders, and their practice, drawing largely on the economic and political science disciplines. A substantive body of work on the practices of microfinance was consulted, principally using the Marshall Library of Economics in Cambridge, and the CGAP/Microfinance Gateway Library online, in addition to journal searches. The author has also met with microfinance groups in Malawi, Zambia, and India, and observed the practices described in this paper first-hand. Whilst this supported the findings in established literature, it is not drawn on explicitly in this paper.

3. THE DUTY OF CARE IN MICROFINANCE

3.1. THE DUTY OF CARE

The concept of a duty of care is well defined and understood in the UK and US laws, but has more recently been used in the context of a wider, more extensive set of obligations in medical, virtue and care ethics. When I refer to a duty of care here, I mean a duty on one party to another that is coincident with the established, legal duty of care that is the cornerstone of the law of tort in the UK. This comes with fewer obligations than when the term is used in medical and virtue ethics, but has the advantage of these obligations being better defined, clearer to ground in moral principle, and being of wider application (to any profession or transaction, including lending).

The obligation that the legal duty of care imposes, is that one party may not cause harm to another when providing a good or service, where the supplier of the good or service can foresee, or can reasonably be expected to foresee, that the recipient cannot judge for himself whether or not the good or service is harmful to him. If the duty of care is breached, the party owing the duty of care becomes liable for paying damages to the party to whom the duty was owed.

The legal position on who owes to whom, a duty of care was shaped in English and Scots law in the seminal decision by the House of Lords in the case of *Donoghue v. Stevenson*, 1932, well-known to all British lawyers. In his leading judgment (which allowed the appeal of Donoghue to claim for suffering caused to her by ingesting parts of a decomposing snail in a ginger beer bottle manufactured by Stevenson), Lord Atkin expounded his 'neighbor' principle:

The rule that you are to love your neighbor becomes in law you must not injure your neighbor; and the lawyer's question: Who is my neighbor?, receives a restricted reply. You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbor. Who, then, in law, is my neighbor? The answer seems to be persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions that are called in question....

A man has a Duty of Care to conduct himself in such a way as to avoid harm to others, where a reasonable man would have seen that such harm would occur.⁴

The Lords found that because the manufacturer had sold a bottle of beer in darkened glass, so that the ultimate consumer had no possibility of inspecting it before opening and drinking it, the manufacturer had a duty of care to the consumer to be absolutely sure that no noxious substances could enter the bottle between it leaving him, and reaching the consumer. This landmark decision opened up modern negligence law, such that a provider of services or goods has to ensure they are fit for the purpose intended, whoever ultimately uses them, regardless of whether there is a contract between the ultimate consumer and original provider or not.

A duty of care applies between one party and another in a transaction, then, when (a) the product the seller is supplying is potentially harmful, and (b) the purchaser's ability to assess the appropriateness for themselves is foreseeably impaired (whether through their relative ignorance, or the product being sold in such a way as for them not to be able to do so). For these circumstances to hold, the parties in a transaction will often be unequal in their negotiating power, and one may hold all the expertise: but it is the potential harm of the product and the restriction on the purchaser's ability to ascertain its suitability for themselves that are crucial.

Medicine, of course, is a common area where a duty of care is required. However, the fuller duties sometimes held by medical ethicists to be part of a doctor's duty of care are not here being appealed to. A doctor may indeed have a fuller obligation not only not to harm his or her patient, but to act in their best interest: but it may be better to think of this as part of a doctor's fiduciary duty to his patient, rather than extending the 'no-harm' duty of care principle to cover these fiduciary duties as well. The fiduciary duty to act in a patient's best interests may well encompass the 'no-harm' duty of care, but the no-harm duty of care does not encompass further fiduciary obligations. The legally-scoped duty of care is narrower in scope, covering only a duty not to harm, but is wider in application, to transactions and professions well beyond those involving fiduciary obligations. A limited paternalism from the expert is demanded in many exchanges.⁵ These do not have to be only occasions on which a wider fiduciary obligation also holds.

It may seem that what generates the duty of care is the fact that the transaction is between expert and non-expert, rather than because what is transacted is potentially harmful to the purchaser. But a non-expert selling a potentially seriously harmful product to another non-expert would still have this duty, and there are plenty of expert to non-expert transactions where a duty of care is *not* taken to hold: it was not required of digital TV salesmen in the UK, for example, that they ensure the potential purchaser could actually receive the digital signal before making the sale.

4 *Donoghue v. Stevenson*, SC (HL) 31 (UKHL May 26, 1932).

5 See, e.g. O'Neill, *Autonomy and Trust in Bioethics*.

What links cases where a selling expert has a duty of care to a buying non-expert is the potential of product to harm the purchaser. This applies as much to the stock-broker selling the client a product promising a certain yield and capital security, when in fact its structure is such that it is likely to wipe out the client's life savings, as it does to the doctor and surgeon. It is not the relative expertise that drives a duty of care between the participants in a transaction, but the obligation on the seller to take precautions to ensure that what he supplies does no harm to the purchaser, accompanied by a lack of ability on the part of the purchaser to establish this for him- or herself.

3.2. A DUTY OF CARE IN MICROFINANCE

Thus, to establish if a duty of care applies to microfinance, we need to establish if microfinance is potentially harmful to the borrower, and whether the credit offering is sufficiently transparent to the borrower so that they can accurately assess any risks they take in accessing it.

The application of this to microfinance could be as follows. A loan carrying an interest charge, especially a very high one, is a potentially dangerous product for the borrower. It may facilitate some profitable transaction whose profit margin more than covers the interest rate cost: but it may also lead the borrower into a downward spiral of debt from which they cannot extricate themselves. The product of debt is, clearly, potentially dangerous, as with Stevenson's snail-infested ginger beer.

The borrower's poverty matters here. An extension of credit to one who would have to sell their last assets if they were unable to repay, has a great deal more potential for having harm done to them than the extension of credit to one who would only have to forgo some marginal consumption if the business failed.

If it is also the case that the microfinance borrower is unable to assess if the product is suitable for them or not, due to the opaqueness of the terms of credit, then this would complete the set of criteria to be met to establish a duty of care on the lender. Opaqueness as to credit terms would operate like the darkened glass on the ginger beer. Without knowing the true interest rate, the borrower cannot properly judge if the cost of the loan is likely to exceed the margin they can make using the loan, and therefore cannot assess the real risk of the credit to him- or herself.

So what is the empirical evidence both of the potential harms from microfinance, and the transparency of the terms on which it is lent?

With regard to potential harm from microfinance, many of the early studies on the impact of microfinance on alleviating poverty appeared positive, but turned out to be flawed. In a 2011 systematic review of 2643 publications on the impact of microfinance, Duvendack and co-authors found only 58 worth studying in depth, noting "our report shows that almost all impact evaluations of microfinance suffer from weak methodologies and inadequate data", and concluding that "there is no 'good

evidence' for the belief that microfinance actually succeeds in alleviating poverty, and that the microfinance phenomenon had been based on 'shifting sands'".⁶

There have now been a number of randomized control studies on the impact of microfinance that do provide good evidence of its effect. The largest and longest running of these is the 'Spandata' study⁷, which concluded that there was no net impact on average consumption, or indeed on the empowerment issues measured. Six further studies in Morocco,⁸ Mongolia,⁹ Bosnia,¹⁰ Ethiopia,¹¹ and Mexico¹², summarized by Banerjee, Karlan, and Zinman in the *American Economic Journal: Applied Economics* in January 2015,¹³ echoed these findings, as did Banerjee's 2013 survey of other studies.¹⁴

In summary, Banerjee finds that microfinance is not transformative. It facilitates an increase in business investment and activity: but neither necessarily a profitable one, nor one that has an impact in reducing borrowers' poverty. It increases choice, but there is nothing to suggest that it will be a good choice to make. There was little support for strong claims of impact, positive or negative, on the *average* borrower, but some support albeit more analysis needs to be done for the idea that microfinance benefits a very few by a significant amount and that the losers from it are generally the poorest of borrowers. This last point that the losers from microcredit generally are found amongst those who, being the poorest, start out with the most to lose, was also found by Paul Mosley and David Hulme back in 1998.¹⁵

In his exhaustive inquiry into the industry of microfinance, David Roodman also summarized the position as: "on current evidence, the best estimate of the average impact of microcredit on poverty is zero."¹⁶ Yet as Roodman also points out,

6 Duvendack et al., 'What is the Evidence of the Impact of Microfinance on the Well-being of Poor People?', pp 75.

7 Banerjee et al., 'The Miracle of Microfinance?.'

8 Crepon et al., 'Estimating the Impact of Microcredit on Those Who Take It Up', pp 123-150.

9 Attanasio et al., 'The Impacts of Microfinance', pp 90-122.

10 Augsburg et al., 'The Impacts of Microcredit', pp 183-203.

11 Tarozzi et al., 'The Impacts of Microcredit', pp 54-89.

12 Angelucci, Karlan and Zinman, 'Microcredit Impacts', pp 151-182.

13 Banerjee, Karlan, and Zinman, 'Six Randomized Evaluations of Microcredit', pp 1-21 They are reassured that their conclusions here also echo Banerjee's survey using other studies, "Microcredit under the Microscope: What Have We Learnt in the Last Two Decades, What Do We Need to Know?", *Annual Review of Economics* 5 (2013) pp 487-519.

14 Banerjee, 'Microcredit under the Microscope'.

15 Mosley and Hulme, 'Microenterprise Finance: Is there a Conflict Between Growth and Poverty Alleviation?', pp 783-790.

16 Roodman, *Due Diligence*, pp 3.

having a net zero impact is not the same as having no impact. A net zero impact can be achieved by there being no impact on any borrower; or by there being a number of successes which are offset by an equal number of losses. We need a sense of the distribution of the benefits and burdens of microfinance to assess how many suffer from their exposure to credit, and by how much. As Malcolm Harper put it: "It is surely unacceptable that an intervention that is intended to help the poor should injure any of them."¹⁷

Unfortunately, there must be some for whom this must be true. The randomized control trials referred to above, and particularly the Spandata study, give us some grounds for assessing this.

The Spandata study was the first randomized evaluation of the impact of introducing microcredit in a new market. Spandata, a fast-growing MFI, was expanding into Hyderabad and chose 104 areas of the city as it planned new target markets. It then randomly chose 52 of these to begin lending in to in 2006 and 2007. All 104 districts (6,000 households) were then surveyed around eighteen months after lending had begun, and then again after two to three years, with the latter (2010) respondents being surveyed again in 2012.

On the basis of these findings, Bannerjee et al.¹⁸ divided the borrowers into two groups: the so-called 'gung-ho entrepreneurs' and 'reluctant entrepreneurs'. Gung-ho entrepreneurs had wanted to expand previously existing businesses, but had been constrained by lack of capital; reluctant entrepreneurs only undertook businesses because they could not have what they really wanted, which was a job. They still needed to generate some income to meet consumption expenses or to repay loans taken out to meet consumption expenses, therefore starting a micro enterprise in order to do so.

Banerjee et al. could not find, overall, significant impact from microcredit, but what they did find was that a very small minority did receive a significant benefit from their borrowing. Virtually all the gains achieved across all borrowers were made by the top 5% who had owned a business previously, the gung-ho entrepreneurs. For the remainder, the 95% reluctant entrepreneurs, there were no gains.

But if overall impact of microcredit is around zero, and there are significant gains but which are taken by just 5% of all borrowers, there must be some significant losers from microcredit as well. It could just be possible that 95% are all just losing a little bit, but it is also possible that a majority find little difference made one way or the other, but then a significant minority will be seeing significant losses and their poverty deepening.

Because the microfinance industry does not usually track what happens to its 'drop-outs', those who leave the lending group and do not renew loans, it is hard to be precise here. The number of drop outs can be very high: Graham Wright found

17 Harper 'Some Final Thoughts', in: Dichter and Harper, *What's Wrong with Microfinance*, pp 259.

18 Banerjee et al., 'Do Credit Constraints Limit Entrepreneurship?'

dropout rates as high as 25% - 60% in East Africa¹⁹, and Hulme and Mosley found dropout rates of 15% in Bangladesh²⁰. Given Bannerjee et al.'s findings that it was the successful pre-existing business owners who wanted to take on more credit to expand, it seems unlikely that many of these drop-outs are for the good reason of success that they no longer need credit. It seems much more likely that the majority of drop-outs are borrowers who are either defaulting on a loan because they cannot afford it, or strive to pay off this one but are sacrificing so much in doing so that they no longer wish to carry on with further borrowing.

Worryingly, Hulme and Mosley's work also shows the losers from microfinance, those who drop out and cannot repay, and who tend to be the poorest to begin with. Their poverty deepens but this is the group with the highest disutility from any further deepening of their poverty.

The consequences of over-indebtedness can of course be very severe, including driving desperate borrowers to suicide, as with the crises in Andhra Pradesh. The coercion involved in loan collection is reported by Ramesh Arunachalam, a rural practitioner, as covering threats, abuse, repossession and sale of property, embarrassment, physical intimidation and shaming²¹. The anthropologist Lamia Karim observed similar credit-related strife among members and their families during her research there. This ranged from scolding, removing a woman's gold nose-ring (a symbol of marital status, symbolically divorcing/widowing her), and taking a woman's family's food supply, leaving them with none.

Karim reports that the NGOs also use the apparatus of the state, the police, to have defaulting women arrested until a loan is repaid. She met a number of women who had then been divorced by their husbands because they had "disgraced" their family by going to jail.

It seems, then, that microfinance is certainly potentially harmful to borrowers, and to the most vulnerable who will suffer the most disutility from a loan turned sour. Does microfinance also fulfill the second criteria for requiring a duty of care to be exercised, a lack of transparency?

It is unquestionably true that the true rate of interest charged to the borrower is rarely as transparent as it should be. Typically, a 'flat rate' of interest is charged, quoted monthly: say, 5% per month for a four-month loan. A headline rate of 5% will then be quoted, rather than 20% for the four months, or 60% if it were rolled for a year; or 73% if the 20% every four month rate is compounded (i.e. interest is paid on interest.) This is how the rate would have to be quoted in the

19 Wright, 'Dropouts and Graduates: Lessons from Bangladesh', pp 14 - 16.

20 Hulme and Mosley, *Finance Against Poverty*.

21 Arunachalam, *The Journey of Indian Microfinance*.

UK.²² Indeed, matters are much worse than this: a full calculation of the interest paid, allowing for the capital sum paid off each month, fees etc., could be well over 200%.²³

There are arguments for not including every step in the interest calculation above for figuring out the true rate of a microcredit loan: the client may not renew it every four months, though they are encouraged to, and most do. The point, however, is that an MFI which quotes the low rates here and hides the true cost behind a lack of transparency to the borrower, misleads the borrower. For those who insist that it is *caveat emptor*, and the frequently illiterate borrowers should be able to work out all this for themselves, we should note that this is not a standard we demand for considerably less vulnerable borrowers in developed countries, where, as noted, in the UK the disclosure of the APR rate is compulsory before any loan agreement is finally signed.²⁴

A duty of care in lending has not, hitherto, been clearly established. That may partly have been because in the past, a financial institution may often have acted in the same way as it would have done had such duty been recognized. It would do so as a result of its own self-interest in maximizing the chances of getting the loan repaid. In developed countries, analysis of a borrower's cash flow or business prospects for a business loan is standard practice before extending a loan: not from paternalistic motives of preventing over-indebtedness in the borrower, but to protect the profitability of the financial institution, which would suffer severely if more than a few are unable to repay loans.

A duty of care may always have existed, but been subsumed from our notice by the institution's own self-interest in acting in the same way as if it had been. It has been the use of the group liability model in microfinance that has divorced the interest of the lending institution from that of the borrower with regard to repayment.

22 The standard rate that any UK financial firm must quote in addition to any other rate it uses is the Annualised Percentage Rate (APR) which is $1 + ((\text{interest rate}/100)/\text{number of compounding periods})$ raised to the power of number of compounding periods.

23 The 5% rate will be quoted on a flat-line basis: interest is charged on the full sum initially borrowed in each month, rather than on a declining balance basis, i.e. only on the remaining sum of the loan outstanding (on a four-month loan, a quarter of the principal will be paid off each month, as well as the interest due.) A loan of 100 for four months, with 25% paid back each month, is an average balance over the four months of only 62.5, not 100, but interest is charged on the full 100. The 'simple interest' of a flat 20% over four months is 32% on a declining balance basis, which compounds not to the 73% annual rate above, but 229%. Worse is to come. On top of all of this, if 20% of the original loan extended (100) is held back as 'savings', so that the borrower actually only receives 80, but pays interest as if it were 100, then the final annual percentage rate that the borrower pays, compounded, on the money actually received, rises to 274% (Some MFIs also deduct fees from the loan amount before extending it, and most frequency of repayment periods are much shorter than monthly, usually, weekly or biweekly; both factors will raise the true cost of interest still higher).

24 As it is in the EU and US, albeit the method of calculating APR is a little different in the US compared to the UK and EU.

The use of group liability creates perverse incentives for loan officers. An MFI needs to be incentivized to ensure that every individual it lends to is capable of repaying their loan through generating a sufficient margin on the business they undertake. Group liability means that it is incentivized to ensure only that there are enough (it need only be one or two) borrowers in the group who are doing so well that they can cover the payments of the struggling borrowers as well.

This in turn may leave some individuals seriously losing out from their microcredit experience, since their defaults are not covered by other borrowers without cost to the original borrower. The demands of fellow group members on a defaulting borrower for compensation for making his or her payment may be brutal for the borrower, including confiscation of their last remaining assets or even taking the roof from their home.²⁵

The dual criteria for a duty of care being owed from MFI to borrower are thus met. What, then, does a duty require on those who have the duty? Does it imply a limited, but required, paternalism? In medicine, we believe so. Where the product is potentially harmful and the patient unable to assess its advantages and disadvantages, but believes he wants it, we expect the doctor to override the patient's autonomy and refuse to prescribe where he believes it will do more harm than good. Ditto financial services: the borrower may want a loan, but if considering his business prospects or overall cash flow, the lender perceives it to be more likely to harm than benefit him (even though not necessarily harm the lender where group liability exists), and there are grounds to believe that the borrower is unable to figure this out for themselves (pressure of poverty or lack of transparent interest rates), then the lender has a duty to the borrower, paternalistically, not to make that loan.

Microfinance, then, has a duty of care not to extend loans to borrowers when the loan at the rate lent is likely to be harmful, and when through the lack of transparency on interest rates, the borrower cannot adequately assess this for him- or herself. By and large, as an industry it is failing to deliver on this duty of care. So what might MFIs be doing?

3.3. HOW THE DUTY OF CARE IN MICROFINANCE SHOULD BE MET

To meet the duty of care owed to borrowers, an MFI needs to demonstrate that each individual has at least some chance of being able to repay the loan. To do this, the MFI needs to establish and record much more clearly what the true interest rate is that the borrower is going to pay over the life of the loan, and realistically assess the margin and profit the business undertaken by the borrower will generate. Together, these would generate awareness that, if things go according to plan, the enterprise is actually capable of meeting the cash flow requirements of the debt. In other words, the MFI would keep records of the projected cash flow and profitability of the busi-

²⁵ See Karim, *Microfinance and its Discontents* (2011), esp. pp 110-111.

ness and the true interest rate being charged on the loan and only extend the loan when the former exceeded the latter.

In the context of microcredit, I argue that such a practice of ensuring projected margins do exceed the interest charged is required if the extension of microcredit is to be carried out ethically. The risks to the borrower when this is not done are just too great: we are considering indebting the poorest, whose ability to withstand a failure is the least. If one stands back and imagines an MFI that made these calculations and understood which of its borrowers were most likely to fail and then went ahead and lent to them anyway, because provided it gets repaid by the others in the group, it is in its financial interest to do so we might more quickly see that what the MFI does here is wrong. If that is conceded, then a requirement not to make that loan when that information is available, and the prior requirement to garner that information, follows.

3.4. DOES 'FINANCIAL INCLUSION' DO A BETTER JOB OF RECOGNIZING A DUTY OF CARE TO POOR BORROWERS THAN MICROFINANCE?

The leading players of the microfinance industry set up the Smart Campaign in 2009 to focus on issues of client protection. It is here, if anywhere, that we can start to find industry policies aimed at preventing over-indebtedness. The Smart Campaign puts forward seven Client Protection Principles (CPPs), listed below:²⁶

The seven Client Protection Principles are:

- Fair & Respectful Treatment of Clients
- Transparency
- Prevention of Over-Indebtedness
- Responsible Pricing
- Appropriate Product Design and Delivery
- Privacy of Client Data
- Mechanisms for Compliant Resolution

The problems with these are several. Firstly, they are not fully specified. Just what does fair and respectful treatment of clients require? What level of interest rates would 'responsible pricing' disallow? To qualify as Responsible Pricing, an MFI need only charge roughly the same as others operating in that country. So if all MFIs in a country charged 60-80%, one more charging 75% would be 'fair'.

Secondly, they are not enforced. Rather, an MFI can sign up to the Smart Campaign and make no changes to its behavior whatsoever. No one from the Smart Campaign will come to see if any of the Principles are followed, or how they are interpreted. If this is self-regulation, it is self-regulation with the regulation left out. In January 2013, a certification programme for the CPPs was introduced. This allows

²⁶ See www.smartcampaign.org.

MFIs to apply to rating agencies, for a fee, for an independent certification that they do indeed comply with the CPPs. But four years on, just 60 MFIs have been certified.

Thirdly, the CPPs do not apply to agent banking, which in India has become a dominant way of distributing credit. This is an important gap. Agents are paid on commission, which the SMART Campaign has found leads 'aggressive and unsuitable sales'.²⁷

Perhaps the biggest problem for the SMART Campaign and its specifications, however, is that it does nothing to tackle the problem inherent in the group lending methodology. When other members of a group make good a defaulting borrower's payment, their efforts at recovering their cost may be more coercive than those of the MFI or its agents. None of the CPPs address this. Thus, sadly, the certification programme could exceed all its currently rather low expectations and set excellent standards that are followed and verified: and the problems of disempowerment of borrowers continue by proxy.

There is hope that financial inclusion offers an improvement over this. If two key problems of microfinance were the levels of interest being charged and the use of group liability, to the extent that the use of digital technology becomes prevalent in financial inclusion, it should both enable more individual as opposed to group liability lending, whilst also being considerably less 'high touch' and therefore lowering the cost of supplying a small loan, creating room for the interest rate to fall.

Further, as microfinance evolves into the much wider world of financial inclusion, it begins to migrate to the formal sector, with its specific regulatory context. Thus the Microfinance CEO Working Groups does recommend, in its 'Client Protection Principles: Model Law and Commentary for Financial Consumer Protection', that as and when legislation is put in place to supervise and regulate the offering of credit, the regulating authority should require transparent interest rates, which should include all fees, be on a declining balance basis and be either EIR or APR. But the onus is put on the regulating authority to enforce this: there is not a suggestion that those lending should be doing this regardless of whether a supervisor is requiring it of them.

Unfortunately, the evidence of the spread of financial inclusion through digital technology lowering interest rates, or through developing a stronger enabling environment is still very limited. The use of mobile phones has taken off in Kenya, the poster child for delivery of loans through mobile technology, but is not yet widespread elsewhere. And if we compare rates charged in Kenya to those elsewhere in Africa, we see microcredit rates three or four times the formal, commercial bank prime lending rate, which is not as bad as the worst cases of Malawi or Zambia, but is bettered in Uganda and Ethiopia in other words, with a range of interest rates from the high teens to over 250% and an average for small loans of over 60%, digital technology is

²⁷ Barres, *Protecting Clients and Building Trust*, pp 10.

not yet making much difference to interest rates.²⁸ Either the cost savings are not as large as might have been thought, or they are not being passed on to the customer.

However, to the extent that a great bulk of the lending over digital platforms is done on an individual rather than group basis, then the interests of the lender and the borrower do begin to realign. Offsetting this, however, will be the extent to which the borrower signs away his or her 'digital wallet' and gives the lender first call on any income, or government benefits, that are paid into their digital account. If the lender does secure this, then he will again become less incentivized to act as if he really did recognize his duty of care.

There is also, unfortunately, one way in which extending Financial Inclusion via digital means may exacerbate the failure of lenders to exercise a duty of care to vulnerable borrowers. This could happen where the use of a digital platform weakens the ties of responsibility of lender to borrower. If the borrower is receiving a loan through a mobile phone from an MFI, financed by a bank, who now holds the duty of care? Adding more actors along the chain blurs the responsibilities and although we might say here that it is shared by the MFI and the bank, the added complexity may weaken individual, and institutions' own sense of responsibility.

4. CONCLUSION

I have argued, then, that a duty of care is owed by lending institutions to vulnerable borrowers, where the loan being sold is potentially harmful to the borrower and its terms so opaque to them that they cannot assess the risk of it for themselves. I have argued that microfinance meets both these criteria: that there is evidence that for a significant minority of borrowers, their lives go very much worse from exposure to credit that they cannot repay, and that the true interest rate charged on that credit is not sufficiently transparent to the borrower. This establishes a duty of care on the microfinance institution to the borrower. I have argued that this needs to be met by much more transparent interest rates and by the lending institution doing much more record keeping of a borrower's income, cash flow and proposed margins on any business he or she plans to start with the loan. I have argued that the use of group liability undermines a lender's duty of care to his borrowers by breaking the link between that duty and the lender's interest in getting repaid.

To the extent that financial inclusion enables more individual lending rather than the group liability methodology, that may help the duty of care to become better established in developing countries, as well as in the developed ones. It may also be the case that once loans are individualized and the interest rate set up against the borrower's capacity to repay, that lending institutions appreciate that many of these

²⁸ Sherratt, *Can Microfinance Work?*, pp 50-51.

loans should not be made in any case, at the interest rate at which it wants to make them. At which point either the market will need to shrink, or the interest rate offered essentially be subsidized down to an affordable level.

To those who would argue that we would then have ended up failing in the goal of financial inclusion, it is worth remembering that all we are doing is failing to include poor borrowers in lending at a price which they cannot afford and which will deepen their poverty if taken advantage of. There is nothing inherently valuable in financial inclusion. Financial inclusion that is dependent on the offer of credit which is in breach of a lender's duty of care to the borrower is financial inclusion that can be lived without.

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THE CHALLENGES OF ENVIRONMENTAL ETHICS IN GLOBAL WORLD: A PHILOSOPHICAL-ETHICAL VIEW

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ABSTRACT

The paper emphasizes that the principal task for environmental pragmatism is also to reengage the meta-ethical and metaphysical debates of environmental ethics, but what is most important is to impress upon environmental philosophers the need to take up the question of what would motivate humans to change their attitudes, behaviors, and policy preferences toward those more supportive of long-term environmental sustainability. While there are other ways to achieve this same end in ethical practice, to abandon such a project would be irresponsible to the different communities we inhabit as environmental ethicists, as well as broadly inconsistent with the admirable reasons why this field got started in the first place.

Keywords: Environmental ethics; Environmental sustainability

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PART I. THE CALL OF CREATION: GOD'S INVITATION AND THE HUMAN RESPONSE

1. INTRODUCTION

It has become clear that care for the environment presents a major challenge for the whole of humanity in the 21st century. A way of life that disregards and damages God's creation, forces the poor into greater poverty, and threatens the right of future generations to a healthy environment and to their fair share of the earth's wealth and resources, is contrary to the vision of the Gospel.

The environmental crisis is especially complex since it involves not only many branches of scientific knowledge, but also politics and economics. The Church recognizes and respects the 'autonomy of earthly affairs' in all these disciplines (Second Vatican Council, Pastoral Constitution on the Church in the Modern World, 1965, Section 36). Its own task is to 'read the signs of the times' and uncover the spiritual and moral issues that lie at the root of the challenges of our time.

Care for the environment is fundamental to the universal good, since the health and well-being of all life depend on a healthy environment. The full human development of every person, both now and in future generations, cannot be separated from the fate of the earth.

In Catholic social teaching, the concept of the common good "implies that every individual, no matter how high or low, has a duty to share in promoting the welfare of the community as well as a right to benefit from that welfare" (Catholic Bishops' Conference of England and Wales, *The Common Good and the Catholic Church's Social Teaching*, 1996, Section 70). Therefore, if the environmental crisis affects us all, then each of us has the responsibility to play our part in addressing that crisis. What is happening to the earth indicates that we must think beyond local and national interests and define 'the community' in global terms. The way we live and the choices we make affect the lives of others: not only human life, but also the other forms of life found on the earth. In 1983, the Catholic Bishops of the USA, referring to the nuclear threat, wrote: "We are the first generation since Genesis with the power to threaten the created order." Today we are threatened by the disregard of a minority for the manner in which its way of life affects the rest of the world.

The Bishops' Conference offers these reflections to all people of goodwill, particularly to Catholics, Christians of other denominations, and followers of those other religions that recognize the earth as the gift of a loving Creator. The task before us is 'the shared problem of the human race' (Common Good, Section 106) and therefore demands the united effort of all humanity.

2. WHAT HAVE WE DONE TO THE EARTH?

Damage to the environment affects every part of creation. Hardly a day goes by without some mention of these matters by the radio, television and newspapers. For many people, this volume of information can be bewildering, since the issues are so wide-ranging, and at first sight many do not concern us here in England and Wales. These problems can be grouped into four main areas.

2.1. DAMAGE TO THE EARTH'S LIFE-SUSTAINING MECHANISMS

The natural world is made up of many different delicate and intricately interconnected cycles that have nurtured and sustained life for millions of years, giving fertile soil, clean water and a pure atmosphere. Now these life-sustaining mechanisms are breaking down through pollution and abuse. In many places, fresh water once teeming with life is dead, beautiful coasts have been turned into sewers, and fertile soil lies barren or has turned into desert. Forests, often described as the lungs of the earth, are reduced to wasteland, and cities are choked with smog. Emissions of 'greenhouse gases' continue to affect the atmosphere in ways that threaten the balance of life on the planet. The resulting climate change could severely disrupt the lives of all of humankind.

2.2. DEPLETION OF THE WORLD'S NATURAL RESOURCES

Our wealth and our way of life depend on the raw materials that are earth's gifts to us. Everything we produce and consume derives from these raw materials. Yet these finite resources are being exploited as if they remained available in infinite quantities. In the last forty years of the twentieth century, world consumption of metals, minerals and other materials more than doubled. Scarcities arising from the depletion of non-renewable natural resources threaten international stability as well as those who immediately depend on them.

2.3. THE IMPACT ON THE WORLD'S POOR

Environmental destruction and social injustice often go hand-in-hand. Damage to the environment will almost inevitably affect the poor most of all, since poor communities inevitably inhabit the worst and most vulnerable locations. What is more, 80% of the world's resources are commandeered by the richest 20% of the world's population. In other words, we in affluent countries take far more than our fair share of the world's goods. Much of our consumption becomes waste almost immediately. Meanwhile, 20% of humanity remains destitute, lacking even the basic necessities of clean water, adequate food, shelter and clothing.

One key principle of Catholic social teaching is that of the ‘universal destination of material goods’. The great Bishop, St. Ambrose, citing the Gospel of Luke in the fourth century, wrote as follows: “If God’s providence bestows an unfailing supply of food on the birds of the air who neither sow nor reap, we ought to realize that the reason for people’s supply running short is human greed. The fruits of the earth were given to feed all without distinction and nobody can claim any particular rights. Instead, we have lost the sense of the communion of goods, rushing to turn these goods into private property” (St. Ambrose, *On the Gospel of St. Luke*).

The right to private ownership, therefore, has strict limits, set in particular by the urgent need of others. The environment is a prime example of a good that is essentially shared, and is not to be monopolized by powerful individuals and groups.

2.4. THE LOSS OF BEAUTY AND DIVERSITY

Human activity has always shaped its environment, including many places now considered areas of great ‘natural beauty’. But more recently economic growth, technology, urbanization and the shift in land-ownership from small farmers to powerful corporations have magnified the scale of this human impact. Grasslands and forests are destroyed for commercial gain, the oceans are over-exploited, and species become extinct. Our need for beauty and our communion with the other creatures of the earth are also denied.

3. UNDERSTANDING THE ‘SIGNS OF THE TIMES’

The environmental crisis has revealed the interdependence of all creation. Whatever we do, whatever choices we make, other people and the earth itself are affected. The symptoms of distress that have been outlined indicate that many human beings have lost an understanding of their true place in creation. By regarding the natural world merely as the ‘setting’ in which we live, and by treating the gifts of creation solely for the satisfaction of our supposed needs as consumers, we have become alienated from the earth and from each other, and therefore from God as well. As Pope John Paul II put it in his message for World Peace Day in 1990, “The gravity of the ecological situation reveals how deep the human moral crisis is” (Section 13). In order to recover health and harmony, these broken relationships must be restored and healed. The plight of the earth demonstrates that an individualistic materialism cannot be allowed to drive out responsibility and love, and that care for those in need, and respect for the rights of future generations, are necessary to sustain a proper life for all.

It is encouraging, though, that many people already recognize these deeper implications. In Seoul in 1990, the World Council of Churches called all Christians to

embrace the cause of 'Justice, Peace and the Integrity of Creation', and to work to achieve a sustainable way of life. Many Christian Churches, and people from other religious traditions, as well as those belonging to none, have advocated a new attitude towards the environment, and recent popes have echoed the words of St. Ambrose, quoted above, by stressing that the earth and its resources are given to the whole of humankind, including future generations, not just to the privileged few of today. Organizations such as CAFOD make no grant for the development or humanitarian work without considering its environmental implications. All these persons represent an "ecological conversion which in recent decades has made humanity more sensitive to the catastrophe to which it has been heading. Man is no longer the Creator's 'steward' but an autonomous despot, who is finally beginning to understand that he must stop at the edge of the abyss" (Pope John Paul II, 19 January 2001, to a general audience in St. Peter's Square). The Pope continued, "At stake, then, is not only a physical ecology that is concerned to safeguard the habitat of various living beings, but also a human ecology which makes the existence of creatures more dignified, by protecting the fundamental good of life in all its manifestations and by preparing for future generations an environment more in conformity with the Creator's plan".

4. REDISCOVERING MORAL AND SCRIPTURAL FOUNDATIONS

Christians see the world through the lens of faith. Our responses to the environmental crisis will therefore draw on our own moral and religious foundations, as well as on other rich traditions of faith.

4.1. CREATION HAS VALUE IN ITSELF

We believe that God is the Creator of everything there is and that this creation is good, reflecting God's own goodness (Genesis 1-2). God loves creation for its own sake, and God's love holds everything in existence for its own mysterious purpose (Psalms 104: 29-30). Creation has its own relationship with God, to some degree independent of humankind and beyond human understanding: it glorifies and worships God in continuous praise (Psalms 96: 12; Isaiah 55: 12). Our destructiveness can silence creation's song of praise to God; our care for creation can be a true expression of our own praise. Such a perspective challenges any narrow economist view that the gifts of creation have no value except as a 'factor of production'.

4.2. CREATION HAS VALUE BECAUSE IT REVEALS GOD

The Creator's "eternal power and divine nature, invisible though they are, have been understood and seen through the things he has made" (Romans 1: 20). Nature re-

veals God to us and allows us to experience God's presence. For example, people of faith have testified that nature's abundance and beauty reveals God's generosity and majesty, its healing, nourishing and life-giving properties reveal divine reconciling love. In the thirteenth century, St. Thomas Aquinas argued that the diversity of the extraordinary array of creatures roaming the earth revealed the richness of the nature of God. "And because one single creature was not enough, he produced many diverse creatures, so that what was wanting in one expression of the divine goodness might be supplied by another; for goodness, which in God is single and all together, in creatures is multiple and scattered. Hence the whole universe less incompletely than one alone shares and represents his goodness" (Summa Theologica, ia 47.1). When we allow creation to be degraded and damaged, therefore, we lose our sense of God's very self. Jesus points to the lilies of the field and the birds of the air as beautiful in their own right ('Not even Solomon in all his royal robes was clothed like one of these') but also as revealing the care of God for all beings (Matthew 6: 26-30), a care that can liberate us from the kind of anxiety that deflects us from seeking God's kingdom first. His authority over the immense power of the sea awes the disciples who experience it, because it is only God who has sovereignty over the forces of Creation.

4.3. HUMAN BEINGS ARE DEPENDENT BUT RESPONSIBLE

Human beings are created in the image of God (Genesis 1: 27), and have the special gift and challenge of sharing in God's creative activity. We use, and by using we transform, the natural world. As 'co-creators', then, our acts should reflect God's own love for creation. We ourselves are part of creation, formed out of the earth, and dependent on the rest of creation for our continued existence: so we are made aware that caring for creation is part of caring for ourselves (Genesis 2: 15). There is a covenant of mutual care and respect that unites God, humankind and every other living creature (Genesis 9).

4.4. CREATION REVEALS HUMAN SIN

Our capacity to marvel at the earth, but also to develop and utilize its resources (for instance, through the application of science and technology), has greatly enriched our lives. This human creativity carries with it a profound responsibility. However, it is also part of Christian faith to recognize that we are sinners: in our present context, this truth means that sin has distorted the human relationship with the natural world, and that we have disturbed the balance of nature in radical and violent ways. As Pope John Paul II wrote, "Man thinks that he can make arbitrary use of the earth, subjecting it without restraint to his will, as though the earth did not have its own requisites and a prior, God-given purpose, which man indeed can develop but

must not betray. Instead of carrying out his role as a co-operator with God in the work of creation, man sets himself up in place of God and thus ends up in provoking a rebellion on the part of nature, which is more tyrannized than governed by him” (Pope John Paul II, *Centesimus Annus*, 1991, Section 37).

Sin damages our relationships with God and with one another, the relationships between social groups, and that between humanity and the earth. As the prophets of the Old Testament testify, such sin is reflected in the earth’s suffering: “The earth dries up and withers, the world languishes and withers; the heavens languish together with the earth. The earth lies polluted under its inhabitants; for they have transgressed laws, violated the statutes, broken the everlasting covenant” (Isaiah 24: 4-5). “Therefore the land mourns, and all who live in it languish; together with the wild animals and the birds of the air, even the fish of the sea are perishing” (Hosea 4: 2-3).

4.5. CREATION PARTICIPATES IN OUR REDEMPTION

We live out our relationship with God as dwellers on the earth. Our use of the gifts of creation forms part of that relationship. To love God is, among other things, to give thanks and praise for these gifts, to honor and respect them for themselves, to acknowledge that they are destined by God for all people, and therefore to share the gifts of the earth justly. God constantly calls us back from sin to repentance and conversion. In thinking of the environment, we can say that the antidote to the sin of exploitative greed is found in the virtue of care and respect. It is partly in this sense that St. Paul daringly argues that the earth itself shares in our redemption and salvation. “Therefore creation too waits with eager longing... that the creation itself will be set free from its bondage to decay and will obtain the freedom and the glory of the children of God. We know that the whole creation has been groaning in labor pains until now” (Romans 8: 19, seq).

4.6. CREATION IN THE WORLD TO COME

Our present life already participates in the life to come. Jesus says, “The Kingdom of God is among you” (Luke 17: 21), and we have been given the vision of the new heavens and the new earth as an inspiration for the present as well as a sign of hope for the future. We are partners in God’s creative enterprise, called to ‘renew the face of the earth’ until there is peace and harmony, sparkling life-giving water, the ‘trees of life’ that give health and the messianic banquet that can be shared by all the inhabitants of the earth. Then “the curse of destruction will be abolished” (Revelation 22: 1-3).

5. RESPONDING TO THE CRY OF CREATION

The cry of creation prompts us all to ask “What then should we do?” (Luke 3: 10). What is needed is “not merely a feeling of vague compassion or shallow distress at the hardships of many people, both near and far. On the contrary, it is a firm and persevering determination to commit ourselves to the common good: that is to say, to the good of all and of each individual because we really are responsible for all.” (Pope John Paul II, *Sollicitudo Rei Socialis*, 1988, Section 38)

5.1. EDUCATION TOWARDS ECOLOGICAL RESPONSIBILITY

It is encouraging to note that environmental awareness now plays a greater part in formal education: but it is important that this education enables people gradually to take up their personal responsibilities. Education that focuses solely on the elements of science and technology cannot offer a framework of moral values to guide the daily decisions of living. We need an education that helps liberate people from enslavement to a way of life that values consumption, convenience, wealth, status and economic growth above all else, an education that begins to give them the freedom to make different choices. “This education is not something that can be based on emotion or vague aspirations. Its goal can be neither ideological nor political, and its programme cannot rest on a rejection of the modern world or on the vague desire to return to a ‘paradise lost’. True education about responsibility involves a genuine conversion in the way we think and behave.” (Pope John Paul II, World Peace Day Message, 1990, Section 13)

5.2. PERSONAL RESPONSIBILITY AND CONVERSION OF LIFE

Such a change of attitude calls for a fundamentally new orientation towards the purpose of material possessions. “It is not wrong to want to live better. What is wrong is a style of life which is presumed to be better when it is directed towards having rather than being and which wants to have more, not in order to be more but in order to spend life in enjoyment as an end in itself.” (Pope John Paul II, *Centesimus Annus*, Section 37). We are called to reflect on our individual roles and purposes in life, and ask ourselves what is it that we need to develop our human qualities, to grow in love of God and neighbor. In a context of environmental justice, this reflection will allow us to make serious choices - including the choice not to consume what we do not need and, above all, what is likely to harm others. All religious traditions encourage simplicity of life, often even a certain austerity. In the Christian tradition, this wisdom derives from the Lord’s own profound saying, “Where your treasure is, there will your heart be too” (Matthew 6: 21). The desire for affluence,

for more and more possessions, for almost anything new, can begin to dominate us. In a consumerist age, the pressure exerted on us by the advertising industry and by the visibility of luxury goods all around us encourages the assumption that it is our right to use the gifts of creation entirely as we wish. It will require a continuing reflection on how our habits of life can all too easily become excessive and wasteful, and how they affect the well-being of others, to counter these pressures. Nevertheless, to do so is a way of co-operating with Christ's mission to bring reconciliation and peace, and indeed this can truly be a way of learning afresh to love God and our neighbor.

Individual actions may seem insignificant, but together the small steps of many people can have an astonishing impact. Each person's joyful choices can be a visible example to others and give them courage to follow. Public pressure becomes powerful when it reflects a mature moral vision that respects the rights of others to a decent life now and in the future.

5.3. ACTING IN PARTNERSHIP: OTHER CHURCHES AND FAITHS

Many different groups are to be found where people come together to support and encourage each other towards environmental justice. Amongst these are numerous church-linked programmes and activities. Christians can work together ecumenically at parish level and nationally. The Environmental Issues Network of Churches Together in Britain and Ireland provides one such ecumenical forum. The network Christian Ecology Link has an active Catholic section. At a continental level, there is the European Christian Environmental Network, open to all the Christian Churches. Christians can also give common witness to the value and goodness of creation with other faiths, not least Judaism and Islam which share our belief in God, the loving Creator of all that is.

5.4. ACTING IN PARTNERSHIP: CIVIL STRUCTURES

Recent government reports about the effects of global warming indicate the concern at the highest level about some aspects of the environmental crisis. It is encouraging that the 'Kyoto Protocol', deriving from the United Nations Framework Convention on Climate Change, held in 1997 in Kyoto, Japan, has now been ratified by more than seventy countries and, in June 2002, was ratified as a bloc by every country of the European Union, though it is still opposed by some important countries such as the USA and Australia. The Protocol would require countries to restrict their industrial emissions so as to prevent the increase of greenhouse gases.

The wide support given to the Kyoto Protocol shows that governments can create structures that encourage and enable citizens to live in a more ecological way, for example through environmentally responsible transport systems and energy policies,

by tax incentives, and by supporting the development of facilities to promote sustainable living. Since these governments have often signed the protocol under strong pressure from their own civil societies, we also learn that real change is possible if there is active support and co-operation of all sectors of society. But such results can only be achieved if electors are willing to let go of the relentless search for the maximization of consumption, and if oppositional political parties, as well as the governments, refuse to allow the search for short-term political gain to block the necessary measures.

Environmental problems cross state boundaries: so governments, particularly those of the rich countries of the world, need to co-operate in order to develop common policies to limit environmental damage and to promote environmental protection, as well as to confront together the injustice of excessive wealth in a world where there is abject poverty. Developing countries cannot be expected to forego their own economic progress so that the rich can exploit the earth's resources unchallenged.

5.5. ACTING IN SOLIDARITY

In September 2002, the world's nations gathered in Johannesburg for the World Summit on Sustainable Development. This crucial meeting needs our support and prayers. In his foreword to the State of the World 2002, a report from the Worldwatch Institute, the Secretary-General of the United Nations, Kofi Annan, wrote that the Johannesburg Summit "can and must lead to a strengthened global recognition of the importance of achieving a sustainable balance between nature and the human economy". He recognized that nations are currently at very different levels of development and therefore have different responsibilities, but are facing common threats and are being offered common opportunities if we can "respond to this challenge as a single human community".

The Summit recognized that the struggle to protect the environment has to take into account the destitution still rife in the world. It assessed the ecological implications of continued economic globalization, and sought to give new life to the international treaties on biodiversity, climate change, forests and desertification. This agenda presented governments, as well as all of us, with massive challenges: for example, climate change is not just a matter of political negotiation but confronts our every assumption about how we live our lives. The extent of the Summit's success or failure will seriously affect the future of our earth and its peoples.

At the end of their Low Week Meeting in April this year, the Bishops Conference of England and Wales issued a resolution urging all Catholics to pay close and prayerful attention to this summit, and they also affirmed the teaching of Pope John Paul II that "the dramatic threat of ecological breakdown is teaching us the extent to which greed and selfishness - both individual and collective - are contrary to the order of

creation, an order which is characterized by mutual interdependence". In their different ways and in accordance with our time, the Pope and the Secretary-General of the United Nations can be understood as re-stating the fourth-century vital insight of St. Ambrose.

Individual choices can seem insignificant when faced with such global challenges. But multiplied individual actions can indeed make a real difference. The Johannesburg Summit must not be allowed to fail through governments' refusal to take decisive action because they think public opinion is against them. Faith groups have the specific task of communicating to their governments the spiritual and moral foundations of sustainable living and development.

The Johannesburg Summit is the opportunity for all forms of social organizations to work together: international institutions, governments, non-governmental organizations, business leaders, scientists and so on. "In an increasingly global society, the unit of human community to which the term 'common good' applies, moves from the national to the international level. Hence solidarity has an inescapable universal dimension. Solidarity requires action to protect the common good at this level, where it can only be safeguarded by the collaboration of all." (The Common Good, Section 102) It is the logic of our present argument that solidarity must, in a genuine sense, extend to nature itself, as we learn to live in ways that are consistent with its God-given laws.

6. CONCLUSION

Christians, perhaps Catholic Christians in particular, are reminded of the precious gifts of creation at each Eucharistic celebration. In the ancient prayer over the gifts of bread and wine, we praise God our Creator, and remember that these material goods are given to us by God and are fashioned through the co-operation of Creator and creature: so our own daily living is to reflect our gratitude for the gifts that have been given to us. Again, in the Eucharist we join in the self-giving, the sacrifice, of Christ himself, and in this sense the offering of our own lives - time, convenience, money - for the good of others can be Eucharistic in itself, a 'sacrifice' for the good of others. In the Eucharist we, the priestly people, the Church, are empowered to transform and use what we have been given. This act of transformation is a sacred act. But it is for all to nourish all, for the life and salvation of all.

PART II

Nature might be indirectly morally considerable because it is the source of things that humans need, such as natural resources, used to provide the foundations for building and sustaining human communities. As such, we might consider it unfair if one human community has greater access to a share of those resources thought to be held in common (air, water, soil, and so on) than another human community. In contrast, nature might be directly morally considerable if it possesses some kind of value (for example, some land of intrinsic value or inherent worth) demonstrable through a subjectivist or objectivist meta-ethical position. If nature is the sort of thing that is directly morally considerable (as many ethical theories would claim humans are) then our duties, for example, to preserve some natural park from development would not be contingent upon articulating some value that the park has for humans, but would instead be grounded in a claim that the park has some kind of value that necessarily warrants our protection (for example, because it is a wild place or because it is the home of an endangered species) without needing further appeal.

The possibility that nature or non-human animals might be directly morally considerable has launched a thousand meta-ethical and metaphysical ships in environmental ethics. Whereas many other fields of applied ethics (for example, business ethics and medical ethics) originally evolved along the traditional lines of debate in normative ethics, environmental ethics (especially of the 'holist' variety, which I will explain below) has been concerned with a different set of debates altogether. In part because our traditional models of moral inquiry have not previously been applied to non-humans, let alone the entire ecosystems, what the scope and limits of this form of philosophical inquiry should be remains unclear. And while there have been some environmental ethicists from the Kantian or utilitarian tradition who have more or less expanded these ethical traditions to cover non-human animals and ecosystems (for example, Regan, 1983; Taylor, 1986; Singer, 1990), many environmental ethicists have resisted this so-called 'extensionist' approach. A different set of meta-ethical questions has emerged as predominant in the field. Questions such as: should environmental ethics be inclusive of concerns of the individual welfare of animals or should it only be directed at questions that are inclusive of the entire ecosystems? Should the field be concerned only with 'natural' environments that are not the creation of humans, or should it also be concerned with humanly created and manipulated environments? Such questions are thought to be not only practical - directing our attention to certain problems - but also philosophical, resolving the cases of moral conflict to one side or another.

In this chapter, I will try to explain why environmental ethics has evolved in the way that it has, so that only a discrete set of answers to the predominant meta-ethical debates in the field seems to count properly as what we call 'environmental ethics'.

If environmental ethics is to be considered one form of applied ethics, rather than a separate kind of philosophical enterprise altogether, then we need more by way of a critical discussion of what subjects the field should be applied to; or at least, what it should not be restricted to.

After outlining the varieties of environmental ethics today, I will turn to the question of why environmental ethics has focused on the question of the direct moral consideration of nature and largely rejected human forms (anthropocentric forms) of valuing nature. I will then conclude with a discussion of what sort of applied ethics environmental ethics could strive to become. Before starting out however, one word of warning: this chapter does not intend to provide a complete overview of the field. Because of the focus of this chapter, many important figures and themes will not be discussed. Instead, my goal is to briefly summarize some of the major issues of philosophical debate in the field, and then move on to a discussion that I find particularly relevant to the issue of the relationship between environmental ethics and other forms of applied ethics, and in turn to the question of how best to shape ethical debate in a field of applied ethics concerned with a particularly pressing set of issues.

7. VARIETIES OF ENVIRONMENTAL ETHICS

There are many ways to parse out the various meta-ethical and metaphysical schools of thought that have shaped the development of contemporary environmental ethics. My preference is to track this development in terms of a series of debates; with the first and most important one involving the rejection of 'anthropocentrism'. Tim Hayward defines ethical anthropocentrism as the view that prioritizes those attitudes, values, or practices which give "exclusive or arbitrarily preferential consideration to human interests as opposed to the interests of other beings" or the environment (1997: 51). While I will say more about the rejection of anthropocentrism below, it is important to point out that many early environmental ethicists were adamant that if environmental ethics was going to be a distinctive field of ethics, it must necessarily involve a rejection of anthropocentrism in ethics. Using Hayward's definition, this amounted to a rejection of the claim that ethics should be restricted only to the provision of obligations, duties, and the like among and between humans, thereby prioritizing in moral terms all human interests over whatever could arguably be determined as the interests of non-humans, species, or ecosystems.

Among the first papers published by professional philosophers in the field (for example, Naess, 1973; Rolston, 1975; Routley (later, Sylvan), 1973; Singer, 1974) some version of anthropocentrism was often the target even if it was not explicitly labeled as such. For Singer, the worry was more specifically over 'speciesism', the arbitrary assumption that only the interests of members of the human species matter in moral systems which otherwise provide no necessary reason for excluding the

interests of non-humans (such as the pain/pleasure criterion of utilitarianism); for Routley, the worry was over 'human chauvinism', or, as put in a much-cited paper with Val Routley (later Plumwood), the claim that "value and morality can ultimately be reduced to matters of interest or concern to the class of humans" (Routley and Routley, 1979: 36). Human chauvinism is expressed when warrants for moral consideration are defined in ways which necessarily favor capacities found only, or most paradigmatically, in humans (such as rationality or language).

There is, however, some dispute over whether speciesism and human chauvinism can or should be equated with each other or with anthropocentrism (see Hayward, 1997; Eckersley, 1998). Regardless of the debates over terminology, the assumption that axiologically anthropocentric views are antithetical to the agenda of environmentalists, and to the development of environmental ethics, was largely assumed to be the natural starting-point for any environmental ethic. So pervasive was the assumption that it was often not adequately defended. It has become one of what Gary Varner (1998: 142) calls "the two dogmas of environmental ethics". Furthermore, the notion of what anthropocentrism meant, and consequently what overcoming anthropocentrism entailed, often relied on very narrow, strawman definitions of anthropocentrism. Anthropocentrism was equated with forms of valuation which easily, or even necessarily, justified the destruction of nature (rather than anthropocentric values, such as aesthetic values, which might count as reasons to preserve nature). Therefore, a corollary of this dogma has been that even a limited endorsement of anthropocentric forms of valuation of nature would necessarily give credence to those anthropocentric values which prefer development over preservation.

Again, I will revisit the legacy of the rejection of anthropocentrism below. For now, the first divide among environmental ethicists comes between those who accept the rejection of anthropocentrism as a necessary prerequisite for establishing a unique field of environmental ethics and those who do not accept this position, arguing that "weaker" forms of anthropocentrism (for example, those which admit humanly based values to nature other than mere resource value) are sufficient to generate an adequate ethic of the environment (see Norton, 1984). But even the general picture of this divide is more complicated. If environmental ethics was to start with a rejection of anthropocentrism then the next step was to come up with a description of the value of non-humans, or the non-human natural world, in non-anthropocentric terms. The preferred description of this form of value has generally been some form of intrinsic value, thought to mean that non-humans or ecosystems possess some sort of value in and of themselves (as opposed to possessing only instrumental value to the achievement of human ends). (The term "intrinsic value" has many senses, and many debates in environmental ethics hinge on competing conceptions of how the intrinsic value of nature should be decided and, further, whether a description of an entity as having some form of intrinsic value necessarily warrants a relevant set of

moral obligations to it (see O'Neill, 2001). To avoid some of these problems, some (such as Katz, 1997), have abandoned the term "intrinsic value", while maintaining a focus on justifying non-instrumental foundations for environmental value.

Early on, those rejecting non-anthropocentrism argued that there were no rigorous grounds on which we could base claims for the intrinsic value of non-humans or the natural world. Such challenges included those of John Passmore (1974) and R. G. Frey (1983). For Passmore, less regressive forms of anthropocentrism could be used to provide moral grounds for progressive environmental policies based on forms of value which did not challenge traditional notions of the unique quality of human value and moral commitments. These positions have been taken up and extended in various degrees by figures such as Bryan Norton (1987), Eugene Hargrove (1992) and various other theorists sometimes collectively known as "environmental pragmatists" (see Light and Katz, 1996). The upshot, however, is that the debate between anthropocentrists and non-anthropocentrists in environmental ethics has long been entwined with debates over the validity of ascribing intrinsic value either to non-human animals or to species or ecosystems.

If we are to persist with some form of non-anthropocentrism, the next relevant question becomes how to define the scope and limits of our descriptions of the intrinsic (or at least non-instrumental) value of nature? The second of Varner's "two dogmas" in the field is the rejection of animal rights or animal welfare views (which I will jointly call "animal liberation" views) from the typical understanding inside the field of its scope. Even though the field arguably began with an understanding that the work of an animal liberationist like Singer was as much a part of the history of environmental ethics as that of figures like Naess and Routley, very quickly a new debate emerged between 'individualists' and 'holists', or 'sentientists' and 'holists', which wound up largely excluding animal liberationists from the domain of environmental ethics.

Individualists are those who argue that the extension of moral consideration beyond humans should be limited to other individuals, namely those individuals who could be argued to have interests, or in the case of sentientists, were sentient, such as other animals. (There is a variety of distinctions among sentientists that are beyond the scope of this chapter. For a helpful overview, see Varner, 2001.) Primarily, these arguments, no matter what their normative foundations (for example, consequentialist, non-consequentialist, or virtue theory), result in moral arguments for vegetarianism and against industrial animal agriculture, arguments against scientific experimentation on animals (especially of the more frivolous variety such as for testing cosmetics), and sometimes arguments against hunting.

Holists argue, in contrast, that individualism or sentientism is inadequate for an environmental ethic because it fails to offer direct reasons for the moral consideration of ecosystems, wilderness, and endangered species - all top priorities for the

environmental movement. Because conservationists and environmental scientists evaluate the workings of nature at the ecosystemic level (without much by way of worry over the welfare of individuals so long as a species is not in danger) then an ethic covering the same ground should also try to describe the value of nature and the priorities for preservation at the same level with a similar disregard for the welfare of individuals. Accordingly, at times the ends of individualism and holism are argued to conflict, such as in the case of hunting, where holists have maintained that killing individual members of a non-endangered species is justified whenever the numbers of that species produce a threat to endangered species or fragile ecosystems.

The debate between individualists and holists has evolved in much the same way as the debates between anthropocentrists and non-anthropocentrists. For example, sentientists argue that there are no clearly defensible grounds for describing the non-instrumental value of nature per se, without appeal to things in nature that can be considered to have interests, such as animals. Thus, trees, rocks, and the whole ecosystems cannot be directly morally considerable, even though it is arguably the case that the health and welfare of the whole systems and of endangered species could be covered indirectly by some combination of concern for the interests of non-humans and of future human generations. Other individualists, most notably Tom Regan (1983), have gone on to press harder still, arguing that holism entails a form of "environmental fascism", whereby the strong likelihood is raised that the welfare of individuals will often, if not always, be sacrificed to the needs of the greater biotic good.

Somewhere in between these two camps are biocentric individualists, such as Paul Tadjor and Gary Varner, who have pushed the boundaries of individualism beyond sentientism, arguing for a coherent individualism extended to cover the value of the capacity for flourishing of non-sentient organisms. For Taylor, there is a broadly speaking Aristotelian sense in which all natural entities flourish and so what is good or bad for them is a matter of what is good or bad for this flourishing, a claim that is not dependent on human interests. This expansion of individualism in part helps to bridge the gap between holists and individualists even though biocentric individualists are adamant that holism in itself must be rejected. Not all interests among all living individual things are granted equal status on such views, with various arguments put forward for which interests count more than others (for example, the interests of those individuals capable of desires might be considered more important than those not capable of desires).

Nonetheless, despite such compromising positions, holists such as J. Baird Callicott (see, especially, Callicott, 1980) and Holmes Rolston III have prevailed in staking a claim for environmental ethics in some form of holism most forcefully by recourse to the argument that many forms of individualism encounter problems in their plausible extension to species and ecosystems. While many important chal-

lenges have been made to try to bridge this gap between individualists and holists (especially by Jamieson, 1998, and Varner, 1998), and much more theoretical subtlety has been brought to bear on cases of conflict like hunting, a strong bias exists in the field that would exclude animal liberationist positions from the scope of environmental ethics proper.

There are still further debates among holists, though not so much over the proper scope of environmental ethics. These debates largely cut along the lines of whether the case for the non-instrumental or intrinsic value of nature can best be made on subjectivist or objectivist grounds. Leading subjectivists include Robert Elliot (1997) and Callicott, the latter most well known for developing a Humean, or what he refers to as a "communitarian" line of reasoning out of the work of the forester and conservationist Aldo Leopold. Leopold is most well known for his 1949 posthumously published memoir, *A Sand County Almanac* in which he developed a holist "land ethic" (see Callicott, 1989, 1999).

Callicott's claim is that value should be understood as a verb and so can only be engaged in by those beings with the capacity to value, namely humans, though perhaps some non-humans as well. There are things in the world which can be subjectively considered to be intrinsically valuable (valued by a valuer for its own sake) through an evolutionary extension of what counts as inclusively important among a community of valuers. In the past, what was considered valuable for us was restricted to other members of the human community (which progressed from the empathetic bonds of the family to the clan to the tribe to the town, and so on); the next progression of this evolution should be to consideration of non-humans and ecosystems as similarly valuable. In Leopold's words, the next evolution of ethics should be to human-land relations. Sorting out conflicts in value among competing demands from different communities that demand our attention (for example, between duties to our immediate families and duties to ecosystems) requires adopting two second-order principles for Callicott, ranking as higher our obligations to more intimate communities (such as our families in many cases), and to "stronger interests" (such as duties to the preservation of endangered species).

In contrast, Rolston (see Rolston, 1988, 1989, 1994) argues that intrinsic values in nature are objective properties of the world. He does not claim that individual animals are unimportant (though he does not have strong qualms against the production and consumption of other animals; indeed, he even claims that meat-eating is necessary to maintain our identity as a species). Rolston's position is, initially at least, compatible with some form of individualism, arguing, like Taylor, that every living organism has a telos from which we may derive a baseline of intrinsic value. But different characteristics, such as the capacity for conscious reflection, add value to each organism. Along with this scheme of value, he also offers arguments for the intrinsic value of species as well as ecosystems. For Rolston, there is a conceptual

confusion involved in the claim that we could value individual organisms without valuing the larger wholes which produced them through evolutionary processes. (Still, it should be noted that the individualist-holist divide does not map onto the subjectivist-objectivist divide. Individualists such as Paul Taylor and Robin Attfield (1987) are also objectivists about the existence of intrinsic value, while holding individualist positions of the deontological and consequentialist variety, respectively.)

A further debate, brought on by the scope of holism, has evolved over the question of whether or not preservation of the environment should be grounded in a monistic foundation or whether it can tolerate pluralism in forming a coherent ethical view. Monists in environmental ethics generally argue that a single scheme of valuation is required to anchor our various duties and obligations in an environmental ethic (see, for example, Callicott, 1990). This would mean that one ethical framework would have to cover the range of diverse objects of moral concern included under holism: other humans, other animals, living organisms, ecosystems, species, and perhaps even the Earth itself. Such a view would have the advantage of generating a cleaner methodology for resolving disputes over conflicting obligations to and among these objects, itself a very worrisome problem as an environmental ethic has a mandate covering many more competing claims for moral consideration than a traditional ethic.

Pluralists counter that it cannot be the case that we could have one ethical theory that covered this range of objects, either because the sources of value in nature are too diverse to account for in any single theory, or because the multitude of contexts in which we find ourselves in different kinds of ethical relationships with both humans and nature demand a plurality of approaches for fulfilling our moral obligations (see, for example, Erennan, 1988, 1992). Accordingly, for Andrew Brennan (1992: 6), there is "no one set of principles concerning just one form of value that provides ultimate government for our actions". Such claims lead Callicott to charge pluralists with moral relativism.

While less a dogma than non-anthropocentrism and holism, argument over moral monism continues to push the evolution of the field, particularly over the issue of the relationship between theory and practice in environmental ethics. The debate over pluralism raises the question of how appeals concerning the welfare of the environment cohere with other issues in moral philosophy in particular situations. Many, if not most, cases of potential harm to the value of ecosystems are often also a case of moral harm to human communities which can be objected to for independent anthropocentric moral reasons. The literature on "environmental justice", the concern that minority communities often bear a disproportionate burden of environmental harms, such as exposure to toxic waste, is based on linking concerns about human health and well-being to environmental protection (see Schlosberg, 1999). A truly pluralist environmental ethic would not be terribly concerned with whether

the claims to harm to the interests of a minority community by the siting of a toxic waste dump could or could not be based on the same scheme of value that would describe the harm done to the ecosystem by the dump. A pluralist ethic would be open to describing the harm to the ecosystem and to the human community in different though compatible terms for the purposes of forming a broader coalition for fighting the dump (see Light, 2002).

To conclude this section, a key set of debates - anthropocentrism v. non-anthropocentrism, individualism v. holism, subjective v. objective holism, and monism v. pluralism - have largely shaped the development of contemporary environmental ethics. At a minimum, the field is most clearly defined, though not always adequately defended, through its rejection of anthropocentrism and its commitment to holism. But the portrayal here of the varieties of this connection has been far from adequate. Consistent with the extension to broader questions in social and moral philosophy raised by the monism-pluralism debate, an extensive literature has developed connecting environmental ethics to feminism (for an overview of ecofeminism, see Davion, 2001), as well as more restricted literatures on humanism (Brennan, 1988), virtue theory (O'Neill, 1993; Welchman, 1999), pragmatism (Light and Katz, 1996), communitarianism (de-Shalit, 2000), and more nuanced understandings of human self-interest (Hayward, 1998). All of these alternative directions in the field have presented new challenges in meta-ethics and normative ethics, but they have also done something more. In their own ways, all of them have moved beyond the more abstract questions of the meta-ethical debates concerning non-anthropocentric intrinsic value in nature to provide, in John O'Neill's words, "more specific reason-giving concepts and corresponding claims about the ways in which natural objects are a source of wonder, the sense of proportion they invoke in us of our place within a wider history" (2001: 174). The question that I will take up in the remainder of this chapter is how best to provide a platform in which such further discussions can take place and have more of an impact on bettering the health and sustainability of the natural world.

8. ENVIRONMENTAL ETHICS AS APPLIED ETHICS

With this variety of views in the field, how should environmental ethics proceed? One answer would be that it simply will proceed, whether it should or not, as a new set of debates between the more traditional non-anthropocentric varieties and the new biocentric, anthropocentric, or other alternative views briefly mentioned at the end of the last section. Many anthropocentric environmental ethicists seem determined to do just that (see the debate between Norton, 1995b, and Callicott, 1996). There is, however, an alternative: rather than continuing the tradition of most environmental ethics as philosophical sparring with other philosophers over these

debates and others, we could instead turn our attention to the question of how the work of environmental ethicists could be made more useful in addressing actual environmental problems.

The problems with contemporary environmental ethics (evident in Varner's dogmas) are arguably more practical than philosophical, or at least their resolution in more practical terms is more important than their resolution in philosophical terms, at least at the present time. For even though there are several dissenters to the dominant non-anthropocentric traditions in the field, the more important consideration is that it is widely acknowledged that the world of natural resource management (over which environmental ethicists as applied ethicists should hope to have some influence in the same way that medical ethicists have worked for influence over the medical professions) takes a predominantly anthropocentric approach to assessing natural value, as do most other humans (more on this point below). As such, environmental ethics appears more concerned with overcoming human interests rather than redirecting them toward environmental concerns. As a consequence, a non-anthropocentric form of ethics has limited appeal to such an audience even if it were true that this literature was providing the best reasons for why nature has value that should be respected (de-Shalit, 2000). Why this lack of attention to human interests?

When surveying the various non-anthropocentric and holist views in the field, one is struck by the assumption that if a reason could be provided for directly protecting nature or wildlife, which would trump traditional anthropocentric valuations of nature, then one could reasonably expect that it would be followed. But why should we assume the validity of this assumption? Anthropocentric reasoning is a foundation of the development of many, if not most, human cultures. If it were not, then it would not present the hurdle to overcoming the environmental crisis that most environmental ethicists claim. But what would motivate humans to shift away from this approach to moral reasoning if it is so commonplace? The lack of attention to this question in the field belies a common assumption of a land of rationalist motivational internalism for much environmental ethics.

Rationalist motivational internalists hold that the truth of a moral requirement guarantees compliance for those who understand it. No antecedent desire to follow the requirement or principle need be demonstrated. While such internalism is not in and of itself objectionable, its function in environmental ethics generates two particularly troubling problems: (1) because non-anthropocentric holism is admittedly such a departure from the long history of moral theorizing (and the longer history of human moral interaction) the hurdles involved in it eventually influencing laws or policies enforced over the traditional human-centered approach to such problems are substantial and the time horizon for overcoming these hurdles is quite long; and relatedly, (2) because the environmental problems facing us are so pressing, it is not

clear that such an approach will have much practical effect on our ability to resolve these problems, thus raising the question of why such philosophical pursuits are valuable outside their inherently interesting philosophical qualities. Of course, the effects of moral theories on policy are difficult to discern and are not an all-or-nothing game. The development of the field and the presence of environmental ethicists in policy-making structures and bodies have been influential even when they have not always persuaded non-philosophers of the truth of their schemes of value. Nonetheless, given these two problems, a strong case can be made that an environmental ethic which actively discouraged a parallel development of an approach more attuned to moral motivation - one which assumed that theoretical justifications do not necessarily motivate agents from acting independently of their interests - would not be an applied ethic at all, but more an exercise in a purer form of philosophical activity, one less concerned with its impact on the concerns to which it was being applied. How then to open the path for the development of this alternative approach in a way that will not automatically beg the questions around which meta-ethical debates in the field have been prosecuted?

Looking at some of these debates, a pattern emerges. Most often, those philosophers working on environmental issues are at great pains to prove to each other that their respective approaches, though different from their colleagues, nonetheless get the same ends. It is almost as if there is an inevitable push toward convergence of these differing views. For example, in a debate between Dale Jamieson (1998) and Callicott (1998) on the merits of individualism (animal liberation) versus holism (environmental ethics), Jamieson takes on the claim, rehearsed above, that individualism is insufficient for an environmental ethic because it offers no reason to directly value ecosystems or endangered species. Jamieson's strategy is to prove that there is a scheme of value, whereby sentientists can value ecosystems intrinsically even though they are only derivatively valuable (rather than bearers of "primary value", such as humans and other sentient animals that have a perspective from which their lives get better or worse). From here, Jamieson tries to show that because such traditional subjects of a holist environmental ethic can be valued by a sentientist, then they ought to be valued by sentientists. Callicott, in his reply to Jamieson, takes great pains to try to show that there are cases of ecosystemic value which elude sentientists, examples of things in nature that we might intuitively feel (as environmentalists) that we should preserve but would not be of sufficiently strong derivative value to warrant the ascription of value entailed by Jamieson's approach. Callicott makes the same claim against weak anthropocentrists as well in this exchange, and, likewise, weak anthropocentrists have long tried to get their projects off the ground by proving that their methods of valuing nature capture the same ends as various forms of non-anthropocentrism (see, for example, Norton, 1991). The suggestion, however, that any of these approaches cannot justify even a derivative valuation of the same objects in the world is a bit unbelievable.

Many in the broader philosophical community may find this pattern curious - as the ends of these debates appear to be assumed at the beginning. The issue between the two sides amounts to a struggle over who can prove that their view also achieves these same ends without much by way of concern over which approach takes the fewest coherent steps. Environmental ethicists take on the appearance of newcomers to marathon running: interested first only in proving that they too can reach the agreed-upon finish line. But how can we be so sure that these ends are philosophically justifiable? While certainly there are disputes about the ends of environmental practice, it is surprising how rare it is to find debates between philosophers about these ends. One is left wondering what all the fuss is about.

One possible answer is that the truth of the matter - what really does justify these ends anyway? - is in itself interesting enough to justify the range of debates in the field. But on this point there is at least some disagreement. Richard Watson (1995), to take just one example, has argued that the field as a whole suffers too much from a lack of rigorous philosophical argument and logic in favor of rhetorical moves which rather assert the existence of value than demonstrate it. This tendency not to argue, according to Watson, "but merely pronounce" the existence of obligation-generating values in the world "gives so much environmental philosophy an aura of dogmatism so that readers have a sense that they are being presented with doctrine rather than philosophy" (1995: 204). If such claims bear any truth, then the worry would be that the debates outlined above are largely vacuous - rather providing opportunities for different sides of a political argument to justify their position in the guise of philosophical clothing than anything else. While I find Watson's condemnation of the field too sweeping, I would be remiss not to admit something of what he has said to some positions in the field, or, more specifically, to the way in which these positions have interacted with each other in the debates which have shaped the field. Varner's claim that environmental ethics holds on to two dogmas is a good case in point: it is not as if non-anthropocentrism and holism have somehow definitively won the philosophical day in some definitive contest.

Then again, any progress in any field of philosophy is difficult to discern. Especially in a field as young as environmental ethics, it is unclear what a definitive contest would amount to. And, at the bottom, it should not present us with so much of a surprise to find environmental ethicists struggling over the same ground. Environmental ethics does not exist in a vacuum of philosophical argument. If environmental ethicists were to suddenly come out strongly against preservation of biodiversity, for example, then one could wonder about the viability of the field, not necessarily as a field of philosophy, but rather as a field of environmental inquiry. While environmental ethics may not be linked to a particular environmental practice (such as the strong connection between medical ethics and the medical practices and professions mentioned above), it is nonetheless tethered practically, if not methodologically, to a

larger environmental community. At least part of the constitution of this community is a strong commitment to the priorities of environmental protection and restoration demonstrated by the science of ecology, itself a form of science which is strongly normative as it assumes in part a focus on how the workings of an ecosystem may or may not be hindered or helped by human needs, processes, and systems. If environmental philosophers were to fly in the face of a more or less stable view of ecological science, then at the least a much stronger justification would be needed for this position than we might expect from a relevantly similar position in a debate only with other philosophers.

In the final analysis, debates in environmental ethics will most likely not be settled by recourse to who gets the best desired ends as established by appeals to individual welfare or the assessments of ecological science. Following Watson, the debates in the field will only be settled in the traditional philosophical manner once the positions at stake are adequately justified: a reasoned assessment not of who gets what end in the most direct way, but who has the most rigorous philosophical argument for the highly contentious claim that direct moral consideration can be extended beyond the human community (or, that it definitively cannot), and why things other than humans can be thought to have some kind of value in and of themselves (or, that definitively they cannot). Such a definitive claim will be a long time in coming, or, at least, for reasons more sociological than philosophical, intramural agreement among environmental ethicists will be much further down the road.

Watson is skeptical that in the interim, while these debates are being decided, we can meaningfully apply our views to any actual environmental problems. Watson asks: what, after all, are we applying? Incomplete claims about suffering or the value of non-sentient life (Watson, 1995: 212)? Watson thinks that in the absence of settled views, we could only be applying dogmatic viewpoints; viewpoints that pretend to have settled larger questions in the history of philosophy - such as the nature and existence of intrinsic value, the existence of duty generating pain, and so on - which are still the subject of wider and more demonstrably incommensurable positions. Environmental philosophers need to go back to the drawing board where the larger guild is still hard at work. To do otherwise, perhaps for Watson, is to abrogate our professional responsibilities as philosophers.

But here Watson and I part company. For environmental ethicists, to take his advice would represent an abandonment of their grounding principles, for many as individuals, and arguably for the field as a whole. The aspirations of environmental ethics as a truly applied field are not only to seek to resolve its part of these larger and older debates to the satisfaction of the wider philosophical community. I assume, perhaps naively, that this field of ethics was formed, and continues to draw thinkers to it, out of a concern to find a role for philosophical reflection (not simply a role for professional philosophers) in the resolution of environmental problems rather

than simply their discussion or elucidation. As suggested above, success in such an endeavor requires environmental ethicists to expand the audience to whom they wish to hold their activity responsible beyond the traditional purview of other philosophical subfields. Namely, environmental ethicists must find their role in the larger environmental community, of which they are arguably already a part. While the connection has never been clear, the field continues to be part of at least a continuing conversation about environmental issues in the wider world beyond the academy, if not an outright intentional community of environmentalists.

The focus therefore on ends in the current debates in environmental ethics is really not out of place. Instead, I would maintain that in the context of our role in the larger environmental community, this focus on ends has not gone far enough. We should redirect at least part of our work (perhaps we can call it the “applied” part, though others prefer the term “practical”; see Norton, 1995a) on helping the environmental community to better make ethical arguments in support of the policies on which our views already largely converge. The necessity of engaging in a more policy-oriented, or at least practical problem-oriented, environmental ethics is driven by the particular exigencies of the environmental community and the problems that it orients itself around. This drive to apply ethical theories in this way is not only motivated by a desire to actively participate in the resolution of environmental problems, but to hold up our philosophical end, as it were, in the community of environmentalists.

To make environmental ethics a more useful field of applied ethics does not require giving up all our lively philosophical debates. These debates are deserving of continued attention. But if we are to attend to the needs of our larger community, we must give up the dogmas in the field, at the very least in those contexts where various views have converged and where incommensurabilities between positions do not arise. There are other changes in the application of ethics to environmental problems which would have to occur as well. Here I will only make one other suggestion. A more fully responsible environmental ethics must abandon the wholesale rejection of anthropocentric reasons for protection of the environment, at least as part of our applied and, if you will, our public task.

In addition to the reasons offered above, there are at least two practical reasons for reconsideration of the rejection of anthropocentrism to consider as well. First, we should consider that the focus in environmental ethics on the search for a description of the non-anthropocentric value of nature also separates it from other forms of environmental inquiry. Most other environmental professionals look at environmental problems in a human context rather than trying to define an abstract sense of natural value outside the human appreciation or interaction with nature. Fields such as environmental sociology and environmental health, for example, are concerned not with the environment per se but the environment as the location of

human community. This is not to say that these fields reduce the value of nature to a crude resource instrumentalism. It is to say, instead, that they realize that a discussion of nature outside the human context impedes our ability to discuss ways in which anthropogenic impacts on nature can be understood and ameliorated. If environmental philosophers continue to only pursue their work as a contribution to value theory, then they cut themselves off from the rest of the environmental community which seeks to provide practical solutions to environmental problems, solutions that it is almost trite these days to suggest must be interdisciplinary.

One may fairly wonder how environmental philosophers can make a contribution to something other than value theory. After all, what else are they trained to do as philosophers? My claim is that if philosophers could help to articulate moral reasons for environmental policies in a way that is translatable to the general public, then they will have made a contribution to the resolution of environmental problems commensurate with their talents. But making such a contribution may require doing environmental philosophy in some different ways. At a minimum, it requires a more public philosophy, as the American pragmatist philosopher John Dewey envisioned, though one more focused on making the kind of arguments that resonate with the moral intuitions which most people carry around with them on an everyday basis.

A public and applied environmental ethics would not rest with a mere description of the value of nature (even a description that justified a secure foundation for something as strong as a claim for the rights of nature). A public environmental ethics would further question whether the description of the value of nature it provided could possibly cause human agents to change their moral attitudes about nature, taking into account the overwhelming ethical anthropocentrism of most humans. As such, a public environmental ethics would have to either embrace an enlightened anthropocentrism about natural value, or endorse a pluralism which admitted the possibility, indeed the necessity, of sometimes describing natural value in human-centered terms rather than always in non-anthropocentric terms.

The empirically demonstrable prevalence of anthropocentric views on environmental issues is the second practical reason for reconsidering the wholesale rejection of anthropocentrism. In a survey by Ben Minteer and Robert Manning (1999) about the sources of positive attitudes toward environmental protection in Vermont, respondents overwhelmingly indicated that the reason why they most thought the environment should be protected is because they think that we have positive obligations to protect nature for future human generations. More exhaustive surveys of American attitudes toward environmental protection have also found such results. In the preparatory work for their landmark study of American environmental attitudes in the US, Willett Kempton and his colleagues found that obligations to future generations was so powerfully intuitive a reason for most people to favor environmental protection that they would volunteer this view before they were asked. In a series of

interviews, which helped determine the focus of their questions for the survey, the authors remarked:

"We found that our informants' descendants loom large in their thinking about environmental issues. Although our initial set of questions never asked about children, seventeen of the twenty lay informants themselves brought up children or future generations as a justification for environmental protection. Such a high proportion of respondents mentioning the same topic is unusual in answering an open-ended question. In fact, concern for the future of children and descendants emerged as one of the strongest values in the interviews." (Kempton et al., 1997: 95)

The larger survey conducted by Kempton, which included questions about obligations to the future, confirmed these findings. Any philosophical views which would extend such intuitions would of necessity have to start with anthropocentric premises.

In addition to not giving up our various philosophical debates, my suggestion that we begin to make arguments closer to anthropocentric, everyday, moral intuitions also does not mean that those who choose to must give up their pursuit of a theory of non-anthropocentric natural value. They can continue this work as one of their tasks as environmental ethicists. But another task that they must accept (if they are to rise to their larger role in the environmental community) requires that they be willing to articulate their philosophical views about the value of nature when necessary in terms that will morally motivate policy-makers and the general public even when they have come to their views about the value of nature through a non-anthropocentric approach. Other works (Light, 2001) have sketched in more detail how such a two-pronged approach would work. Here I will only note that this strategy, asking that ethicists sometimes translate their views into a language more resonant with the public, is only required where convergence has been reached. That is, where the preponderance of views among environmental ethicists of various camps, as well as among environmentalists themselves, has converged on the same end, then the public work of the philosopher is to articulate the arguments that would most effectively morally motivate non-environmentalists to accept that end. Empirically, for many issues, this will involve making weak anthropocentric arguments (which also have the virtue of often being less philosophically contentious). But one can imagine that in some cases non-anthropocentric claims would be more appealing as well. What applies best is an empirical question. Where convergence has not been achieved, however, this public task of translation is not warranted. There we must continue with our "environmental first philosophy", a la Watson's suggestions, attempting to hammer out the most plausible and defensible views.

When engaged in this public task, environmental ethicists will be turning to an approach grounded in a more empirical moral psychology. But such a concession seems appropriate given the pressing need to attend to environmental problems

now. (Note, however, that I have not argued that this public task is conceptually or practically justified for other areas of applied ethics. For now I am making this argument only given the structure of current debates in environmental ethics and the pressing nature of the problems to which it is addressed.) This approach is also more consistent with a robust pluralism, even though its pluralist components are practically, rather than philosophically, justified. There are many other details to fill in with this approach; I trust charitable readers will allow for its full defense elsewhere.

I call the view that makes it plausible for me to take such a position, “methodological environmental pragmatism”. By this term I do not mean an application of the traditional writings of the American pragmatists to environmental problems. Instead, I mean that environmental philosophy of any variety ought to be pursued within the context of recognizing that a responsible and complete applied environmental ethics includes a public component with a clear policy emphasis. Environmental pragmatism in my sense is agnostic concerning the existence of non-anthropocentric natural value or the relative superiority of one form of natural value over another. Those embracing this view can either continue to pursue non-anthropocentric theories or they can take a more traditional pragmatist stance denying the existence of such value (see Weston, 1992; Parker, 1996), so long as they do not see the pursuit of a purer philosophical pragmatism to be the endless descent into more meta-ethical debates.

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ECONOMICS TRACK

SPECTRAL ANALYSIS OF MACROECONOMIC SERIES FOR CROATIA

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ABSTRACT

Macroeconomic data/indicators are the basis for any serious assessment of the economic situation in a country. After gaining independence, Croatia developed into a highly open economy that liberalized fast, thus becoming a small, open, import-dependent and indebted country, with strong trade imbalances. In addition, large seasonal influences and numerous external and internal shocks led to a problem of data consistency and reliability. Nowadays we find many advanced tools for data analysis, and one of them is spectral analysis. The goal of spectral analysis is to create a decomposition of the original series into a large number of small independent components such as slow fluctuating trend, oscillator components, and structural noise. The advantage of spectral analysis is that it allows the identification and characterization of dominant trends and cycles, as well as seasonal and oscillatory components. In this paper, we will use spectral analysis to study the most important macroeconomic variables for Croatia. Hence, the main objective of this paper is to use elements of spectral analysis to get more accurate and reliable macroeconomic series that could be useful in evaluating and/or forecasting future economic developments.

Keywords: Advanced time series analysis; Spectral analysis; Cycles; Croatia

JEL Codes: O11; C3

1. INTRODUCTION

Macroeconomic indicators are very important for any kind of assessment of the economy. The accuracy of those macroeconomic data is an even more important issue. The accuracy of the data affects all possible results that arise from economic models. If we look at Croatia, we can see that there is a very large seasonal impact on all macroeconomic variables. In addition to the negative seasonal impact, there is a large number of shocks, from post-war, to the influence of various business cycle phases, to the world economic crisis aftermaths. This is why the approach of this paper, i.e. the spectral analysis of macroeconomic indicators is so important for the evaluation of business cycles in Croatia. Although we can find different tools within the business cycle analysis, we use spectral analysis due to its advantages in operating stages. The goal of spectral analysis is to create a decomposition of the original series into a large number of small independent components such as slow fluctuating trend, oscillator components, and structural noise. The advantage of spectral analysis is that it allows the identification and characterization of dominant trends and cycles, as well as seasonal and oscillatory components. With spectrum analysis, we achieve fewer errors in the assessment of macroeconomic variables, and reduce the seasonal impact and the impact of various shocks on the variables much more precisely. Hence, the main objective of this paper is to use elements of spectral analysis to get more accurate and reliable macroeconomic series that could be useful in evaluating and/or forecasting future economic developments in Croatia.

2. A SHORT LITERATURE REVIEW

Although spectral analysis is a relatively new technique, derived from natural sciences, many studies in economics are already based on the spectral approach within time series analysis. There are a number of papers dealing with the study of macroeconomic indicators on the basis of spectral analysis, such as the work from Korotayev and Tsirel (2010) entitled "A Spectral Analysis of World GDP Dynamics: Kondratieff Waves, Kuznets Swings, and Juglar and Kitchin Cycles and Global Economic Development, and the 2008-2009 Economic Crisis". In this paper, the authors observed the movement of the world GDP over the period of 53 years. The conclusion of this study is the identification of Kuznets and Juglar cycles in the world GDP variable. The next work that dealt with the spectral analysis of the GDP variable is the work of Leon (2015), entitled "Decomposition of the European GDP based on Singular Spectrum Analysis", where the author observed the European GDP in the period from 1995 to 2010. He took apart a variable GDP into the trend, cycles, seasonal impact and noise components. Leon concluded that spectral analysis should be proclaimed the best technique with highest expectations in the future (within eco-

conomic science) due to its long-term use in the natural sciences. Another paper on this topic is the work of Dudaković (2010) entitled "Spectral Analysis of GDP Shocks and the US and the BRIC Countries". In this paper, the author used a long-term time-series data for the US and for Brazil, Russia, India and China, i.e. the BRIC countries. The aim of the study was to show that spectral analysis can be efficiently used for the analysis of GDP and for determining the existence of business cycles across a different set of countries.

The work done by Pleskach (2014) entitled "Modeling of Dynamics of the Unemployment Index at the Regional Level by Means of the Spectral Analysis Method" analyzed unemployment at the regional level for the period from 1994 to 2014. It demonstrated that spectral analysis can be pragmatically used at the regional level analogously. There are a number of papers dealing with the study of unemployment through spectral analysis as well. One of these is the work of Škare and Buterin (2015) under the title "Modelling and Forecasting Unemployment Non-linear Dynamics Using Spectral Analysis". The authors study the unemployment rate in Croatia in the long run through spectral analysis. As a result of their work, all the variables that affect the unemployment rate in Croatia are given. Goodman (1974) analyzed the dependence of the labor force and unemployment through the relation to salary with spectral analysis. The results indicated that the authors were unable to find a correlation between the observed variables at that time.

If we look at some other important macroeconomic variables such as aggregate consumption and income, which are studied by means of spectral analysis, we can track a number of important works. The first such paper was that by Pollock (2009), titled "Consumption and Income: A Spectral Analysis". In this paper, the author observed the relationship between aggregate income and aggregate consumption in the UK, where he analyzed the data using different forms of spectral analysis. The conclusions suggested that fluctuations in the growth rates of consumption tend to occur prior to similar fluctuations in income, as opposed to the general position. The work by Pakko (2003) entitled "A Spectral Analysis of the Cross-Country Consumption Correlation Puzzle" observed the aggregate consumption. The conclusions suggest that the relationship between consumption within a different set of countries exists; however, it is expressed only at higher frequencies.

An interesting paper is provided by Sella and others (2011), entitled "Economic Cycles and Their Synchronization: Spectral Analysis of Macroeconomic Series from Italy, The Netherlands, and the UK". The conclusion of their work is the existence of synchronization of business cycles between these three countries for the duration (on average) of five years for one cycle. Spectral analysis within the international synchronization process is part of the work by Dua and Sharma (2013) as well. They concluded that there exists a synchronization process for various sets of countries, which was much more pronounced in the period from 1990 to 2010. For the period

before 1990, the severity of the business cycle dynamics is much smaller. By studying the data on GDP and related macroeconomic variables for the EU countries through spectral analysis, Tomić and Stjepanović (2017) offered some conclusions on the nature of business cycle synchronization, cyclical regularities, and macroeconomic interdependence.

There are other techniques for seasonal adjustment such as X-13ARima, which we can compare with spectral analysis. The X-13ARIMA-SEATS seasonal adjustment program is an enhanced version of the X-11 Variant of the Census Method II seasonal adjustment program. The enhancements include a more self-explanatory and versatile user interface and a variety of new diagnostics to help the user detect and remedy any inadequacies in the seasonal and calendar effect adjustments obtained under the program options selected. The program also includes a variety of new tools to overcome adjustment problems and thereby enlarge the range of economic time series that can be adequately seasonally adjusted.

We can also see in the paper by McGrevy (2013), that there is a new semi-parametric multivariate approach to seasonal adjustment. In this paper, the primary innovation is to use large dimensional factor model of cross section dependence to estimate the trend component in the seasonal decomposition of each time series.

3. DATA, METHODOLOGY AND RESULTS

The data for this research were collected from the International Financial Statistics (IFS) database. We looked at the following variables: real gross domestic product, real household consumption, real government consumption, real import, real export and real gross fixed capital formation and unemployment. The data for Croatia were taken for the years (ranging from 1997 to 2016) available in their monthly form.

3.1. SINGULAR SPECTRAL ANALYSIS

Singular spectrum analysis (SSA) is a new technique in time series analysis, which incorporates the elements of classical time series analysis, multivariate statistics, multivariate geometry, dynamical systems, and signal processing. Spectral analysis explores the cyclical patterns of data, and its main purpose is to decompose the original series into an infinite sum of periodic functions, each of which has a different frequency. The advantage, hence the uniqueness of spectral analysis, is that it enables the identification and characterization of nonlinear trends and dominant cycles, including perennial and seasonal components, which characterize each time series.

The basic version of SSA consists of four steps, which are performed as follows (Golyandina, 2000). Let $F = (f_0, f_1, \dots, f_{N-1})$ be a

time series of length NN , and LL be an integer, which will be called the “window length”. We set $K = N - L + 1$ and define the $L - L$ -lagged vectors $X_j = (f_{j-L}, \dots, f_j, \dots, f_{j+L-1})^T$, $j = 1, 2, \dots, K$, and the trajectory matrix:

$$X = (f_{i+j-s})_{i,j=1}^{L,K} = [X_1 : \dots : X_K]X = (f_{i+j-s})_{i,j=1}^{L,K} = [X_1 : \dots : X_K] \quad (1)$$

Note that the trajectory matrix X is a Hankel matrix, which means that all the elements along the diagonal $i + j = \text{const}$ are equal. The construction of the trajectory matrix constitutes the first step of the algorithm. The second step is the singular value decomposition (SVD) of the matrix X , which can be obtained via eigenvalues and eigenvectors of the matrix $S = XX^T S = XX^T$ of size $L \times L$. This provides us with a collection of LL singular values, which are the square roots of the eigenvalues of the matrix SS , and the corresponding left and right singular vectors. The left singular vectors of XX are the orthonormal eigenvectors of SS , which we often call “empirical orthogonal functions” or simply EOFs. The right singular vectors can be regarded as the eigenvectors of the matrix $X^T X$. We thus obtain a representation of XX as a sum of rank-one biorthogonal matrices $X_i X_i^T$ ($i = 1, \dots, d$), where d ($d \leq L$) is the number of nonzero singular values of X . At the third step, we split the set of indices $I = \{1, \dots, d\}$ into several groups I_1, \dots, I_m and sum the matrices $X_i X_i^T$ within each group. The result of the step is the representation:

$$X = \sum_{k=1}^m X_{I_k} X = \sum_{k=1}^m X_{I_k}, \text{ where } X_{I_k} = \sum_{i \in I_k} X_i X_i^T = \sum_{i \in I_k} X_i \quad (2)$$

At the fourth step, averaging over the diagonals $i + j = \text{const}$ of the matrices $X_{I_k} X_{I_k}^T$ is performed. This gives us an SSA decomposition; that is, a decomposition of the original series FF into a sum of series:

$$f_n = \sum_{k=1}^m f_n^{(k)}, n = 0, \dots, N - 1, f_n = \sum_{k=1}^m f_n^{(k)}, n = 0, \dots, N - 1, \quad (3)$$

where for each k the series $f_n^{(k)}$ is the result of diagonal averaging of the matrix $X_{I_k} X_{I_k}^T$.

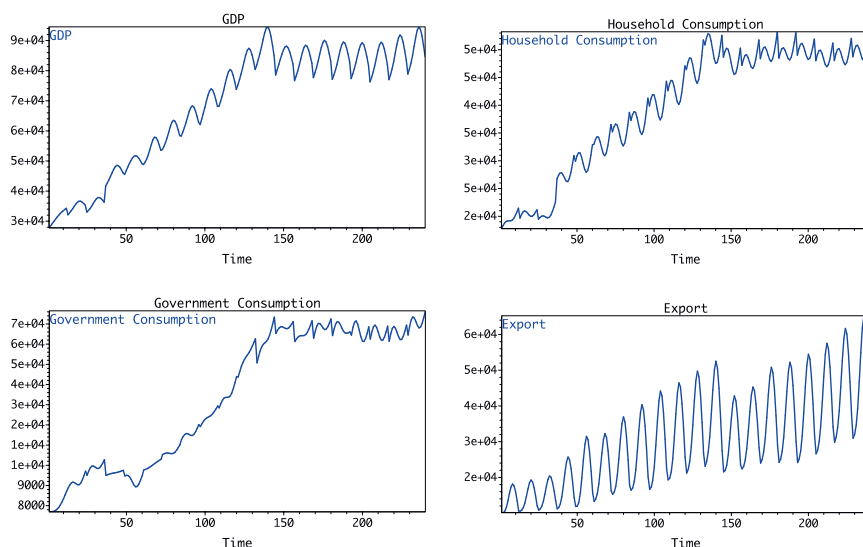
SSA is usually regarded as a method of identifying and extracting oscillatory components from the original series. The standard literature does not pay enough attention to theoretical aspects which are very important for understanding how to select the SSA parameters and, first of all, the window length LL for the different classes of time series. The concept of separability and related methodological aspects together with robust empirical results provide us with this understanding. The choice of parameters in performing the SSA decomposition (they are the window length LL and the way of grouping the matrices $X_i X_i^T$) must depend on the properties of the original series and the purpose of the analysis. The general purpose of the SSA analysis is the decomposition (3) with additive components $f_n^{(k)}$ that are “independent” and “identifiable” time series; this is what we mean when we talk about analyzing the structure of time series by SSA. Sometimes, one can also be interested in particular tasks, such as ‘extraction of signal from noise,’ ‘extraction of

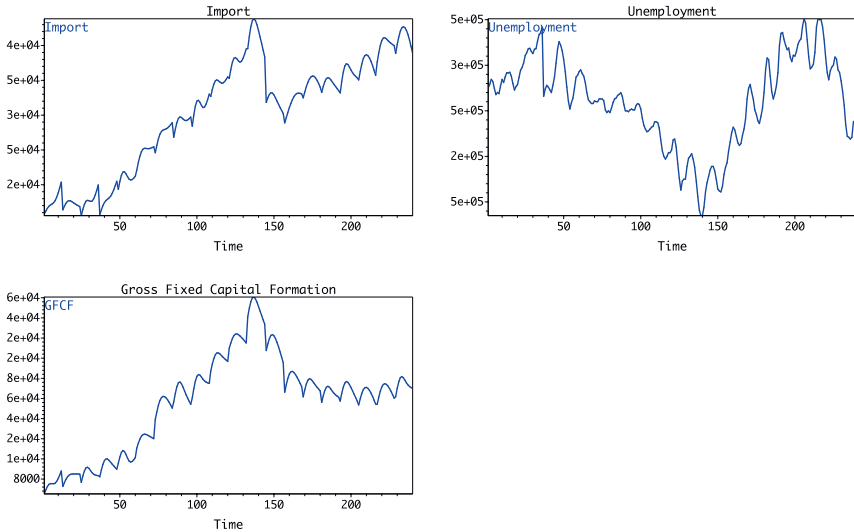
oscillatory components' and 'smoothing'. For a properly made SSA decomposition, a component $f_n^{(k)}$ in (3) can be identified as a trend of the original series, an oscillatory series (for example, seasonality) or noise. An oscillatory series is a periodic or quasi-periodic series which can be either pure or amplitude-modulated. Noise is any aperiodic series. The trend of the series is, roughly speaking, a slowly varying additive component of the series with all the oscillations removed. Note that no parametric model for the components in (3) is fixed and these components are produced by the series itself. Thus, when analyzing real-life series with the help of SSA, one can hardly hope to obtain the components in the decomposition (3) as exact harmonics or linear trend, for example, even if these harmonics or linear trend are indeed present in the series (by a harmonic, we mean any specific time series with some amplitude, frequency and phase). This is an influence of noise and a consequence of the non-parametric nature of the method. In many cases, however, we can get a good approximation of these series.

3.2. EMPIRICAL RESULTS

This section presents the results of the research. The results will be explained by following the set of variables for Croatia. These observed variables are the GDP, private consumption, government consumption, imports, exports, gross fixed capital formation and unemployment.

Figure 1.: Original macroeconomic series

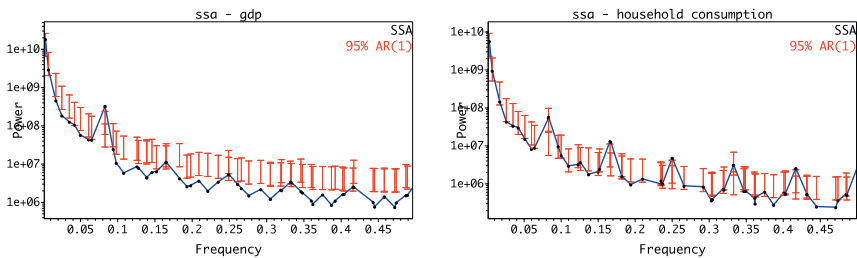


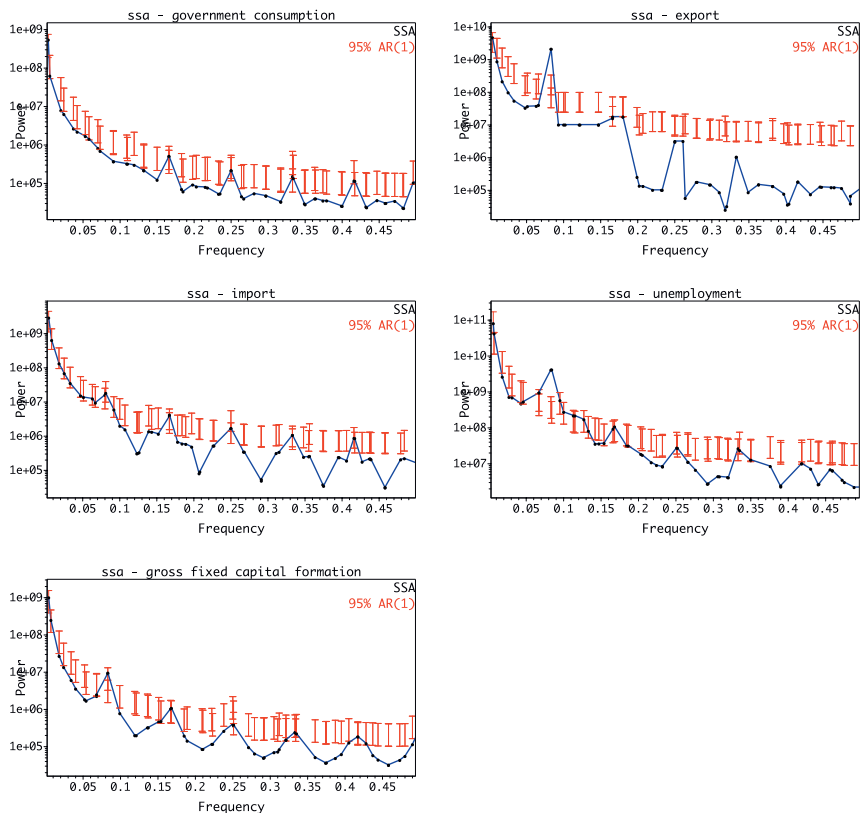


Source: IFS (2016)

In *Figure 1.*, we can find macroeconomic variables for Croatia for the period from 1997 to 2016. Graphical displays of the variables indicate very large and pronounced seasonal effects. These seasonal effects result from the structure of the economy that is very dependent on tourism. Tourism in Croatia has a strong impact on the economy through its large impact on investments, but also on the consumption and overall GDP trends. If we consider the unemployment variable, we can also detect seasonal impact; however, there is a significant drop in unemployment in 2000, which is the consequence of introducing a different system of registering unemployment at the Employment Service. With this change in the registration system, many unemployed persons have been deleted from the register.

Figure 2.: SSA eigenspectrum decomposition



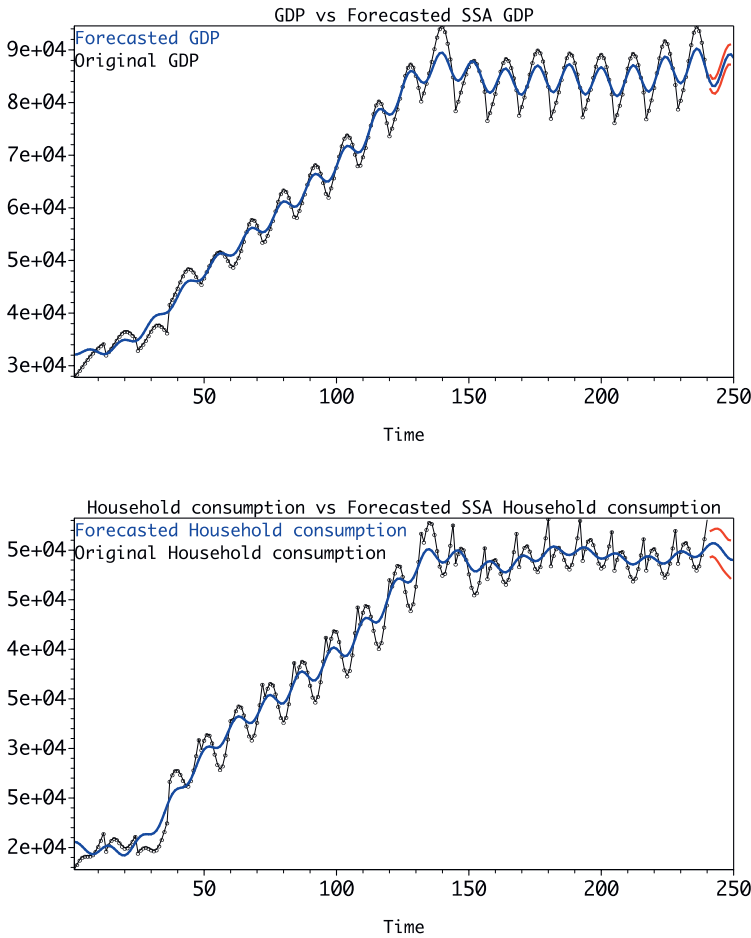


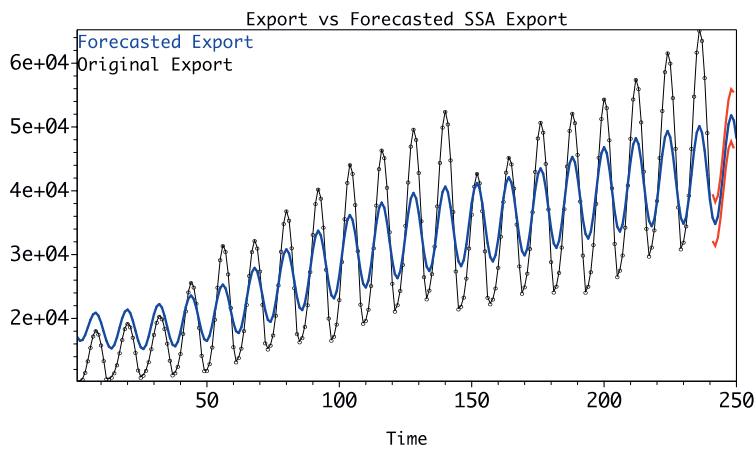
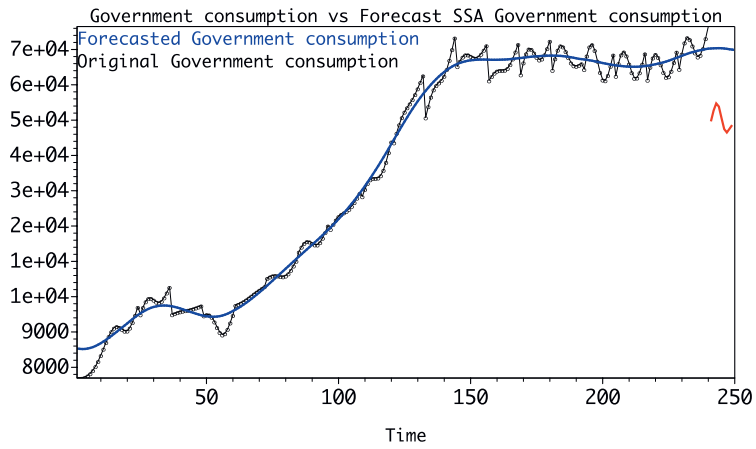
Source: Authors' calculation.

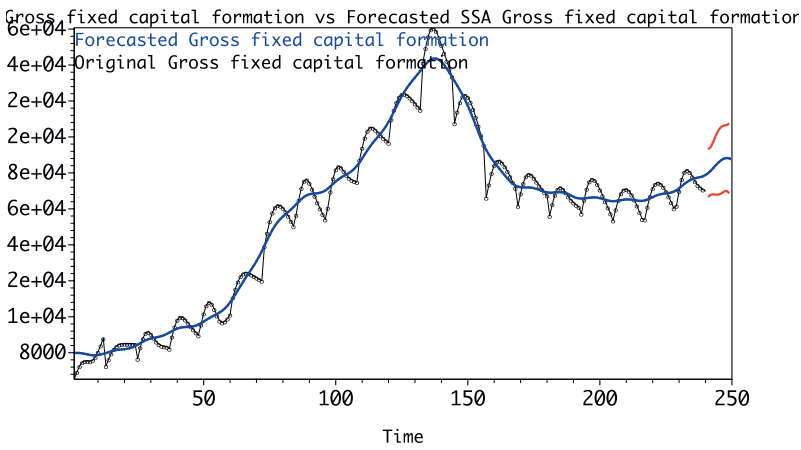
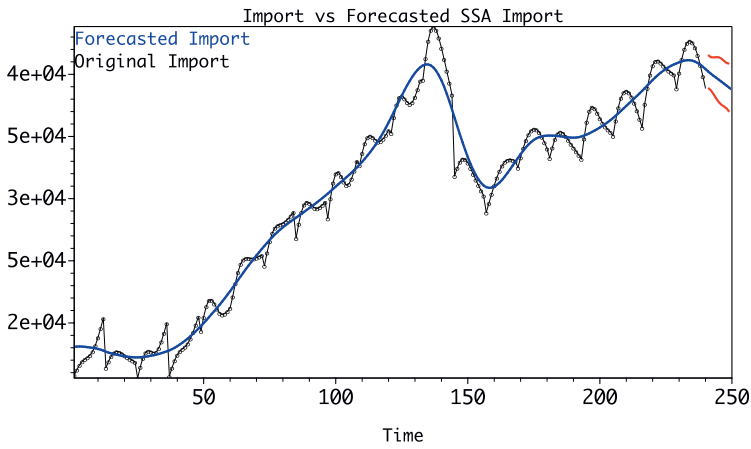
Next, *Figure 2*, displays singular spectrum analysis of eigenspectrum decompositions of macroeconomic series for Croatia. We see that the trend component in all the series is significant, with two SSA components explaining almost 66.9% to 81% of the variance in all the series. Trend component is correctly identified by SSA 1-2 as it is visible from the graphical presentation. Error bands (95% confidence level) are estimated from surrogate series against the null hypothesis (red noise). Identified spectral components fall into the error band with the SSA 1-2 at the 90% confidence level. Dots (representing evaluated eigenvalues) falling into the 5th and 95th red noise percentile are not statistically significant from the red noise. An oscillatory component, i.e. the signal SSA 9-10 is statistically significant for it explains 41% of the total variance in the GDP series. In this particular case, the eigenvalues 9-10 indicate components whose power is considerably different from the simulated red noise. Oscillatory signal SSA 5-6 is statistically significant for it explains 21% of the total variance in the household consumption series. For government consumption, we find oscillatory components signal 11-12, which explains 19% of the variance. In

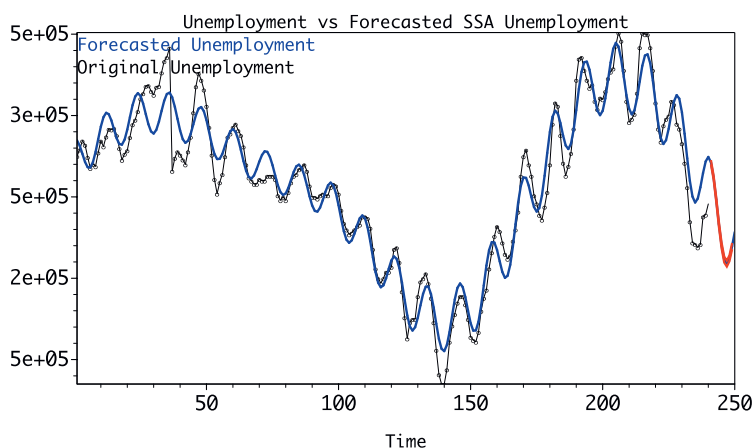
export and import, we find 15-16 and 13-14 oscillatory components signals that are significant since they explain 39% and 45% of the variance. In unemployment series, there is an oscillatory components signal 3-4 that is significant for it explains 33% of the variance. In the variable gross fixed capital formation, the oscillatory components signal 11-12 is also significant, explaining 25% of the variance.

Figure 3.: Original macroeconomic series and SSA trend reconstructed macroeconomic series









Source: Authors' calculation.

Finally, *Figure 3*, suggests that by using singular spectrum analysis, we can eliminate seasonal impact and shocks from the original data and thus obtain more accurate approximations of the variables. In addition, we can achieve great potential for forecasting the movements of these variables in the future. In other words, when observing the GDP variable, we should expect moderate growth in the coming period, yet with strong seasonal influence. The forecasted values of personal consumption suggest a mild decrease by the end of 2017 and early 2018. Unlike private consumption, the government consumption variable could remain in similar frequencies with no significant changes. The exports variable will continue to follow the cyclical behavior that can be seen from its movements (see *Figure 1*). Imports could decrease in the immediate future (but with the clear intention of increasing again), while the gross fixed capital formation variable should remain at the same level as in the previous period. We can conclude that unemployment is expected to fall, which is logical in regard to the expected GDP growth and an increase in consumption. We also need to emphasize that we can still expect a very large seasonal impact on unemployment in the future.

4. CONCLUDING REMARKS

In this paper, we analyzed important macroeconomic variables for Croatia for the period from 1997 to 2016. The variables that we considered within this study are the gross domestic product, personal and government consumption, imports and exports, gross fixed capital formation and unemployment. What is specific for this research is the purpose of the paper, which stems from a desire to get a thorough spectral analysis of macroeconomic variables. SSA analysis is used due to its features

and advantages. The possibilities offered by SSA analysis are seen in a successful detection of trends for different resolutions. A further possibility is an extraction of seasonal components, and a very good ability of forecasting the movements of variables in the future. Hence, this analysis does not require much knowledge of the parametric modelling of time series, for it works with a wide spectrum of real-life time series, it matches up for non-stationary time series and allows finding of the cyclical structure within a short-term analysis. The aim of this study was to extract reliable features of the macroeconomic variables for Croatia, i.e. to cancel the seasonal impact and the impact of various external and internal shocks. Although there are a number of tools in econometrics by which we address this issue, spectral analysis is considered due to its usefulness in observing oscillatory patterns in time series within frequency patterns.

We came to several conclusions. The results suggest that all the variables that had a very pronounced seasonal effect in themselves, still retained it after applying spectral analysis techniques, but on a smaller scale. Next, we found that approximated values of forecasted variables follow trends that existed within these variables in the past. From the accompanying results, we can conclude that the future (expected) growth of gross domestic product, private consumption and exports, could be achieved with higher seasonal impact. Also, we can expect a drop in unemployment and a decrease in imports with a slight increase in the gross fixed capital formation. *Ditto*, we expect a growth of the Croatian economy in a distinct future. When considering forecasted GDP growth assessments, we could expect a fall in unemployment and, with a revival of the EU market, an increase in exports.

Based on the assessments from this analysis, we see spectral analysis as an unavoidable technique in the study of macroeconomic variables in Croatia. This would eliminate seasonal effects in the data, and also isolate external and internal shocks that have occurred throughout history. Such research could provide more accurate data, which we can use for more reliable macroeconomic modeling. In addition, one could work in the future to compare the functionality and accuracy of spectral analysis with respect to other existing techniques in econometrics. In this way, we could compare the results from all the techniques and see if spectral analysis could offer more accurate and selective conclusions. From such evaluation, we could discover all the shortcomings of some econometric techniques, and negotiate what technique serves best and in which conditions. In this way, we could assess the quality of distinct individual techniques, and therefore see whether their results overlap or not. To conclude, our deductions made above are just mere observations and could/should be subject to revision in the future.

SSA for phase space reconstruction has two advantages over the method of delays. First, SSA has an inherent filter for reducing noise, and second, the coordinate functions (principal components) are more general (that is, all linear projections are

considered, not just delta functions as in the method of delays). SSA for phase space reconstruction can be effective when the underlying attractor is relatively simple. The limitation of using SSA for reconstructions arises from the fact that the components of the orthonormal basis given by SSA are linearly independent but can be strongly related in a nonlinear sense.

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FINANCE AND ACCOUNTING TRACK

EVALUATING ALTERNATIVE SOLUTIONS FOR A NEW FINANCIAL SYSTEM

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ABSTRACT

The global financial crisis that shook the world in 2008 gave way to a frustrating “new normal” of low growth, rising inequality, political dysfunction and social tensions, all despite massive policy interventions from the central banks. Unless something changes, our financial system may be on the path to another collapse, perhaps an even more severe than the last one. Identifying the core problem is easy, but the solution is painful. Governments and central banks do not have the will to take the necessary steps to fix the core problem, which is increasing the mountain of debt in the world. The cure is to reduce the level of debt. The next financial crisis could put too much stress on our current system and, thus, governments, economists and central banks will need to develop a new financial system, as well as address the issues of the current one such as debt, derivatives, big banks, money creation and a lack of ethics. This article is about evaluating alternative solutions towards a new financial system. This article tries to highlight the present status of our current financial system, and gives a review of possible alternatives such as bringing back the gold standard, implementing the Chicago plan, the IMF’s special drawing rights (SDRs) as the world’s reserve currency, Islamic finance, digital cryptocurrency, and Clean State.

Keywords: Alternative financial system; Financial crisis; Monetary policy

JEL Codes: G1

Thomas Jefferson's view on a central bank was: *"If the American people ever allow private banks to control the issue of their currency, first by inflation, then by deflation, the banks and corporations that will grow up around them will deprive the people of all property until their children wake up homeless on the continent their Fathers conquered.... I believe that banking institutions are more dangerous to our liberties than standing armies.... The issuing power should be taken from the banks and restored to the people, to whom it properly belongs."* (Platt, 2003)

Henry Ford on the banking system: *"It is well that people of the nation do not understand our banking system and monetary system, for if they did, I believe there would be a revolution before tomorrow morning."* (Binderup, 1937)

Thomas Edison on money issuance: *"If our nation can issue a dollar bond, it can issue a dollar bill. Both are promises to pay, but one promise fattens the usurers and the other helps the people."* (Hammes, Wills, 2004)

Henry Kissinger on money: *"If you control the oil, you control entire nations."* (Kissinger, 2008)

Mayer Amschel Rotchild on money control: *"Let me issue and control a nation's money and I care not who writes the laws."* (Griffin, 1994)

1. INTRODUCTION

Paying for things with a plastic card is the normality, and the society is nowadays becoming accustomed to tapping of cards without even entering the pin number and, in some cases, without getting a receipt. The next stage for customers is to become familiar with paying by using other methods like smart phones, smart watches, RFID wristbands, company issued RFID cards, iBeacon wristbands, payment wearables and RFID chips inside human bodies. This technology offers control and reporting accuracy, connects with other technology, increases security and reduces access. The technology is convenient and secure; it offers location control, improves efficiency, reduces cash and administration costs, increases revenues and offers real-time analytics.

Increasing capital controls in a form of the war on cash as a component in the economies' decline worldwide includes the West, followed by Japan and Australia. The governments benefit from capital control move if they collectively eliminate cash in favor of a digital currency transferred solely through licensed banks. It means governments are limiting the use of cash by restricting the amount of cash that can be withdrawn from banks and by limiting what can be purchased with cash.

So far, the governments of the world have linked the free movement of cash to terrorism and suggested that the movement of large sums of cash is connected to criminal activity. They have established upper limits on money amounts that can be moved without being reported to a government's financial agencies. Some govern-

ments have already lowered those limits. They are running awareness campaigns on how to live cashless.

The next step could be to declare a date until which cash should be deposited to bank accounts, and after which cash would become illegal. An increase of negative interest rates would then apply to a much bigger sum of money. Confiscation and a freeze of deposits in case of crime suspects are legal in Canada, EU and the U.S., and they also apply to safe deposit boxes. Taxation would become direct debit. Money could be declared a property of the State that issued it and the people would be allowed to trade it, but it would not be truly theirs. State money and wealth control establishment would be the goal. The cash in the bank wouldn't be depositors'; it would become the wealth loaned to the bank which would then, with the government's approval, have the power to decide if, when and how much it will return back. These rules would be decided on by the banks, without the need for depositors' approval.

There will be some strong governments taking a different path, willing to accommodate people who seek to escape such financial systems of their countries, offering low taxation and minimal interference or regulation over wealth.

The ultimate beneficiaries of the war on cash are going to be the governments and the central banks. The challenge will be to prevent illegal uses, money laundering, terrorism financing, fraud and a government's or bank's misuse. Governments could block financial flows to individuals or impose prohibition on certain purchases. Counterfeit notes wouldn't have place in the digital economy. All financial transactions could be taxed, charged a fee, and bank runs become impossible. The government wouldn't need to guarantee limited bank runs as they did in the time of Great Depression or Greece, which triggered the collapse of hundreds of banks, as depositors would no longer need to fear a bank closing.

Monetary intervention such as printing cash in order to get out of national debt or, as in Japan, inducing inflation in the economy would become impossible. Money increase would be possible only through bond issuance and treasury bills which would increase debt obligations. It would prevent governments from excessive spending, but would also remove a tool to fight deflation such as in the case of Japan. The remaining problem would be to make sure digital payments are backed by real money if real cash is eliminated.

The reality is that the bottom 90 percent of households in America has less income than they had before (Saez, 2015), are able to spend less and aren't hoarding cash, but have to fight for existence with declining income. The rich percentage of society got richer from bonuses and raising profits, while small businesses haven't prospered. All were facing higher living expenses. Only the top slice was able to invest, to keep their savings in cash or gold, or to gamble it in the stock market. Keeping money in cash is the only rational response to financial repression and economic insecurity, while central banks' demands for spending rather than saving is contrary

to the best interests of regular people. The capital which begins its life as savings is the healthiest investment for the future building of wealth and the founding brick of capitalism. Attacking savings and cash is attacking future capital wealth.

Big major banks own the majority of productive assets and are able to borrow at near zero interest rates, which they use to buy their own shares and even more productive assets, while the rest at the bottom aren't supposed to accumulate their savings, but spend it and pay interest payments. Income inequality is rising, debt burdens are rising, and short-term perspective is making long-term planning required to build sustainable financial system nearly impossible.

Every single transaction would be recorded for eternity, for the whole economic life of a human being, and all bad habits like alcohol, cigarettes, pornography attached to a permanent RFID ID. Censoring transactions or shutting down someone's account would mean the actual death in real society.

The fall of popularity of globalism worldwide was visible in the year 2016 as never before. In the middle was a revolution against corporate interests and monopoly worldwide. Nations like Japan, Australia, Eastern Europe, Romania, and Hungary rejecting the IMF, Germany's falling popularity with chancellor Angela Merkel, France with the lead of Marie Le Pen, Turkey paid off their debt to IMF and rejected any ties, the UK and the Brexit, Trump's win in the U.S. elections, nationalists' percentage rising in presidential elections in the Netherlands, Italy's vote, Iceland, and Iraq.

A sudden push by governments to ban cash comes because banks and governments are anticipating bail-ins and applying negative interest rates on savings. The only escape from such threats is cash, investment in precious metals and real estate, or gambling in the financial markets. The result in a form of credit contraction and cash holding instead of spending is recession, and that is why the solution offered by the banks and the governments is to push digital currencies.

Central banks are mostly independent from national governments. These private institutions create the money supply out of nothing, and the money they create is backed by nothing in this fiat system.

The Federal Reserve in the U.S. came into existence in 1913, a little bit over a hundred years ago, and was formed by interests of private banks. Since that time, the U.S. dollar has devalued by 96 percent (Sahr, 2016), and the national debt has grown 5,000 times. In March 2008, the then-chairman Ben Bernanke admitted that 16 years after the FED was created, it caused the Great Depression that ended in the Second World War (Kupelian, 2008). The FED is privately owned and its shareholders are private banks, but who those shareholders are is mostly unknown to the broader public.

One of the first things that the U.S. did after evading countries in the name of freedom and need of liberation was to enslave the population with debt via central banks, owned by global banking cartels that are integrated into the global financial

system. In 2001, the U.S. invaded Afghanistan and by 2003 Da Afghan bank was re-established by presidential decree. Hamid Karzai was first installed by the U.S. as an interim president a couple of months after the invasion, and later became elected president. Just a few months after the invasion of Iraq, the U.S. didn't even wait for the cover of a puppet government to be formed, and created the central bank of Iraq to bring Iraq's legal frame for banking in line with the international standards. As invader, the U.S. pressed upon the people of Iraq a privately controlled central bank which then began issuing debt. In Libya, Colonel Gaddafi was destroyed by the U.S. as he attempted to implement gold-backed currency, the African Dinar that would be outside the central bank system and would have challenged the petrodollar.

The countries outside the central bank system are very small and represent a special group: Iran, Cuba and North Korea, which are countries with the longest-sustained economic sanctions that the U.S. has ever applied to any country in the world, as well as Syria, where the U.S. has backed up rebel groups that seek to overthrow the regime, despite the crime against the Syrian people that they have committed.

It is absolutely clear that many of the central banks in the world are controlled by private banking cartels, but there isn't institutional will to change that, despite the obvious problems that exist with private institutions having the power to create debt-backed currencies out of nothing and then loan it at interest. Nowhere in the world does a political movement exist which would shut down a central national bank, as politics in the world is more focused on guns, legalization of marijuana, alcohol and cigarettes taxes, abortion, LGBT rights, feminism, race relations, state welfare, and mass uncontrolled migration. Governments have lost control of the money supply. Central banks do control the money supply, but it is commercial banks that create most of the money via fractional reserve banking. Commercial banks only hold a fraction of the amount of its deposit liabilities; they create money by loaning money they don't have, at interest, and are thereby creating debt. Our currencies are created in debt and our debt, whether personal or public, is created out of nothing.

With falling population, banks have fewer people to issue debt to and, what is even more difficult for banks is that most countries throughout the western world are maxed out on their ability to carry more debt. Canada holds more personal debt (174%) than citizens of any other G7 country, and its cities have some of the most overvalued real estate on the planet (Isfeld, 2016). The same goes for Australians who aren't part of the G7. Australia has around \$2 trillion in unconsolidated household debt relative to \$1.6 trillion in GDP. Australia's ratio is 123.08%, while Denmark's fell slightly to 122.99% (Soos, 2015). Canadians and Australians are so eager to allow hundreds of thousands of migrants to enter their countries every year to become debt slaves, despite high unemployment, deteriorating services and the structure of social cohesion (Benchfield, 2016). None of these matters as Canada, Australia and the rest of the West keep pushing new people in the debt machine (Keller, 2016). Mass

immigration of people from the developing world who lack language skills and formal education keeps the labor market artificially high and depresses wages (Nickell, Salehen, 2015). The gutting of the middle class everywhere and the creation of short-term jobs forces people into seeking hope of getting a better job, which means more student loans and more debt, more people struggling, more people on government assistance, and more people voting to expand state welfare benefits and national debt increase.

Without expanding population, banks are at a loss as they have less ability to issue debt that is created out of nothing via national fractional reserve banking. The more immigration from the developing world, the more western national politics moves towards expanding the welfare state.

Due to the demographic shift, democratic nations with populations that are impoverished through this system will move towards less free and more controlled societies (Laurence, Bentley, 2015).

Banking reform and the elimination of debt-backed currencies is one of the most important issues in front of the world today, which is never spoken about because the stakes are too high and the players are too big to fail.

Inflation is low in the U.S., while the purchasing power is declining. Since 1864, the U.S. has had a debt-based banking system. All money is based on the government's debt, and debt can't be extinguished without extinguishing money supply. It is impossible to pay of the national debt without reforming the banking system. The solution lies only in the reform of the banking system.

The term '*federal*' in FED is a deception created before the Federal Reserve Act was passed in 1913 to make Americans think that America's central bank operates in the public interest. The truth is that the Federal Reserve is a private bank, owned by private stockholders, and run for their private profit.

Republican congressman Charles A. Lindbergh of Minnesota stated that: "*The financial system... has been turned over to ... the Federal Reserve Board. That board administers the finance system by authority of... purely profiteering group. The system is private, conducted for the sole purpose of obtaining the greatest possible profits from the use of other people's money.*" (Bryer, 2012)

Republican congressman, former chairman of the US House Banking and Currency Committee during the Great Depression of 1932, Louis T. McFadden from Pennsylvania defined the FED stating the following: "*We have in this country one of the most corrupt institutions the world has ever known. I refer to the Federal Reserve Board.... This evil institution has impoverished... the people of the United States and has practically bankrupted our Government. It has done this through... the corrupt practices of the moneyed vultures who control it.*" (Mullins, 1983)

Senator Barry Goldwater commented on auditing the FED: "*Most Americans have no real understanding of the operation of the international money lenders. The accounts of*

the Federal Reserve System have never been audited. It operates outside the control of Congress and manipulates the credit of the United States." (Franks, Nunnally, 2015)

The FED is more powerful than the Federal Government because it determines the average real estate of vehicle payment. It is the largest single creditor of the United States government. The borrower is servant to the lender. From the day that the Constitution was signed, the ones who profit from privately owned central banks have been fighting for control over who gets to print the money. Money is just another commodity on which the profiteers want monopoly; there are a lot of ways to make profit and offer political influence. The privately owned central bank of the UK has forced the Parliament of the UK to impose taxes on the American colonies.

2. THE GOLD STANDARD

The gold standard has been gathering a lot of attention because it is understood better than any other proposed solution. The main feature of the gold standard is that governments fix their currency exchange rates to gold, and guarantee their convertibility into gold at a set price. This restricts governments from issuing unlimited supply of money, since they can do so only if they acquire more gold. The advantages are long-term price stability as it is difficult to expand money supply, and high inflation is extremely rare as it occurs only during war, when large parts of economy are destroyed, or when new gold is discovered in the country. It removes the types of financial repression such as the transfer of wealth from creditors to debtors, and because of small inflation there isn't such a great confiscation of wealth. Gold stands in the way of this process as the protector of property rights. Gold reduces uncertainty in trade, since the exchange rate is fixed. The negative side is short-run price volatility that can lead to financial instability because of the value of debt if the price of gold experiences rapid fluctuations. Unequal distribution and limited growth are an issue with gold.

The problem with the gold standard is that it is a fiat national currency that is supposedly backed by some mythical gold that is in a vault somewhere. The gold standard opens the door for the whole Wall Street and banking issues once again. If we used gold coins or nanograms that were attached to a block chain, and not to a gold standard, it would be verified that it is present, that it has a certain value and that the government can't expand it; it would work just fine and there wouldn't be dismal continuous deflation. We would live in a completely different world. The financial sector of today represents a 40% share of the world's GDP; it is huge and should be slashed to 5%. It is this enormous part of the world economy whose people don't build anything, don't manufacture anything, don't grow any foods and don't improve our lives, except the very few of them that account for 5% of the total number that help enable transactions. The rest of the financial system is the Wall Street itself, and the banking

system created to enrich them. There is purchasing power that has been stolen and transferred to the non-productive portions of the economy. With the gold standard, we would have a far higher standard of living, i.e. if this non-productive portion of the economy was not being enriched by this financial system - and it wouldn't exist if we had honest money and if we used gold and silver. The gold standard always leaves the back door open for the governments to expand the currency supply and amend the gold backing percentage.

Switzerland was the last country to drop the gold standard in 2000; before that, the Swiss franc was backed by a 40% gold reserve (Kinley, 2003). A 100% gold reserve would be quite impossible nowadays, but a 20% backing along the lines of the Swiss Gold Initiative in 2014 could become a likely scenario.

Bundesbank in Germany wants all of its gold back and is preparing for losses if the ECB starts hiking interest rates. In 2016, it reported the smallest profit in a decade. The German central bank has been moving its gold reserves from around the world back to Frankfurt. It has spent €6.9 million on shipping and the reclaiming process that started four years ago. In 2016, it returned its gold from the FED, and it is now waiting to return it from France in 2017. Germany is preparing itself in the case Mario Draghi stops the QE, and mortgage buybacks and interest rates start hiking.

Russia has been on gold shopping spree since 2008. The Russian central bank was sitting on gold reserves of over 55 million gold ounces in 2016. The year 2016 was the eighth consecutive year of gold diversification due to sanctions, unpredictability of changes that the new U.S. President Trump might have on the world economy, and concerns about the dollar and currency wars. Gold guarantees inflation insulation from legal and political risks.

China's demand for gold has also been growing, especially from 2015 onwards. All gold distributed inside China must first pass through the Shanghai Gold Exchange (SGE). The current Chinese gold reserves are reaching 1842.56 metric tonnes and are the 5th biggest in the world. Gold reserves list is led by the U.S. with 8133.46 metric tonnes, followed by Germany with 3377.94, Italy with 2451.84, France with 2435.85, and Russia on the 6th place with 1615.22 metric tonnes of gold, according to Trading Economics website.

Western central banks have underestimated the eastern hemisphere's appetite for gold. Despite an attempt by the Bank of International Settlement (BIS) to mute India's demand by restricting the availability of cash in India's banking system, India's demand for gold is robust and could increase due to fears of Indian government's war on cash. Western central banks will have a problem if the price of gold begins to rise, as they will lose their ability to control the price using derivatives. If the investors keep buying gold at the same pace, as gold is usually in high demand in times of uncertainty, the central banks of the West will run out of their gold.

3. THE CHICAGO PLAN

The Chicago Plan targets the creation of money in our monetary system and calls for the elimination of fractional reserve lending by replacing it with 100% reserves for deposits, cutting banks off from the money creation ability and replacing all government debt with Treasury credit.

The plan was drafted in 1926 by the Nobel Prize winner in chemistry, Frederic Soddy. In 1933, it interested Professor Frank Knight of the University of Chicago, who submitted a memorandum on it to the U.S. President Franklin Roosevelt, who seriously considered the plan as a way of getting out of the Great Depression. Economist Henry Simmons from the same University of Chicago, and Yale economist Irving Fischer also worked on the plan (Dimand, Geanakoplos, 2005). It wasn't until the global financial crisis of 2008 when two IMF economists, Jaromir Benes and Michael Kumhof, published an IMF working paper titled "The Chicago Plan Revisited" in August 2012.

The plan proposed eliminating the credit boom and bust cycle by preventing banks from the money and credit creation process. Bank runs would be eliminated with the requirement of 100% reserve backing for deposits. Government could issue money at 0% interest and debt-free in order to reduce the debt burden on government financing. The plan would dramatically reduce the problem of accumulating debt in the economy. Would it offer a better control over money and more discipline? In the transition phase, the government would have to buy all of the outstanding government debt. New money issued would be debt-free, and all of the old debt money would have to be taken out by the Treasury, which would cancel all debt against Treasury credit in debt buyback and the banks could then use this credit to issue loans.

Banks would operate as financial intermediaries, but their speculative business would come to an end. Deposit insurance would become unnecessary as deposits would be available to be taken out at any time. If banks wanted to issue credit, they would have to borrow from the Treasury. The government's Treasury would be the sole issuer of the money and credit in the economy.

Private institutions such as private equity firms and venture capitalists would be free to invest and offer credit based on their stockholders. Profit and loss would be solely on them, not on the government or the public.

The negative sides could be deflation, as debt would be cancelled out and credit harder to get, stiff economic growth and perhaps the emergence of "shadow banks", as well as the authority to issue money given to the government. Limiting the issuance of debt in favor of equity and issuing money on back of equity is better than debt-based financial system. The Plan swaps debt from the system for credit, allowing the banks to use it and lend again. The plan doesn't provide solution for derivatives, which leaves a doubt of whether this plan would be able to succeed, since the

largest portion of the derivatives market is based on interest rates from debt instruments.

State money system is not a new idea. American president John Adams considered any private issuance of money as fraud on the public. The idea was to nationalize money, but not banking itself. In fact, the present demand to nationalize banking would fade away if only the control of money were recaptured by the government. Almost all of our complicated banking laws could be repealed if we made this separation between money creation and money lending. The insurance of bank deposits would become unnecessary, because there would be no reasons for runs on banks (Fisher, 1936).

The transition in today's world, where debt is purchased by buying Treasury notes, bonds and other securities as these securities come due instead of Treasury repaying them with Federal Reserve Notes (alias the current money of the United States of America), would be to substitute them with the older form of state money, the old United States Notes. The U.S. notes have a red seal, and Federal Reserve notes have a green seal. The U.S. notes were legal tender in the U.S. for 132 years, from 1862 until 1994. It was the longest serving form of America's money. Federal Reserve notes are part of the banking money system. The U.S. notes were issued free of debt from the U.S. Treasury. They look the same, but are different in the color of the seal, where green increases the national debt and red does not.

In 2017, 48% of the U.S. national debt is being sold as Treasury bills or notes with maturity of three years or less. Repaying the Treasury bills and notes with the U.S. notes instead of the FED notes would immediately start to reduce the national debt. It isn't inflationary because it doesn't increase the money supply. Basically, it is the replacement of bank money with state money, on a one-for-one base. The total money supply would remain the same and stable, and wouldn't cause inflation. In only three years, it would be possible to pay back 48% of the national debt held by the public.

In an interview, President Trump predicted a recession, but also said he intends to eliminate the national debt in eight years (Woodward, Costa, 2016). This action doesn't take into account the ten-year treasury notes and the thirty-year bonds. Starting to reduce national debt starts by reducing the growing interest payments, which is real money the U.S. could use to boost economy through better trade deals, production, and infrastructure, which would increase the real GDP. Such action would represent an immense economical decrease in the U.S. national debt since President Andrew Jackson last paid off the national debt in the year of 1836. The only thing that President Jackson missed out on when he paid off the U.S. government's debt was that he left the fractional banking system in place, which later fuelled economic instability. With this new prosperity, the new president could offer the holders of ten- and thirty-year Treasury bills and bonds a special deal with extra interest to retire them early.

4. IMF'S SPECIAL DRAWING RIGHTS (SDR)

In the next big crisis, the reserve currency for central banks could include the IMF's SDRs. The world's central banks have set up a system where the IMF gives each central bank a quota of SDRs, which can then buy or sell SDRs with other central banks. If central banks buy them from another central bank, they pay interest to that central bank, while the bank that sells them charges interest, so it is just a currency they use in-between themselves. But that is the reserve.

The dollar could lose its reserve currency status. Before settling at Breton Woods, Henry Kissinger went to Saudi Arabia in 1974 and got an agreement that oil would only be traded in the U.S. dollars. The Swift system (Society for Worldwide Interbank Financial Telecommunication code) of international wire transfers was set up to use only the U.S. dollar. Half of the dollars that exist aren't inside the U.S. borders, which is a great thing for America but bad for the rest of the world because it drives up the demand for the U.S. dollar, enables the FED to continue the money printing process, inflation is not limited to America alone, it dilutes the currency supply and robs purchasing power abroad, which functions as a tax on the entire world. The process has been going on since 1974 till present. America started to abuse the system when President Bush started the Medicare programme part D, and then president Obama took over and expanded the deficit. Other countries started to wise up and when they decide not to tolerate it any longer, they could end America's supremacy that enables it to spend with impunity and forever raise the debt ceiling.

The Special Drawing Rights (SDRs) were created by the IMF in 1969 to supplement the reserves of its member countries. It is an interest bearing international reserve asset and can only be held by the IMF, its member countries and designated official entities, 'prescribed holders'. It serves as a unit of account used for financial statements of the IMF and for denomination of IMF's financing arrangements. The value and yield are based on the basket of five key fiat international currencies; USD (41.73%), EUR (30.93%), CNY (10.92%), JPY (8.33%) and GBP (8.095%), the most important in the world trade and financial system. The value is calculated daily and interest rates weekly. SDR is not a currency, not a claim on the IMF, but a potential claim on a freely usable currency of IMF members, which plays a role as an interest bearing international reserve asset. The IMF allocates SDRs to its members in proportion to their standing in the organization, based on their share in the global economy. Every 5 years, the IMF reviews whether there is a global need for additional international reserves to justify a new allocation of SDRs. Currently the amount of SDRs stands at 204 billion. The allocation of SDRs boosts member countries' official reserves. At a same time a country is assigned holdings and allocation of SDRs, it earns interest on the holdings and pays interest on the allocation based on SDR interest rate. Countries can exchange SDRs among themselves to meet their balance

of payment need, or to adjust the composition of their reserves. The countries can exchange them for the basket currencies, through voluntary trading arrangements with other IMF countries. If a member purchases SDRs and its holdings rise above its allocation, it earns interest on the excess. If it sells SDRs and holds fewer SDRs than allocated, it pays interest on the shortfall. The value of SDR as a reserve asset derives from the right to exchange it for freely usable currency, and through this plays an important role in providing liquidity to the global economic system. The value is based on the exchange rate of the five currencies included in the basket.

When IMF issues SDRs, it increases global money supply. There is no limit to the issuance amount as long as member states agree. SDRs are *fiat* created out of thin air and backed by commitment of its members. At the moment, they can't be used as a currency or traded, and as their amount is not limited they can be inflationary. Supporters argue that SDRs help to maintain price stability and are deflationary. SDRs were designed to offer liquidity during global financial crisis and in 2009 their amount was raised by the IMF to help the FED, ECB and BOJ when they were facing limits of liquidity they could offer. Economists like James Rickards, the author of *Currency Wars* and *New Case for Gold*, argue that IMF has a plan to make SDR the world's currency with the purpose of centralizing and controlling the issuance of global money which would be in the hands of the board of IMF. On January 7th 2011, the IMF issued a document named *Enhancing International Monetary Stability* by author Reza Moghadam, where it lays out its plan for creating SDR a global currency and includes the creation of SDR bond market as low credit risk issuers.

This document can be read as a plan to continue bankrupting nations with debt, indebting them more with their assisting banks, imposing austerity and, once they can't pay back, seizing their assets and land. In the global trade, only global corporations would be allowed to use SDRs, coincidentally in accordance with the Trans Pacific Partnership (TPP) trade deal, proposing corporate takeover on global scale under the veil of free trade, but assuming trading in sovereignty, freedom and health. The document proposes a currency peg of regular currencies, devaluing them, implementing the SDRs and pegging the new value of any currency to the SPD. People will still use currencies, and lose their savings and their purchasing power. Sovereign wealth funds, and pension and hedge funds will be investors in SDR bonds. The IMF would act as central bank clearing house, with monopoly power according to a picture included in the document called the SDR clearing and settlement system.

Central banks have invested in bad assets of stocks, mortgage and bonds, and are hoarding them on their balance sheets to make the banks look healthier but now they sit on worthless currency and are not able to bail them out anymore. This left them with only one solution, that of helicopter money and QE. **Helicopter money** is also money printing, but combines monetary policy with fiscal policy, meaning the government runs bigger deficit and spends money on welfare programmes, education

and infrastructure. Money is spent by the government, jobs are created, money gets some velocity, turns over and this gets the economy moving. This way of spending means more deficit and deficits are covered by the treasury, issuing more bonds and the FED buying those bonds. **QE is money printing** by the FED or central banks when they buy bonds from the banks with the money coming from thin air. The bank takes the money and just deposits at the FED in the form of a bank deposit. That money doesn't do anything; it isn't being spent, has no velocity (even though it could if banks would want to lend the money but banks don't want to lend), people don't want to take loans or spend money and all that money creation doesn't really go anywhere. It isn't doing anything in order to get the economy moving. At the end of the day, it still comes back to printing money to buy bonds, but instead of running it through the banking system where it doesn't go anywhere with QE, as opposed to helicopter money which is run through the budget where it actually goes somewhere because the government forces the money to be spent. If the FED decides to do that in the next recession, to print not like the last time \$4 trillion but this time more like \$8-12 trillion, and people lose their trust in the fiat currency being printed out of thin air, the U.S. dollar currency could become worthless. If it comes that far and the world markets collapse, the IMF would stand ready to introduce the SDRs as currency.

This system requires the least change of the current system and allows the continuation of the fiat system for a little longer. Instead of relying on the U.S. dollar as reserve currency, their Triffin dilemma would be lifted and the SDRs would become the world's currency. The main problem of debt and derivatives would remain unsolved so this system couldn't last for long.

5. ISLAMIC FINANCE SOLUTION

From Islamic finance perspective, there is no debt. The only debt that exists is for charity. Financing is available for anyone or any entity that has assets to back the financing. Islamic finance is asset-backed financing. If governments want to borrow, they cannot do that. Instead, they can get financing if they have assets to put up for sale or lease. Investors which give the government financing become the actual owners of the assets being put up to back the financing. As of that moment, government bonds are backed only by their promise to repay. If they aren't able to repay, they can choose to default or print money to pay the debt, causing inflation. In Islamic finance, if there is no asset to back the transaction, than there is no transaction. A promise to repay without assets being involved is unacceptable. Raising government debt ceiling isn't a scenario in Islamic finance. How much financing would a government seek if it had to put up assets every time?

Our economic system is carrying too much debt. Too much debt causes volatility and makes the financial system more fragile. A new system would need to be more

robust based on assets, the opposite of the current fiat currency based on promises. But the problem with more outstanding debt over assets still remains. The world needs to realize that a lot of debt will never be repaid unless investors are willing to watch governments and central banks inflate it away. For the remaining debt, there are options in Islamic finance such as to redraw the agreements to be backed by assets, such as lease to own or operating lease. Debt can be converted into equity, which is also in line with Islamic finance. Housing loans conversion into equity with diminishing partnership home finance.

No government or central bank has the power to face a collapsing derivatives market. As of Islamic finance, derivatives don't belong to a financial system. What was invented to protect investors from risk of loss ended being the casino for banks and investors to take bets, making the system more volatile and fragile. There is no riskless investment in Islamic finance. If investors expect to make money in an investment, they should also be willing to take a loss and understand the risk associated with it. The financial system should get rid of highly speculative and complex financial instruments because the derivatives market of today can easily take down the entire financial system as we know it during a crisis. Shariah law on which Islamic finance is based prohibits gambling and speculation. The premise for this prohibition is based on chance: a person would pay an amount of money for a chance to win a larger amount of money if the outcome was in his or her favor. If not, the money paid is lost and no value is created in the process. In contrast to investing, the risk of profit or loss is present, but the investment is used for a productive purpose such as investing in start up.

A way to stop the too-big-to-fail banks would be to bring back the Glass Steagall Act, which separated commercial banks from investment banks. It worked in the Great Depression until it was repealed in 1999. What would follow is a breakup of the big banks into small enough sizes that aren't too big to fail, and the next time they get in trouble - let them fail the capitalism way.

There are issues with money in the financial system; treating money as a commodity and not as a medium of exchange and the way money is created.

Foreign Exchange Swaps are a type of derivatives which are used for speculative purposes by hedge funds and investors. Nothing is risk free. In Islamic finance, money is neither a commodity nor an asset. On this basis, foreign exchange swaps would not exist. In Islamic finance, you cannot lend something you do not own. Eliminating the creation of derivatives in the financial market would remove speculation. Investors who are looking to profit from foreign currency movements should consider investing in assets in foreign countries.

In a fiat system, money is created at the back of new debt issued. The amount of money coming into the system or leaving it is only partially controlled by the central bank which may raise or lower interest rates, or issue currency backed by govern-

ment issued debt. The central bank is not the creator of the vast majority of debt or new money in the system; this role is played by the banks. As long as the banks meet their reserve requirements specified by the central bank, they can create as much money as they want. The central bank's implied control over the money supply comes from its control over interest rates, but the economic theory of a central bank works no longer.

When the central bank offers high interest rates, banks would prefer giving it to the central bank and earning the higher rate, rather than lending it out with risk. High interest rates absorb the excess lending capacity in the system, starving the local economy of access to credit. When the central bank offers low interest rates, banks keep as little money as possible at the central bank and lend it out as fast as they can to earn return.

Today the FED, ECB and BOJ have been offering near zero interest rates for years and these record low rates have failed to translate into new lending to the masses. Since the global financial crisis of 2008, banks have been cautious about lending to final consumers. Instead, cheap money went into riskier investments in search for return, stock market, emerging markets and junk bonds. Central bankers' lack of control they have over the money supply is evident in how the banks treated cheap money. Financial system must have control over its money supply. Islamic finance solution would be to remove debt from money. The rise or fall of money supply would no longer be linked to the amount of debt in the system and banks would no longer be in control of money creation. Issuing authority could be the central bank, government or government's entity. From Islamic perspective, the issuing authority would issue money based on the value of trade in the economy or based on the value of precious metals it holds. Islamic finance does not stipulate whether money should be backed by anything such as gold, as long as it works as a medium of exchange. The money would have no intrinsic value.

Applying Islamic finance principles to our financial system means applying ethics. For a financial system to be successful, it must be trusted by the people, companies and governments. It must adhere to a strict code of ethics to be fair and just to all. Fraudulent, unethical behavior and illegal activities, lax regulation, and fear of prosecuting large companies have led our financial system to become unsustainable.

5.1. GOLD FOR ISLAMIC FINANCE APPROVED

Gold has become an acceptable investment in Islamic finance for the first time. Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) adopted Shariah-compliant rules for metal trading (Alloway, 2016). The Shariah Gold Standard is a set of guidelines that will expand the variety and use of gold-based products in Islamic finance. The gold market is worth an estimate of \$2.4 trillion.

If the Islamic finance is to allocate just 1% of assets into gold products, than the demand for gold might climb by about 500-1.000 tonnes. Muslim population of 1.6 billion, which makes 25% of the world population, will gain access to the gold market. Muslim investors will be able to take advantage of an increasing range of gold-backed investment opportunities which have before been non-Shariah compliant. Over 110 million investors in the Islamic world are able to invest in vaulted gold, gold savings plans, gold certificates, physical gold, and gold mining shares. The launch of the Shariah Gold Standard signals change in the gold market. Until now, no group as influential as the AAOIFI has issued guidelines stating that gold, in order to be Shariah-compliant must be the underlying asset in all gold transactions. Islamic finance will have a greater say in the setting of the gold price. Gold bullion will be additionally appealing to Islamic banks due to Basel III rules that require banks to own high liquidity and quality, low counter party risk assets such as physical gold in allocated and segregated storage. The Islamic finance market is expected to grow from \$2 trillion to \$5 trillion by 2020.

Historically, gold investment has been problematic under Shariah law as it is considered *Ribawi* (interest) item. *Ribawi* items must be sold on weight and measures, therefore gold as an asset is Shariah-compliant. *Ribawi* items in Islamic finance are six items that are sold by weight and measure, and these include gold, silver, dates, wheat, salt and barley. Gold cannot be traded for future value (interest) or for speculation.

Currently in the gold market, the major activity regarding gold financial instruments is based almost entirely on speculation due to the size of London and Chicago Mercantile Exchange (COMEX), which together have the greatest influence on the spot price of gold. With gold investment platforms such as *GoldCore*, they are able to offer segregated, allocated gold bullion accounts with the option of physical delivery, and Muslims are now able to invest in gold bars and coins.

6. DIGITAL CRYPTOCURRENCY

6.1. BANK'S DIGITAL CURRENCY

The international financial system is hopelessly leveraged in investments and debt that are in the process of turning bad, so banks could fail. Legislation has been passed to enable bail-ins throughout the developed world in 2016. Since January 2016, according to the Bank Recovery and Resolution Directive (BRRD) (Council Directive 2014/59/EU), the bail-in has definitely entered into force as a resolution tool for banks. Designed to ward off the potential systemic risk (domino effect) of a sudden collapse, shield taxpayers from the cost of bail-out, minimize the aggregate cost to bank investors and the public and facilitate orderly implementation of pre-

pared resolution plan. Each time a bank is likely to fail it must be put under resolution, their shareholders and creditors must participate to the rescue with their own resources, write down of shares or conversions of debt to equity. The Directive stipulates that 8% of liabilities must be wiped out before any taxpayer support would be provided, placing bondholders and large depositors for forced loss, called bail-in. In 2010, ECB pressured Ireland not to write down seniors, pushing the country for international bailout. When Cyprus was bailed out in 2013, it became a test case as large depositors were forcibly converted into Bank of Cyprus shares. At the end of 2015, Portugal's central bank wrote down €2bn of senior bonds at Novo Banco. Four small banks have been bailed-in in Italy. The Directive tends to centralize supervision and crisis management of the banks in the eurozone (Barker, A., Brundsen, J., 2016).

"The bail-in tool, maintaining the institution as a going concern, should maximize the value of the creditors' claims, improve market certainty and reassure counterparties. In order to reassure investors and market counterparties and to minimize its impact, it is necessary to allow not to apply the bail-in tool until January 2018." (Council Directive 2014/59/EU, Article 52)

The directive is designed to protect creditors, not depositors or taxpayers. Around 150 banks in the EU are too large and interconnected to fail, there isn't international insolvency regime in place, national laws jurisdictions are different and uncertain, and the termination of operation in insolvency doesn't have continuity and is questionable. Bail-in is a poor substitute for higher capital requirements and leverage ratio.

More and more people will want to withdraw cash from their bank accounts, as this law has classified deposits as an uncensored loan to the banks. With negative interest rates, the people no longer get anything resembling a meaningful return on their money, so why would they leave their money in the banks?

People pay negative interest rates for the honor of having the banks hold their money and bail-ins. Bail-ins plus negative interest rates are the steps planned to be taken instead of bail-outs to save the banks. This is necessary as there are no longer sufficient investors to buy government sovereign debt so that they can raise money to bail out the banks as they did in 2008, neither the political capital necessary to make another bailout by creating money.

The only way to force depositors to keep their money in a bank and to force all citizens to put their cash into the system is to announce a deadline requiring all cash to be given in, in return for a digital account bearing names connected to a biometric ID. After the deadline, any cash which hasn't been redeemed will be declared worthless.

Only then can rumors of the coming bail-ins and negative interest rates not lead to bank runs. As a matter of fact, once accomplished, this eliminates the possibility of bank runs as the very definition of a bank run is the result of fearful depositor

base that demands that it be given its hard earned cash back due to loss of trust in the banks to stay solvent.

By eliminating cash entirely and having all the money be digital entries, all transactions become transparent to government surveillance and available for confiscation. Control of everyone's money provides control of everyone. As the market tanks, they could even prevent the selling of securities.

This has the added benefits of making it much harder to hide income or claim no funds to pay taxes. It would then be easy to just harvest accounts for what government deems is necessary. It would make it much harder to work outside the system, to commit welfare fraud, to operate all of the illegal businesses that run on cash, to enact any transactions that would show the government that citizens don't agree with the governments' view of anonymity.

6.2. WAR ON CASH IN INDIA

Prime Minister Narendra Modi suddenly banned most of India's cash on November 8th 2016 to fight corruption and tax evasion. Indians endured an acute cash shortage and massive lines at banks to exchange the worthless notes for the new currency. Change was nearly impossible to find. As 1.3 billion shocked Indians tried to recover from the country's cash crisis, the remaining question was whether their economy can do the same.

The 500 rupee (\$7.50) and 1,000 rupee (\$15) notes were declared by Modi to be worthless paper, although the notes made up about 86% of all cash in circulation. Few countries are as dependent on cash as India, including Chad, Angola and Ethiopia according to Digital Money report by Citi and the Imperial College London (Baxter, Rengarajan, 2017). The percentage of total cash banned in India is 86.4% and the percentage of consumer transactions in cash is 98% (IRB Bulletin, 2016). The Reserve Bank of India rushed the new 500 and 2,000 rupee notes to banks and ATMs, but chaotic scenes became routine with people waiting in line for hours just to get cash for their daily needs.

The currency swap was further complicated because the new notes issued by the government were smaller than the ones they replaced. India's 212,061 ATMs had to be refitted before they were able to dispense the new notes. Daily and weekly withdrawal limits at Indian ATMs after January 1st 2017 are 4,500 rupees (\$66) per day and 24,000 rupees (\$350) per week. Long lines at banks and ATMs remain.

According to the central bank of India, on December 13th 2016, three weeks before the deadline to deposit old cash, the central bank declared that around 87% of the banned notes had been deposited. The final number is expected to be even higher. The value of cash banned is 14.2 trillion (\$208 billion), the value of old rupee

notes returned 12.44 trillion (\$183 billion) and the value of replacement notes given to the public is only 6 trillion (\$87 billion) (IRB Bulletin, 2016).

The government's intention was to bring more people into the banking system and expose tax evasion to increase the number of taxpayers, since less than 3 percent of the population currently pays income tax. It is common in India to pay for vehicles, real estate and jewellery with cash so those economy sectors encountered a major hit. Manufacturing was also affected. Many Indians were pushed to adopt digital payments but it is not an option for the country's poor. India's 1.3 billion people have only 25 million credit cards and more than 85 percent of its 660 million debit cards are only used for getting cash out of ATMs. Around 233 million Indians still don't have a bank account (PwC Report, 2015).

India's economy was the fastest growing economy compared to all major global economies, with a growth rate of 7.3 percent in 2016. That may no longer be the case after the cash crisis, as new reforms such as nationwide sales tax called Goods and Services Tax lie ahead of India's economy.

6.3. BANKS' CRYPTOCURRENCY

The initiative to develop their own cryptocurrency gathers UBS, Deutsche Bank, Santander and the Bank of New York Mellon. The idea, presented in August 26th 2016, was to create a new cryptocurrency to be used in transactions between branches in order to facilitate operations and reduce costs. The product is expected in 2018. The idea would be to abandon conventional fiat money, Euros and Dollars used in transactions between branches of the same bank in different countries. Such united corporate cryptocurrency would be less expensive than the existing system. The banks agreed to use the new digital cryptocurrency, the Utility Settlement Coin (USC) to reduce transaction time and to avoid conversions to Euros and Dollars.

Other banks are developing similar cryptocurrency systems, like Citigroup's Citicoin and JPMorgan and Goldman Sachs's SETLcoin. The main difference between those cryptocurrencies and the Bitcoin is that the banks are going to be the central issuers of the currency, while Bitcoin has no central issuer of the currency. In the future, we could see more cryptocurrency development similar to the liberal Bitcoin and crypt currencies issued by the central banks (Arnold, 2016).

China is developing its own Digital Currency PBOC cryptocurrency by its central bank, which would be the first central bank to issue digital money that could be used to purchase things. China prefers to issue and control its cryptocurrency rather than giving it to companies which it has no control over (Zhao, 2017).

6.4. BITCOIN

Bitcoin is the most famous digital currency, a cryptocurrency that exists only in the digital world, consisting of coded computer digits used to buy things online. It is a free market attempt of creating a new currency. Bitcoin is traded from individual to individual. For more than a hundred years, banks have been inserting themselves between individuals in the financial system, taking a cut and destroying prosperity as they are taking a piece of economic wealth out of the transaction. As we use credit cards, the charges are getting higher and the banks have been inserting themselves more and more, while their headquarters represent the biggest skyscrapers on the city skylines. The banking sector used to provide very legitimate functions within the society; a part of what it does today is legitimate functioning in keeping the businesses running, but now they are offering broker services and, at the same time, trading against people, which is a conflict of interest. They deal with derivatives, trying to get their own profits up. The bank's primary business used to be to make currency deposits; the bank would lend that currency at a higher rate of interest than they were paying the depositor and that was a service to the community. Today, a very small percentage is serving their community, and the rest is a giant leech on the global community, sucking wealth out of it and producing jobs for the Wall Street that doesn't add to the economy.

Bitcoin is a currency that doesn't deal in Dollars; it is inflation-proof and the bankers' worst fear. The currency was first introduced in 2009 by anonymous Satoshi Nakamoto and offers an instant transfer of value across the globe with the fee of two cents of that day's exchange rate. The currency unit is Bitcoin and it gets increased at a steady rate. Currency creation will stop when it reaches 21 million Bitcoin in the year 2140. A block consisting of 25 Bitcoin is mined every 10 minutes, as regulated by the code that mines them at central computer.

Block chain technology is really interesting and very powerful. It can be used for good or for evil. Bitcoin is seen as one moment in history when everything changed. It is distributed through a consensus network block chain technology. There are millions of computers all over the world running the same ledge and double checking each other, and not all are owned by the same company or entity. If the monetary system is digitalized by using block chain technology, and if there is a single entity running it, block chain technology running on a central bank computer or government computer and not running on everybody's computer with some sort of people's incentive to run it like Bitcoin mining, then it can be used for control and targeted shutdown of people by switching them off from monetary system access, and make their existence questionable. There is dangerous tracking of everything people are doing in real time. It offers good encryption, anonymity and it is decentralized so no one can stop it, lock it or freeze it like a bank account. No one can make more Bitcoin

than is designed by the system itself. It is a unique currency in the world. There isn't a CEO of the network. It is resilient to violence.

Digital currency like Bitcoin is a threat to the banking system. In 2008, the banks profited from the financial crisis that they created. Bitcoin gives opportunity to people not to participate in the government monopolized currency system. There is no inflation with the Bitcoin, as opposed to the money supply that continually grows because it is based on debt and continual government overspending. Bitcoin prevents theft because wallet doesn't matter to it and the government can't confiscate it like cash, gold or jewellery. It is easier to move money around and keep transactions private. It offers a set up of Bitcoin address for small businesses without complying with all of your country's regulations, and cuts costs. It enables one to authenticate and attest the currency value, to transfer, store, lend, exchange, fund and invest, insure currency and manage risk, account and audit. Transactions are irreversible. No hidden fees attached. It is enabled for cell phone apps use as well.

The national security agencies are pretty good at cracking codes and cryptocurrency is just another field where bright minds are working and trying to figure out how to crack them and tag them for tracing purposes in order to support the government's claim to stop crime, terrorism sponsoring and drug abuse - and 99.9% of cryptocurrency is supposedly being used for those purposes - and the same claim is used for the war on cash. The cryptocurrencies have to compete with the banks' digital currencies. The banks want to control the money and make profit out of their services. If a government is involved, it wants to try to control people by limiting their mobility around the world. This level of control is fading with cryptocurrencies' anonymity, which gives people the chance of getting more freedom. Bitcoin is an experiment on what can be accepted as fiat money.

7. CLEAN STATE AND DEBT CANCELLATION

The problem with debt forgiveness is that the currency itself is a unit of debt. If debt would be forgiven, the currency could hyper inflate. In a debt-based model, it is difficult to write off the debt. In order to grow, debt demands more debt. All developed nations are bind to this financial system, backed by nothing else than trust in the government.

The ideas of Clean State include write-down of debts, keeping of natural monopolies in the public domain to prevent rent extraction, taxation of capital gains at higher rates than income. The essence of Modern Monetary Theory (MMT), whose followers are Hyman Minsky, Randy Wray and Steve Keen from the University of Missouri, is that governments can finance deficit spending electronically on their own computer keyboards just as commercial banks do, but without debt attached to it.

The EU creditors know that austerity leaves countries less able to pay their foreign debt but they refuse to even discuss a debt write-down. Austerity was never about tackling public debt, the aim was to take payment by foreclosing on the public domain, privatizing it on credit to be financed by the leading European banks, dismantling protection of labor and turning public investment and infrastructure to rent extractors. Maybe the problem is not in the Euro, but in one's central bank that was supposed to provide banks with liquidity and enough currency to pay depositors not freeze the banking system. The aim of the ECB was to show the pain it can inflict together with the IMF on countries daring to ask that their debts be written down like Greece, Spain, Italy and Portugal. The IMF and ECB paid bondholders, bankers and speculators that never should have been bailed out, but left taxpayers of the PIIGS with the bad debts. Attempting to preserve the appearance that debt could somehow still be paid, Lagarde defined debt in the way of Angela Merkel by rejecting a cut of the debt principal, proposing only to stretch out maturities, offering grace period of no payments and lower interest rates. Greece is in so much debt that it can't withstand further austerity, taking in consideration the latest demands by EMU creditors for pension cuts, tax rises and fiscal tightening and sell offs. There is no legal framework for the write-down of debts owned by IMF and the ECB and, on the other hand, IMF, WB, WTO, ECB and NATO are backing the creditor. Indebted countries are stripped off the power of monetary sovereignty. Hungary is the one of rare countries that decided not to enter the eurozone; Bulgaria, Croatia, the Czech Republic, Denmark, Hungary, Lithuania, Poland, Romania and Sweden did so to keep control of their taxation and fiscal policy.

The truth today is that debt can't be paid. If government debts to foreign creditors are paid by forced privatization selloffs, the former public domain and infrastructure will be turned into rent-extraction opportunities and economies impoverished by austerity. One way of running countries into making more debt is by expansion of the welfare state with granted basic income for the population.

8. WAR

The central banks are controlling everything through controlling the currencies control issuance. The central banks won't give up their power, they want to keep the control and continue their globalist agenda. Looking back in history, war cycles have always been there and the central banks have always been financing both sides in the war to maximize the impact. Wars generate more debt than any other endeavor in history. War is the greatest debt-creating reason in the world since mankind exists. The U.S. has constantly been in a state of war over decades, and the reason is because war is an expensive endeavor. It is a debt system that demands more debt for growth. The world's central banks will make sure it never stops and if they need to continue

to inflate debt, they will do so. The debt ceiling wasn't reached for America in March 2017, which brought another \$9 trillion debt burden in Obama's term. In order to move forward, Trumps' administration will have to do the same, only this time doubling the national debt like in Obama's term won't work. In order to sustain where America is right now, it will need to be doubled again in a shorter period of time than in Obama's eight years. This is not sustainable and there will never be enough tax revenues to cover that.

According to the U.S. and Israel, the state of Iran was declared global threat because it has declared to drop the U.S. dollar in its financial reporting from the new fiscal year 2017, and its trade with partner countries includes oil trade. Iran has no IMF directed central bank; it has 13% of the world's oil reserves and access to 1/3 of the biggest gas field in the Persian Gulf, and is well aware of the petrodollar deal of America, Saudi Arabia and OPEC.

9. CONCLUSION

The U.S. debt is around \$20 trillion and the global debt market is about \$200 trillion. Tax revenue coming to the government has declined. The U.S. can sustain the debt as long as the rest of the world allows them to do so, i.e. as long as the U.S. dollar remains the world's reserve currency and foreign countries still continue to keep their reserves in dollars and the demand for it. The governments, corporations and households are hooked on debt and can't afford for the interest rates to rise. When countries can't service the debt, currency wars and trade wars occur, followed by real war. Central banks have promoted debt creation at cost expense of long-term prosperity. Prosperous global economies have to engage in wars to keep their economies afloat, which ends up heating tensions along global lines. Before the creation of the FED, the government was creating currency via the Treasury which was not debt-based. The FED is loaning out currency with interest and the people have to pay for this in the long run, while taxes always increase. With this debt load, there is no way to pay it off. The regulators should have been one step in front of the central bank to make sure the FED's policies are designed for the benefit of the people. With the dollar being the reserve currency, problems with the petrodollar in the ME, China keen to take over with its RMB, there are alternatives like the IMF's SDRs. Given the debt load of the countries, it is questionable whether there exists a viable option. The infrastructure that would enable some kind of hybrid financial system, basket of currencies or Bitcoin to replace it could be difficult because we simply don't have a global payment system in place to replace it with, and that would withstand the huge demand. Due to hacks of the system, we could be more vulnerable with digital money alone. China and Russia duplicated almost everything from the West; they created their payment systems, and created very similar markets like the Shanghai

Gold Exchange, waiting to maybe one day become the world's reserve currency. They laid the ground work to take over. The more vulnerable the U.S. becomes financially, the greater the chance of taking over. We never know what tomorrow holds if anger over global inequality and divide keeps rising, and what kind of change it could bring. That could increase chances for world war because that is what happens if economic strife is allowed to continue, along with anger among the world's taxpayers, the working class which works hard every day. A lack of morals and trust breeds the crisis of legitimacy of our financial system.

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WEIGHTED MONETARY AGGREGATES FOR CROATIA

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ABSTRACT

The Croatian National Bank calculates only simple-sum monetary aggregates. Such method of aggregation implicitly assumes that components of a monetary aggregate are perfect substitutes. Although all monetary assets could relatively easily, and at low cost, be converted into currency, there are significant differences in the opportunity cost of their holding. Empirical research suggests that economic agents often hold in their portfolios different monetary assets, with different opportunity costs, not only assets with the lowest opportunity costs. This suggests that economic agents do not see monetary assets as perfect substitutes. Therefore, a valid method of aggregation of monetary assets must preserve information on the elasticity of substitution. Weighted monetary aggregates have strong foundations in the aggregation theory and they are consistent with assumptions of microeconomic optimization. The best known weighted monetary aggregates based on index numbers are Divisia index and Currency equivalent (CE) index. The aim of this paper is to calculate Divisia and CE index for Croatia, and to investigate if Croatian weighted monetary aggregates contain additional information on price and real economic activity movements, and make them, for this reason, better monetary aggregates than simple-sum aggregates, for use in economic analysis and monetary policy making.

Keywords: Divisia monetary aggregates; Currency equivalent monetary aggregates; Simple-sum aggregation

JEL Codes: B22; C52

1. INTRODUCTION

The quantity of monetary assets held by households, firms, and other economic decision-makers plays an important role in macroeconomic analysis. The Croatian National Bank (CNB) calculates monetary aggregates M_1 , M_{1a} , and M_4 ¹ as a simple-sum of different components (monetary assets) of a specific aggregate. For instance, the CNB calculates M_1 as a simple-sum of currency outside banks, deposits with the CNB by other financial institutions, as well as demand deposits with credit institutions. Such aggregation method implicitly assumes that the components of specific monetary aggregate are perfect substitutes. For example, in the aggregate M_1 , currency outside banks is considered as a perfect substitute to demand deposits, although the currency is purely a means of payment that does not pay interests, and demand deposits pay interests. Although all monetary assets can relatively easily and with low costs turn into a means of payment, there are significant differences in the opportunity cost of their holding. Empirical research suggests that economic decision-makers often kept in their portfolio different monetary assets, with significantly different opportunity costs, not only assets with the lowest opportunity costs. This suggests that economic agents do not look at monetary assets as perfect substitutes. Therefore, a valid method of aggregation of monetary assets must take this fact into account.

Barnett (1980) developed a method of monetary aggregation based on the assumption that monetary asset, seen as a durable good, enters into the utility function of the consumer. Solving the optimization problem of maximization of the utility function of the consumer, we can get the optimal quantity of monetary asset, durable goods, non-durable goods, and leisure. Problems, however, arise due to unknown functional form and parameters of the utility function on the basis of which we are building aggregation function, which must be estimated. An alternative method is the direct estimation of aggregation function using statistical index numbers. Such indices could provide a good approximation of economic aggregation function, do

1 From December 2010 onwards, the CNB also presents simple-sum monetary aggregates M_1 , M_2 , and M_3 as defined by the European Central Bank (<http://www.hnb.hr/en/statistics/statistical-data/central-bank-cnb/monetary-and-credit-aggregates>). Monetary aggregate M_1 (a "narrow" monetary aggregate) comprises currency in circulation and overnight deposits in kuna and foreign currency. Overnight deposits comprise transaction accounts (including restricted deposits), savings deposits and overnight loans. Monetary aggregate M_2 (an "intermediate" monetary aggregate) comprises monetary aggregate M_1 , time deposits in kuna and foreign currency with original maturity of up to and including two years (including loans received, except overnight loans and repurchase agreements) and deposits redeemable at a period of notice of up to and including three months. Monetary aggregate M_3 (a "broad" monetary aggregate) comprises monetary aggregate M_2 , repurchase agreements, money market fund shares and units as well as debt securities with original maturity of up to and including two years. Hence, the components of these aggregates are not available before that period, so for the purposes of economic research, the old ones are very often used, because it is possible to construct time series from June 1994 onwards.

not require estimation, do not have unknown parameters and are independent of the particular form of aggregation function. Monetary aggregates based on the index numbers are consistent with the assumptions of microeconomic optimization problem. The best-known index numbers used for monetary aggregation are Divisia index derived by Barnett (1980) and currency equivalent index (CE) derived by Rotemberg, Driscoll, and Poterba (1995).

There are a lot of researches that prove superiority of the weighted monetary aggregates over simple-sum aggregates. Barnett (1980) showed how certain fluctuations in the demand for money in the United States could easily be removed using the weighted index instead of a simple-sum monetary aggregate. Belongia (1996) proved that the absence of an impact of change in the money supply on real economic activity in the United States is not due to weak links between money and real economy but rather bad theory of measurement of money. Drake and Mills (2005) used a long-run approach to develop an empirically weighted broad monetary aggregate for the US. In other developed countries, weighted monetary indices are also calculated. For Australia this have been done by Horne and Martin (1989), Longworth and Mensah (1995) for Canada, Ishida (1984) for Japan, Belongia and Chrystal (1991) for the UK, Stracca (2001) for the Euro Area. Most of these works find out that the weighted monetary aggregates are better over simple-summed monetary aggregates in predicting the movement of nominal and real GDP, and inflation. Although it is clear that weighted monetary aggregates have theoretical advantages over simple-sum aggregates, the major disadvantage could be the difficulty of their construction in practice. It is very difficult to select an asset that has the required properties to be absolutely illiquid, and the changes in interest rates differentials could reflect the changes in liquidity of assets only if other conditions are equal.

The aim of this paper is to construct weighted monetary aggregates M_1 and M_2 for Croatia, and to test if they provide more information about economic activity and prices.

The paper is organized as follows. In the next section, we briefly discuss the problem of monetary aggregation. In section 3, we describe the data and explain how we construct the weighted monetary aggregates that would be used in testing. In section 4, we explain methodology and empirical findings of testing additional information in the weighted monetary aggregates about economic activity and prices in Croatia. The final section is the conclusion.

2. METHODS OF MONETARY AGGREGATION

Let us assume two monetary assets, currency (C) and one interest bearing asset (D). Let monetary transaction services M be a function of holdings of these two assets $M=f(C,D)$. (1)

Differentiating (1) and dividing by M gives

$$\frac{dM}{M} = f_c \frac{dC}{M} + f_d \frac{dD}{M}, \quad (2)$$

where f_c and f_d are the first partial derivative of f with respect to C and D .

Multiplying the first term in (2) with C/C and the second with D/D gives

$$\frac{dM}{M} = f_c \frac{C}{M} \frac{dC}{C} + f_d \frac{D}{M} \frac{dD}{D}. \quad (3)$$

Linearly homogeneous function, based on Euler's theorem can be written as

$$M = f_c C + f_d D \quad (4)$$

Substituting the expression (4) in (3) gives

$$\frac{dM}{M} = \frac{f_c C}{f_c C + f_d D} \left(\frac{dC}{C} \right) + \frac{f_d D}{f_c C + f_d D} \left(\frac{dD}{D} \right). \quad (5)$$

Consumer maximizes their utility when

$$\frac{f_c}{f_d} = \frac{P_c}{P_d}, \quad (6)$$

or when the marginal rate of substitution between assets C and D equals the ratio of prices of two assets P_c and P_d . Substituting these prices instead of partial derivatives gives

$$\frac{dM}{M} = S_c \left(\frac{dC}{C} \right) + S_d \left(\frac{dD}{D} \right), \quad (7)$$

where

$$S_c = \frac{P_c C}{P_c C + P_d D}$$

$$S_d = \frac{P_d D}{P_c C + P_d D}.$$

It is easy to see that the growth rate of Divisia index $\frac{dM}{M}$ is calculated based on weighted growth rates of two monetary assets: currency C and interest bearing assets D . The weights will be S_c and S_d . Linearly homogeneous aggregator function ensures that Divisia index will grow at the same growth rate as its components, and that the sum of Divisia weights will be one ($S_c + S_d = 1$).

The expression (7) from continuous time could be approximated to discrete time as

$$\ln M_t^D - \ln M_{t-1}^D = \sum_i n_{i,t} (\ln x_{i,t} - \ln x_{i,t-1}), \tag{8}$$

where: M_t^D = Divisia index at time t ,

$x_{i,t}$ = component of the monetary aggregate i at time t ,

$$n_{i,t} = 1/2 (s_{i,t} + s_{i,t-1})$$

is the average of the expenditure shares from the two adjacent periods, and

$$s_{i,t} = \frac{p_{i,t} x_{i,t}}{\sum_i (p_{i,t} x_{i,t})}$$

is the expenditure shares of assets i during period t . $p_{i,t}$ is the price or user cost of asset i at time t . The user cost of a monetary asset is the loss of potential interest rates which the user could have gained if he kept monetary asset which offers higher yields but which does not offer monetary services. Therefore the user cost (price) of each asset, as derived in Barnett (1980) as discounted value of the interest forgone by holding a monetary asset is

$$p_{i,t} = \frac{R_t - r_{i,t}}{1 + R_t} \tag{9}$$

where: R_t = yield on the benchmark asset (theoretically the highest yield available)

$r_{i,t}$ = market yield of asset i at time t .

Although Divisia index is used in most economic analyses, Rotemberg, Driscoll and Poterba (1995) proposed an alternative weighted monetary index similar to Divisia index. They called it the Currency equivalent index (CE), which is defined as the necessary quantity of currency that would provide the same level of transactional services provided by all monetary assets. This index is a simple time-varying weighted mean of all monetary assets

$$CE_t = \sum_i \frac{(R_t - r_{i,t})}{R_t} x_{i,t} \tag{10}$$

where weights are ratios between the difference in yields between benchmark and monetary assets, and yield on benchmark asset. CE index is defined in levels, not, as Divisia index, in the first difference of natural logarithm (growth rate).

Weighted monetary aggregates define transactions services implicitly, using observed interest rates to calculate user costs for the services provided by each monetary asset. The differences in interest rates reflect the differences in providing transactions services between different assets. This could be a problem if there are explicit fees on transactions services. The further problem in the calculation of weighted monetary aggregates arises in the selection of an asset, or assets, whose

yields reflect the opportunity costs of transactions services provided by monetary asset that enter in the monetary aggregate. In principle, the benchmark asset has to have certain yields in order to make it comparable to other monetary assets, and not offer transactions services. This asset, theoretically, should not have active secondary market, since the existence of this market would enable the holder of this asset to convert it into a more liquid asset that could be used in transactions.

3. CONSTRUCTING WEIGHTED MONETARY AGGREGATES FOR CROATIA

3.1. DATA

From December 2011, CNB started to calculate interest rates based on the reporting system in accordance with the Decision on statistical and prudential reporting. Therefore, the standardization of interest rates calculated by old and new methodology is not fully possible. According to the old methodology, CNB continued to calculate and report data on interest rates until March 2014. Whereas the focus of this paper is on constructing weighted monetary aggregates that are primarily used in macroeconomic analysis, and testing the information that bring weighted aggregates over simple-sum aggregates, we opt for the much longer series, from July 1995 to March 2014, instead of for a much shorter series from December 2011 to present. In this way, our findings will be statistically much more accurate.

Simple-sum M_1 , according to the CNB methodology, comprises currency outside credit institutions, deposits with the CNB by other financial institutions, as well as demand deposits with credit institutions. Simple-sum M_2 aggregate, for exigency of this paper, is constructed as M_1 plus savings deposits in domestic and foreign currency, because these two assets have more similar interest rates during the analyzed period compared to other potential monetary assets that could enter the M_2 aggregate, such as time deposits in domestic and foreign currencies, which had significantly higher interest rates in the observed period. Therefore, we can assume that transactions services provided by savings deposits in kuna and foreign currencies, measured by their interest rates, are similar, and different from time deposits in kuna or foreign currency, which could be a candidate to eventually enter the M_3 monetary aggregate. This fact does not surprise us because the degree of substitution between kuna and foreign currency in Croatia is very high. Monthly data of monetary components and their weighted monthly averages of interest rates from the period 1995:M7 to 2014:M3 are taken from the Croatian National Bank Statistical Data. All components of monetary aggregates and interest rates are seasonally adjusted using the ARIMA X_{11} algorithm. After that, the seasonally adjusted components are summed up to construct Sum M_1 and Sum M_2 monetary aggregates.

3.2. THE CALCULATION OF WEIGHTED MONETARY AGGREGATES

Divisia M1 and Divisia M2 indices are calculated using expression (8), and CE M1, CE M2 indices using expression (10), with data from Table 1. and the same seasonally adjusted components used for the construction of Simple-summed M1 and M2.

Table 1.: Components of monetary aggregates and interest rates used to weight monetary aggregates

Monetary aggregate	Component	Interest rates
M1	Currency outside credit institutions	Zero
	Deposits with the CNB by the other financial institutions	Interest rates on statutory reserves
	Demand deposits with credit institutions	Interest rates on transaction accounts
M2	Savings deposits in domestic currency	Interest rates on savings deposits in domestic currency
	Savings deposits in foreign currency	Interest rates on savings deposits in foreign currency

Source: Authors.

The benchmark asset interest rates are calculated as

$R_t = \max$ (Interest rates on time short-term deposits in domestic currency not indexed to foreign currency, Interest rates on time short-term deposits in foreign currency, Interest rates on time long-term deposits in foreign currency).

These Interest rates are chosen because they have desirable properties. The relative significance² of time short-term deposits in domestic currency in the observed period was 14.37%, on time short-term deposits in domestic foreign currency 12.50%, and for long-term deposits on foreign³ currency 5.18%. They do not enter the M1 and M2 aggregates. After that, time deposits have relatively certain yields in order to make them comparable to other monetary assets, do not offer directly transactions services, and do not have secondary market. Although the time deposits are technically relatively easy to transform into assets that give transactions services, there are strong resistances to do that due to loss in interest rates differential between Time and Savings deposits.

Since Divisia indices using expression (8) were calculated in the first difference of natural logarithms, we accumulated them and took the antilog of their values, to be able to construct Divisia indices in levels. After that, all monetary aggre-

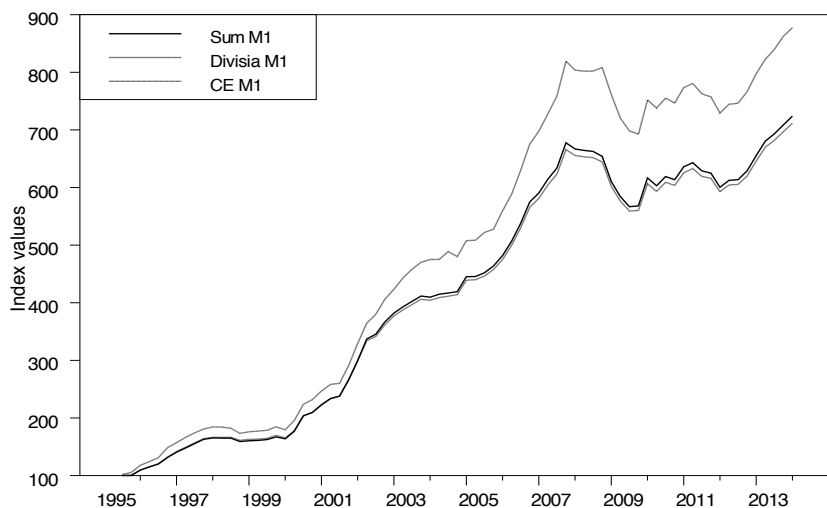
² Relative significance is calculated as a percentage of corresponding deposit category in total deposits received in the reporting month.

³ The relative significance of time long-term deposits in domestic currency was only 0.82%, and for this reason it is not taken into account as an asset for the benchmark interest rates.

gates are averaged from monthly to quarterly frequency and normalized (Aggregate 1995:Q3=100).

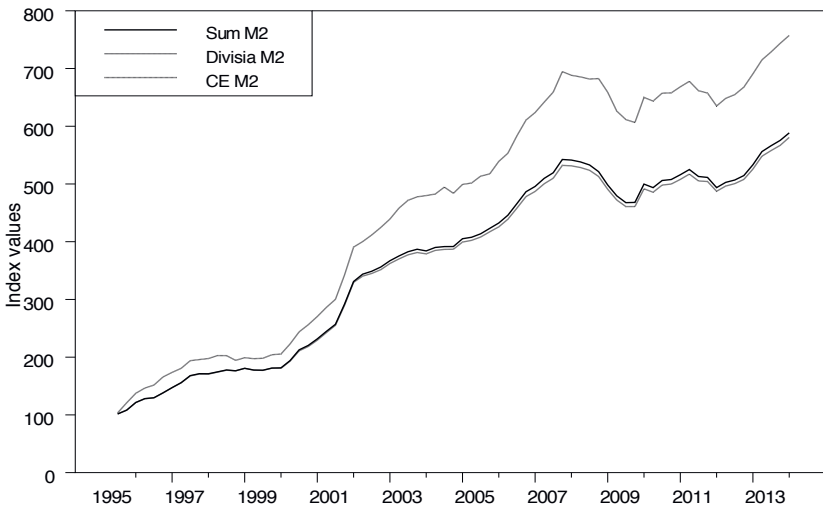
Figures 1. and 2. show graphical representations of these monetary aggregates. From these Figures, it is easy to see that Divisia indices are very close to Simple-sum indices, but that CE indices, especially after 2002, start to diverge from Divisia and Simple-sum aggregates. This is due to the fact that Divisia and Simple-sum aggregates have constant weights; for Divisia the sum of weights, $n_{i,t}$ from expression (8) is always equal to one, and for Simple-sum the sum of weights is the number of components that enter the aggregate, so for M1 it is 3 for the entire period, and for M2 it is 5; on the other hand, CE indices have variable weights. Over the analyzed period, especially after 2001, there was a constant growing trend, as we can see from Figure 3, and these increasing weights make CE indices diverge from Simple-sum and Divisia indices. This was expected because CE index measures the necessary quantity of currency that would provide the same level of transactional services provided by all monetary assets, not thereby assuming that the sum of weights must be constant over time, like Divisia and Simple-sum aggregates that have more restrictive set of assumptions compared to CE index.

Figure 1.: Sum M1, Divisia M1, and CE M1 money measures



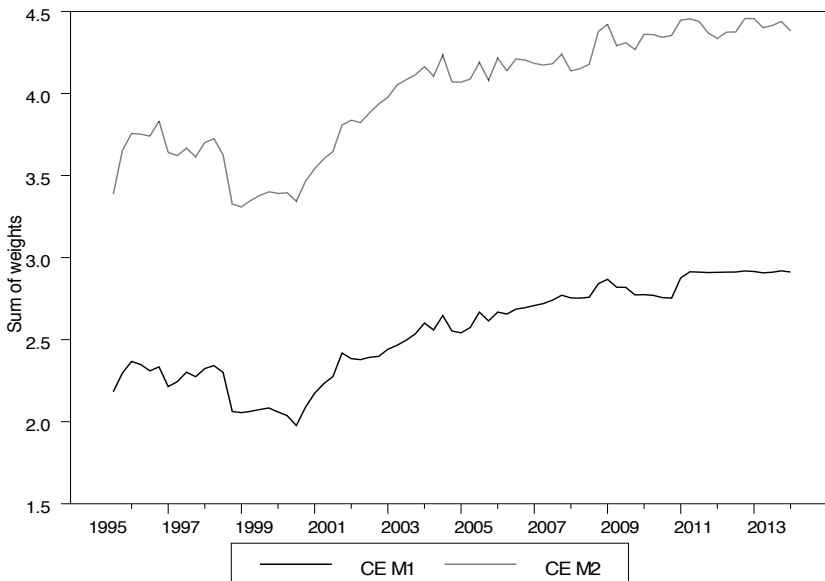
Source: Authors' calculation.

Figure 2.: Sum M2, Divisia M2, and CE M2 money measures



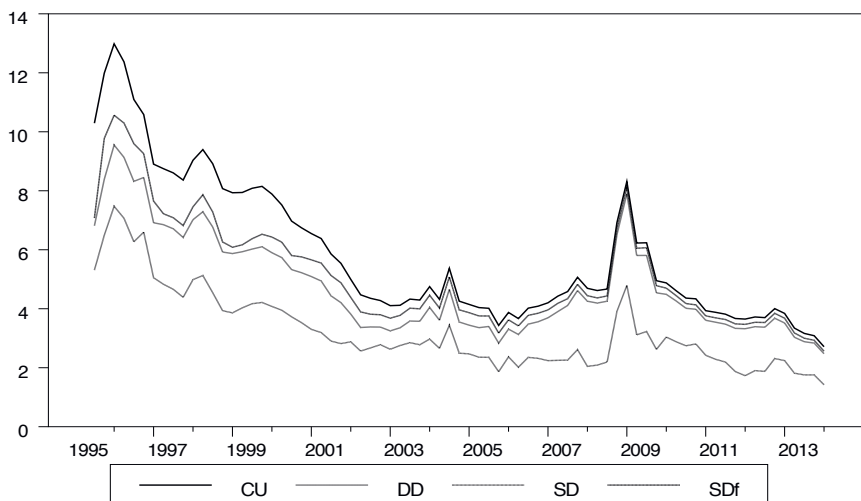
Source: Authors' calculation.

Figure 3.: Sum of weights for CE M1 and CE M2 aggregates



Source: Authors' calculation.

Figure 4.: The user cost of holding a monetary asset (in percentage, on annual basis)



Source: Authors' calculation.

Figure 4. shows the user cost of holding currency (CU), demand deposits (DD), savings deposits in domestic currency (SD), and savings deposits in foreign currency (SDf) as defined in expression (9). We can see that held currency (CU) led to the highest cost, and savings deposits held in domestic currency led to the lowest cost in the analyzed period. Whereas holding currency does not pay any interest, the user cost of holding currency is equal to discounted interest rates of benchmark asset. We can see from Figure 4. that the benchmark assets interest rates had a constant long-run decline over the analyzed period, as all the other interest rates that we used to construct weighted monetary aggregates. We can also see that interest rates in their decline, except for the interest rates on savings deposits in domestic currency, converge to each other, and all together converge to zero, or to the user cost of holding currency.

3.3. TESTING EXPLANATORY POWER OF WEIGHTED MONETARY AGGREGATES

In order to assess whether weighted monetary aggregates are better than simple-sum aggregates for use in economic analysis in Croatia, we are going to perform three different tests. Firstly, we test if weighted monetary aggregate has incremental explanatory power related to economic activity and prices in the presence of simple-sum aggregate; secondly, we investigate, using the Granger causality test, whether monetary aggregates provide information about economic conditions that could be

useful in conducting monetary policy; and finally, we test in the multi-equation VAR framework if weighted monetary aggregates explain forecast-error-variance of economic activity and price variables better than simple-sum aggregates. The tests are performed with quarterly data from 1995Q3 to 2014Q1. As indicators of economic activity, we use nominal and real GDP taken from International Financial Statistics (IFS) dataset, as indicators of prices we use Consumer price index calculated by CNB. All variables are in natural logarithms and seasonally adjusted using the ARIMA X11 algorithm.

3.3.1. INCREMENTAL EXPLANATORY POWER OF WEIGHTED MONETARY AGGREGATE

First of all, we would like to test if Croatian weighted monetary aggregates contain additional information on price and real economic activity in the presence of simple-sum aggregates, and make them, for this reason, better monetary aggregates than simple-sum aggregates, for use in economic analysis and monetary policy making.

For this purpose, we are going to use the test used by Rotemberg, Driscoll, and Poterba (1995) on equation

$$Y_t = \alpha + \sum_{i=1}^p \gamma_i (\text{Sum M})_{t-i} + \sum_{i=1}^p \eta_i (\text{Weighted M})_{t-i} + \sum_{i=1}^p \theta_i Y_{t-i} + u_t \tag{11}$$

where Y indicates variables of economic activity and prices, (Sum M) the simple-sum monetary aggregate, and (Weighted M) the weighted aggregate as a “challenger” we jointly test on parameters, estimated by OLS methodology, the hypothesis $H_0: \eta_1 = \eta_2 = \dots = \eta_p = 0$ (12)

or in other words, that the weighted monetary aggregate does not bring any additional information about economic activity or prices in the presence of simple-sum monetary aggregate. If the weighted aggregate brings more information about the movement of economic activity or prices in the presence of simple-sum monetary aggregate, we could reject the null hypothesis (12).

All variables are seasonally adjusted and in natural logarithms. The optimal lag structure (p) was determined using the Akaike (1974) information criterion (AIC). We considered 1 to 8 lags, and chose the one that produced the smallest value for the AIC.

Table 2, presents the results (F test with their levels of significance in parentheses) of testing incremental explanatory power of Divisia M1, CE M1, in the presence of Sum M1, and Divisia M2, CE M2 in the presence of Sum M2.

Table 2.: Incremental explanatory power of different monetary aggregates
 F-values with p-values in parentheses

Challenger	Lags	RGDP	Lags	NGDP	Lags	CPI
Divisia M1	1	0.283 (0.596)	1	0.000 (0.993)	2	3.389* (0.040)
CE M1	1	6.932* (0.010)	7	3.989* (0.021)	2	1.290 (0.282)
Divisia M2	1	2.520 (0.117)	1	1.685 (0.198)	1	2.096 (0.152)
CE M2	2	3.248* (0.045)	1	1.715 (0.147)	2	0.502 (0.481)

* significant at the 5% level

Source: Authors' calculation.

From Table 2., we can see that CE M1 and CE M2 have statistically significant, at 5% level of significance, incremental explanatory power to identify movements in real GDP in the presence of simple-sum monetary aggregates. Regarding nominal GDP, it seems that CE M1 has incremental power over simple-sum M1. And finally, it seems that Divisia M1 contains some additional information regarding prices (CPI), compared to simple-sum aggregate. From Table 2, it generally arises that CE indices contain some more information over simple-sum aggregate about economic activity, and Divisia on the movement of prices in Croatia.

3.3.2. GRANGER CAUSALITY TEST

In order to investigate if monetary aggregates provide information about economic conditions, we use Granger causality test. Granger (1969) defined the concept of causality that is based on the idea that the consequences could not precede cause. Therefore, if we say that the variable x causes variable y , the variable x should contribute to the prediction of y since the lag of x contains additional information about y . Granger causality test for identification of the causal effect between money and output are used by Rotemberg, Driscoll, and Poterba (1995), Stock and Watson (1989), Christiano and Ljungquist (1988) using the expression

$$\Delta y_t = \alpha_0 + \sum_{i=1}^p \alpha_i \Delta y_{t-i} + \sum_{i=1}^p \beta_i \Delta m_{t-i} + u_t \quad (13)$$

where Δy_t is the growth rate of real and nominal GDP, and Δm_t is the growth rate of a given monetary aggregate. The Granger test consists of testing (13) the joint hypothesis

$$H_0: \beta_1 = \beta_2 = \dots = \beta_p = 0 \quad (14)$$

If we could reject the null hypothesis, we could say that money causes, in Granger sense, economic activity indicators since past realizations of money affect current realizations of economic activity. The optimal lag structure is determined using the Akaike (1974) information criterion considering lags from 1 to 8.

Table 3.: Granger causality test from money to real and nominal GDP
F-values with p-values in parentheses

Money measure	Lags	RGDP	Lags	NGDP
Sum M1	1	5.735 (0.019)	1	5.212 (0.028)
Divisia M1	1	6.022 (0.016)	1	5.440 (0.022)
CE M1	1	6.463 (0.013)	1	5.863 (0.018)
M2	1	5.608 (0.020)	1	4.615 (0.035)
Divisia M2	1	5.603 (0.021)	1	4.529 (0.037)
CE M2	1	8.575 (0.005)	1	6.890 (0.011)

Source: Authors' calculation.

In Table 3., we can see that, independent of which monetary aggregate we used, the growth rate of money always causes, in Granger sense, real and nominal economic activity growth. If we closely look at the M1 aggregates, we can see that although weighted monetary aggregates seem to perform somewhat better than simple-sum aggregates, there is no big difference between them. When we look at the M2 aggregates, we see that simple-sum M2 performs similar to Divisia M2, but that the growth rate of CE M2 index is better than growth rates of simple-sum M2 and Divisia M2 in predicting future movements of growth rates of real and nominal GDP in the observed period.

3.3.3. EVIDENCE FROM VAR MODELS

The effects of monetary shocks on macroeconomic variables are very often analyzed using vector autoregressive models (VAR) which was for the first time introduced by Sims (1972). The idea was that if monetary authorities aim the level of GDP, then there is not only the effect of money on GDP but also a feedback effect from GDP to money. The solution therefore, according to Sims, is to simultaneously evaluate the equation that determines the GDP with all the other equations that incorporate response of monetary authorities to change in GDP (feedback) in the context of unlimited reduced form equations in which all the variables are endogenous variable, or in a VAR of dimension K and order p

$$z_t = v + A_1 z_{t-1} + \dots + A_p z_{t-p} + u_t, \quad (15)$$

where $z_t = (z_{1t}, \dots, z_{Kt})'$ is a K -dimensional vector of random variables, A_i are fixed $(K \times K)$ coefficient matrices, $v = (v_1, \dots, v_K)$ is a fixed $(K \times 1)$ vector of intercept terms. The VAR methodology allows the decomposition of forecast error variance of variables that enter the model. If we use Cholesky triangular decomposition, we must define the ordering of the entrance of every variable in the model, e.g. the first variable is the only one with a potential immediate impact on all the other variables, the second variable may have potential impact on all the other variables except the first variable, and so on.

We considered Sims's (1992) classic 3-variables VAR, consisting of the logged money supply (M), the logged price level (P), and logged real GDP (Y), in that order of entrance in the model. We used quarterly data from 1995:Q3 to 2014:Q1. We chose the order of VAR (p) using Akaike criteria (AIC). For price level we used CPI, and for money supply simple sum M1, Divisia M1, CE M1, simple sum M2, Divisia M2 and CE M2. We were interested in running different monetary aggregates through otherwise identical models for identifying the difference between them.

The forecast-error-variance decompositions in Table 4 show percentages of 20 quarters (5 years) forecast error variance of a variable explained by its own shocks versus shocks to other variables. The forecast error decompositions show that innovations in money explain a small percentage of prices, from 3.63% explained by Sum M1 to 8.05% explained by CE M2. Regarding real GDP in general, it seems that M2 aggregates explain the variance of real output better than M1 aggregates. Among M1 aggregates, it seems that simple sum explains real GDP variance better than weighted monetary aggregates. On the other hand, for M2 aggregates, Sum M2 and Divisia M2 explain very similar percentage of forecast error variance of GDP, 55.71% and 54.94% respectively, but CE M2 seems to perform something better, explaining 60.66% of the variance of real output. When we look at the reaction of monetary aggregates to innovations in other variables in the model, we can see that innovations in prices explain a very small percentage of the variance of monetary aggregates. Innovations in real GDP explain more of variances of weighted monetary aggregates than simple sum aggregates, 34.46% of sum M1 versus 62.77% of CE M1, and 10.84% of sum M2 versus 13.37% of CE M2.

Table 4.: Forecast error variance decomposition (20-quarter horizon), in percentage

Innovation in					
Equation	Lags	M	P	Y	
			Sum M ₁		
M		64.94	0.60		34.46
P	2	3.63	71.79		24.59
Y		40.65	8.21		51.14
			Divisia M ₁		
M		63.36	0.63		36.01
P	2	3.91	73.34		22.76
Y		38.74	8.43		52.84
			CE M ₁		
M		48.27	0.50		51.23
P	2	3.67	73.62		22.71
Y		29.91	7.32		62.77
			Sum M ₂		
M		88.21	0.96		10.84
P	2	6.39	71.60		22.00
Y		55.71	3.99		40.30
			Divisia M ₂		
M		87.95	1.02		11.03
P	2	6.51	71.45		22.03
Y		54.94	4.02		41.04
			CE M ₂		
M		85.90	0.73		13.37
P	2	8.05	65.84		26.11
Y		60.66	2.61		36.72

Source: Authors' calculation.

4. CONCLUSION

For the needs of our research, we took the data on M₁ aggregate from CNB, as a simple sum of currency outside credit institutions, deposits with the CNB by other financial institutions, as well as demand deposits with credit institutions, and constructed M₂ aggregate that is not calculated by CNB as M₁ enlarged by savings deposits in domestic and foreign currency. Based on the available interest rates data from July 1995 to March 2014, we constructed weighted monetary aggregates Divisia and CE for M₁ and M₂ aggregates in Croatia for this time period, choosing as a benchmark asset the maximum interest rates between: interest rates on time short-term

deposits in domestic currency not indexed to foreign currency, interest rates on time short-term deposits in foreign currency, and interest rates on time long-term deposits in foreign currency. Based on incremental explanatory power of weighted monetary aggregates over simple-sum aggregates test, we find that weighted monetary aggregates perform better than simple-sum aggregates, and that the CE indices are the best leading indicators of real and nominal economic activity, and that Divisia M1 contains some additional information regarding prices compared to simple-sum aggregates. The Granger causality test leads to very close conclusions, namely that the CE indices are better, especially M2, for the prediction of future movements of nominal and real outputs. When we run different monetary aggregates through otherwise identical VAR models, we find that among M1 aggregates, it seems that simple sum explains real GDP variance better than weighted monetary aggregates, but for M2 aggregates it seems that CE M2 performs better than Divisia M2 and simple-sum M2. Based on these findings, we could say that the use of weighted monetary aggregates, instead of only simple-sum monetary aggregates, could improve the understanding of Croatian economy, and hence could be an important analytical tool for decision-makers and economic researchers in Croatia.

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MEASUREMENT AND MITIGATION OF COUNTRY RISK: THE ROLE OF QUANTITATIVE AND QUALITATIVE FACTORS, INSURANCE MARKET TRENDS

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ABSTRACT

The economic outlook for the future is greatly influenced by long-term corporate investments, where risk indicators are essential inputs for current business decisions. Due to country risk, companies should demand higher returns in some countries, for the same investments, than in others. The key question of the paper is to find robust risk measure of country risk for longer term valuations. We analyze the hypothesis that country risk ratings are less volatile than market indicators to economic and financial uncertainties. Sovereign risk and country risk ratings also provide information about the country risk, but the methods are different. The paper follows three steps. The first is to analyze the most common alternatives to measure country risk. The second is to examine the relationship between country risk based on IHS Global Insight (GI) score and sovereign risk based on five-year sovereign credit default swap (CDS) spreads, thereafter comparing the stability of the two types of measures (i.e. risk scores vs. CDS spreads). The comparison confirmed our hypothesis. Beside measurement, it is of key importance how a country's risk exposure could be mitigated, in which insurance might play the crucial role. Finally, in our analysis we present the current trends in the country and political insurance market.

Keywords: Country risk; Country risk score; Credit default swap; Sovereign risk; Political risk insurance

JEL Codes: G22; G32

1. INTRODUCTION

In past decades, risk management became one of the most important areas of financial economics. Since the early 1990s, financial deregulation, innovation, and liberalization have contributed to the increase in global financial integration and cross-border trading. In international business, the geopolitical environment also drives firm strategy, beside the global market and investment conditions. The economic outlook for the future is greatly influenced by long-term corporate investments, where risk indicators are essential inputs for current business decisions. Due to country risk, companies should demand higher returns in some countries, for the same investments, than in others. However, estimating country risk premium poses many challenges since country risk can come from many different sources. We need to take account of economic risk, financial risk, political risk, as well as social developments (Damodaran, 2015). Furthermore, there is no standard way of quantifying country risk, comparing and finding the optimal weighting of the different risk indicators. In the literature, there is really no consensus on which factors should be given more weight, and which less. Over and above, it is also important how we interpret the numbers and the results of modeling. We are often faced with the lack of information and data, while a country cannot be modeled properly without the appropriate data.

Sovereign risk refers to the risk that a state could default on its debt or other obligations. Sovereign risk includes the properly quantified financial and macroeconomic indicators, such as GDP, budget deficit, public debt ratios, bond yields or credit default swap (CDS) spreads. The most common way of measuring sovereign risk is based on sovereign credit ratings provided by credit rating agencies. Contrary to that, country risk is mostly scoring-based, including also the economic structure, the degree of integration, the macroeconomic performance, legal environment, levels of corruption and socioeconomic factors. Political risk measures the inherent uncertainty of political system, political stability, social developments and security. Summarizing geopolitical risk indicators, the most relevant questions are the following: Are there any ongoing or expected armed conflicts in the region? How stable is the local government and how large is the corruption in the country? Based on the above, during country risk analysis it is needed to consider both quantitative and qualitative aspects as well (Damodaran, 2015).

Beside measurement, it is of key importance how a country's risk exposure could be mitigated, in which insurance might play the crucial role. There is a wide range of financial and institutional instruments to give protection against the different country risk factors. Besides insurance guarantees provided by the political risk insurance industry, there are co-financing programs and market-based instruments (asset trading, securitization, debt swaps), which can be appropriate tools for risk mitigation.

The key question of the paper is to find robust risk measure of country risk for longer term valuations. We analyze the hypothesis that country risk ratings are less volatile than market indicators to economic and financial uncertainties. In our paper, we analyze the most common alternatives to measure country risk, and then we examine the relationship between country risk and sovereign risk. In our analysis, we found that sovereign risk and country risk are diverging for some countries. For instance, Greece has a much better geopolitical risk assessment than its economic performance and financial market instruments indicate. On the other hand, after the Arab Spring, Egypt has shown a more risky political environment than the financial market rated the country. The analyses are based on the IHS Global Insight (GI) score and the five-year sovereign CDS spreads. Finally, we give a comprehensive summary of the trends in the political risk insurance industry, and examine the most effective tools for risk mitigation.

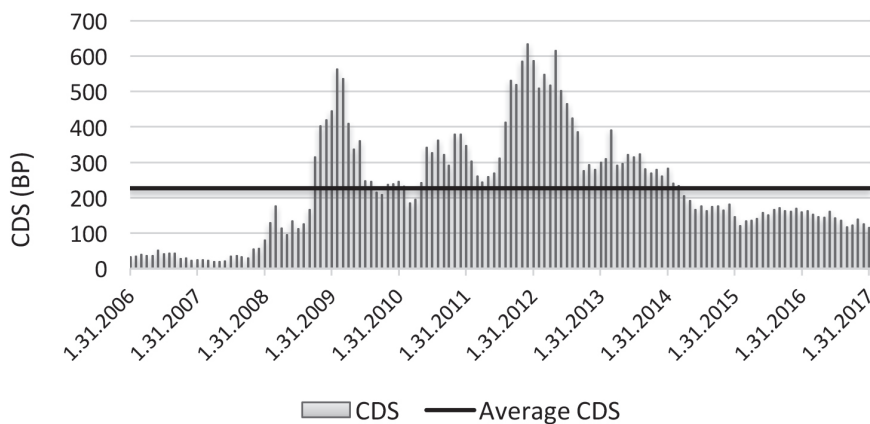
2. MEASURING COUNTRY RISK

2.1. MARKET INDICATORS

Sovereign risk refers to the risk that a state could default on its debt or other obligations. Sovereign debt default can occur when the government is either unable or unwilling to make good on its fiscal promises or honor its foreign debt repayment obligations. The most frequently used market indicators, which provide information about sovereign risk are sovereign debt spreads and credit default swap (CDS) spreads. The sovereign spreads are calculated as a difference between bond yields of dollar-denominated sovereign debt and 10-year US treasury bonds (Iranzo, 2008).

Credit default swap is one of the most popular over-the-counter traded credit derivatives. CDS is a kind of insurance against credit risk, where the buyer of credit protection pays a periodic premium on top of the risk free rate, known as spread, to the seller during the contract's life. In return for fee, the seller assumes an obligation to compensate the buyer if a credit event occurs. The typical credit events are bankruptcy, non-payment, non-fulfillment of obligations by a company or sovereign issuer (Hull et al., 2003). For instance, if the Hungarian sovereign CDS spread for a five-year contract is 150 basis points (bps), this means that the periodic payment is 1.5% and the loss expected equals the sum of the premium received until the contract expires, which is 750 bps (Berman, 2005). Figure 1 shows the Hungarian 5-year CDS over a ten-year horizon. One can observe a 226 bps ten-year average with high volatile. During the observed period, the relative standard deviation is 60% and the range is 615 bps. The extreme values identified with economic crisis in 2008, the failed negotiations between the Hungarian government and IMF and the credit rating agencies downgrades.

Figure 1.: Hungarian 5-year CDS



Source: Authors' own compilation.

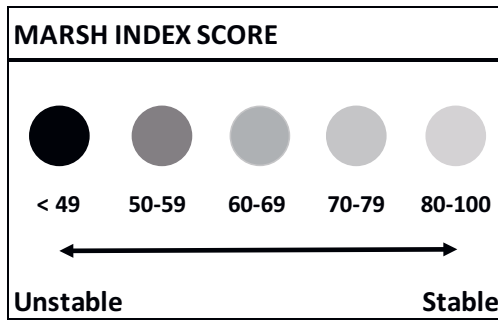
Credit ratings for sovereign and corporate bonds are published by rating agencies. The Big Three credit rating agencies are Moody's, Standard & Poor's and Fitch Ratings, which control 95% of the market. Moody's has its own scale, while Standard & Poor's (S&P) and Fitch Ratings use the same rating scale (Iranzo, 2008). The best rating in Moody's is Aaa, after which come Aa, A, Baa, Ba, B and Caa. In S&P and Fitch, the corresponding ratings are AAA (highest credit quality), AA (very high credit quality), A (high credit quality), BBB (good credit quality), BB (speculative), B (highly speculative), CCC, CC, C (high default risk), and lastly D (default). Both methods divide the categories, except Aaa and AAA, into subcategories. Moody's divides Aa category into Aa1, Aa2 and Aa3, it divides A into A1, A2 and A3, etc. While S&P and Fitch divide their AA category into AA+, AA and AA-, and so on (Hull et al., 2003). Ratings above Baa3 and BBB- mean investment grade rating, while below these the categories are speculative. Currently, Hungary has investment grade ratings in all three credit rating agencies. Considering the last ten years, the worst rating from Moody's was Ba1 between the period from November 2011 to November 2016, and the best valuation was A1 in September 2016. The rating in S&P and Fitch moved between BB and BBB+.

2.2. COUNTRY RISK RATINGS

The score based country risk ratings reflect qualitative analysis, where experts assigned subjective scores for each risk factor. The scoring is based on economic modeling results, open sources country information and market data. The overall country risk scores are calculated as a weighted average of the different risk indicators. There are several institutions which calculate country risk ratings. Insurance

broker companies such as Aon and Marsh regularly publish their Political Risk Map. Besides market data, insurance broker companies can utilize their own claims databases. They can take into account the total numbers and the total volumes of claims per country when measuring the political risk. The Country Risk Index (CRI) of Marsh is based on market data and country analysis from BMI Research, which is the part of Fitch Group. The risk components reflect to the economic evolution and downturn, quantifying the political environment and market volatility. The CRI is calculated as the weighted average of five risk indicators. There are short-term and long-term economic and political indicatives and operational risk factors with double weighting. The operational risk category covers four different areas which are the labor market, trade and investment, logistics, and crime and security. As Figure 2 shows, Marsh index scores split the countries into five bands. Risk bucket with low index scores include the unstable countries with extra high risk measure, while the most stable countries get high scores, between 80 and 100. According to Marsh report, the most unstable areas in the world are the North Africa and the Middle East. Syria's index score is 25.1, while Libya gets 29.9. The top rated countries are Switzerland and the Scandinavian countries, with scores above 80. Hungary is classified into the middle bucket with 67.2 (Marsh, 2017).

Figure 2.: Marsh Index Score Categories



Source: Marsh Political Risk Map 2017

IHS and Heritage Foundation also have their own scoring system to measure country risk. In our paper, we thoroughly examine the method of IHS GI score. According to IHS methodology, the country risk is divided into the following categories: political, economic, legal, tax, operational and security risk. As shown in Table 1, these categories are divided into further subcategories. The IHS strategic risk methodology gives equal weight to each category and subcategory. The overall country risk scores are calculated as equally weighted average of the categories and the categories scores are calculated as equally weighted average of their subcategories (IHS, 2017).

Table 1.: Risk categories and their subcategories

Political	Economic	Legal	Tax	Operational	Security
Government instability	Capital transfer	Contract enforcement	Tax inconsistency	Corruption	Civil war
Policy instability	Currency depreciation	Expropriation	Tax increase	Infrastructure disruption	Interstate war
State failure	Inflation	State contract alteration		Labor strikes	Protests and riots
	Recession			Regulatory burden	Terrorism
	Sovereign default				
	Under-development				

Source: IHS Strategic Risk Methodology (IHS, 2017).

Political risk measures the government and policy stability. Actually, the relevant questions are: what is the probability that the government could be removed by political opposition in a year, how the government wants to control the private sector and monetary policy, and how protectionism is the economic policy. Elements of economic risk include macroeconomic indicators, growth prospects, currency strength and sovereign default risk. Operational risk reflects the level of corruption, the level of employee representation and the rate of the regulatory burden. Security risk included the risk of ongoing or expected armed conflicts and acts of terrorism. Tax risk assigns scores to the tax environment, while legal indicators measure the risk that the government will expropriate or nationalize assets.

Risk is scored on a 0.1-10 scale for each subcategory, with intervals of 0.1 magnitude. The IHS Global Insight (GI) scores split the country risks into seven bands. Table 2 shows the ranging from Low to Extreme risk.

Table 2.: IHS Country risk bands

Low	Moderate	Elevated	High	Very high	Severe	Extreme
0.1 - 0.7	0.8 - 1.5	1.6 - 2.3	2.4 - 3.1	3.2 - 4.3	4.4 - 6.4	6.5 - 10.0

Source: IHS Strategic Risk Methodology (IHS, 2017).

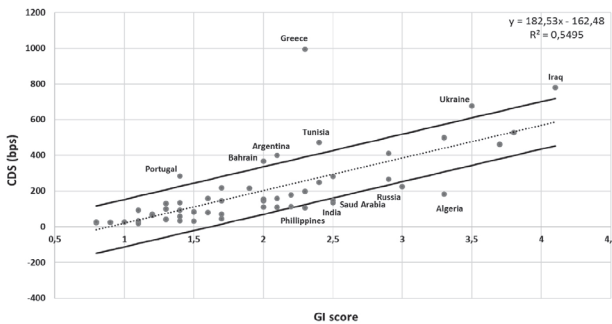
The scale is logarithmic, which means that the ranges of risk bands are different. Consequently, this implies more effective differentiation between countries at both lower and higher ends of the scale. IHS publishes its ratings for 211 countries worldwide. Significant events and changes in risk environment indicate the movements in country GI scores, which are published quarterly. According to the latest data, the least risky country is Singapore. The IHS risk score of Singapore is 0.5, followed by

New Zealand, Norway and Switzerland with 0.8 overall rate. Syria and Yemen can be found at the end of the ranking, assigned the same risk measure of 5.9. Hungary is ranked into the moderate category and gets the same 1.3 score, just as Slovenia, Slovakia and the Czech Republic (IHS, 2017).

3. DATA ANALYSES

In our data analysis, the sample contains 62 countries from all over the world. Our aim is to compare the last half-year average of 5-year country CDSs with the latest available GI scores. Therefore, we downloaded the most liquid 5-year maturity CDSs from Bloomberg and got the GI scores from IHS database. The observation period is from July 2016 to December 2016. In this period, we examine the relationship between the country risk measures with linear regression, where the independent variable is the GI score and the dependent variable is the country CDS. For the sake of simplicity, we apply linear methods in our analysis to highlight results in a clear format. We found that the estimated regression equation is $y = 182.53x - 162.48$ which means that 1 unit increase in GI score induces a 182.53 bps increase in CDS. The coefficient of determination (R^2) is the quotient of the variances of the fitted values and observed values of the dependent variable. In our model R^2 is 0.5495, which implies moderate relationship between CDS and GI score. Figure 3 shows the scatter diagram of country CDS and GI score of the observed countries. The dashed line is the linear regression line, while we get the black lines, if we shift parallel the regression line up and down with 1 standard error, which is 133 bps. In our opinion, the countries within the black lines do not indicate major discrepancy between CDS and GI score. However, those countries which are located above or below the black lines are considered outliers. Figure 3 indicates the corresponding name for extreme countries. For those countries which lie above the black line, for instance Greece, Portugal, Argentina, Ukraine or Iraq, the CDS spread is higher in relative terms than the corresponding GI score, while below the line the opposite holds (Barro, 2005; Heinrichs et al., 2012).

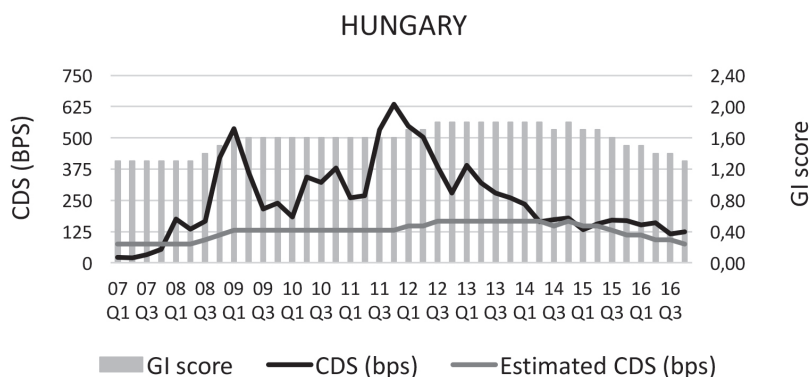
Figure 3.: Comparison of CDS spread versus GI score



Note: Continuous lines below and above the trend line indicates +/- 1 standard deviation confidence interval.
 Source: Authors' own compilation.

Considering a long-term period, it is relevant to examine how volatile the different indicators are, which method gives us a more stable and predictable country risk rating. Figure 4 shows the evolution of Hungarian 5-year CDS and GI score ratings in a ten-year horizon. Comparing the relative standard deviations (RSD), we get a more volatile result for CDS with 60% RSD, than for the GI score with 11% RSD. This implies that GI score is more stable to economic and financial shocks; thereby, it gives a general overview about the geopolitical situation. Based on the $y=182.53x-164.48$ regression equation we estimated above, we can calculate theoretical CDS spreads for the corresponding GI scores. In Figure 4, the black line shows the estimated CDS values. The estimation, which reflects to the fundamental underlying, gives significantly lower CDS time series than the real market values. During the period between 2007 and 2016, we can observe that after the economic crisis and financial shock the real CDS spread converged to the estimated values. Therefore, in a stable economic outlook the estimated regression equation gives better fitting for the two country risk measures.

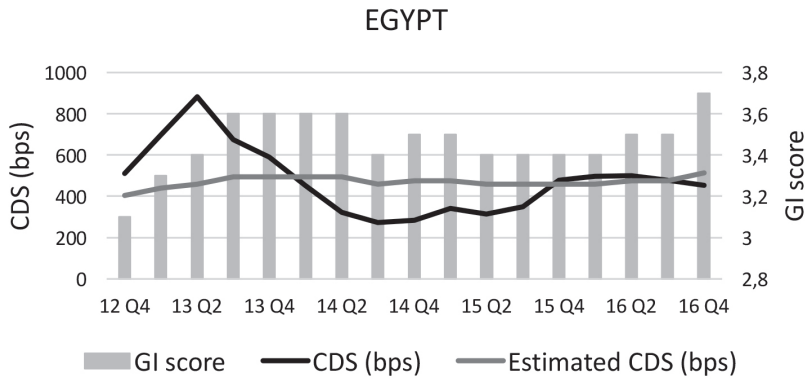
Figure 4.: Comparison of the evolution of Hungarian CDS spread versus GI score



Source: Authors' own compilation.

There are other countries, where GI score indicates a much higher sovereign CDS than the financial market reflects to the risk. During the period from Q4 2013 to Q4 2015, the Egyptian sovereign CDS was significantly lower than the model estimated CDS values, as shown in Figure 5. This means that the political environment was much riskier compared to the economic conditions. This phenomenon can be explained with the Arab Spring and the subsequent political crisis and social insecurity.

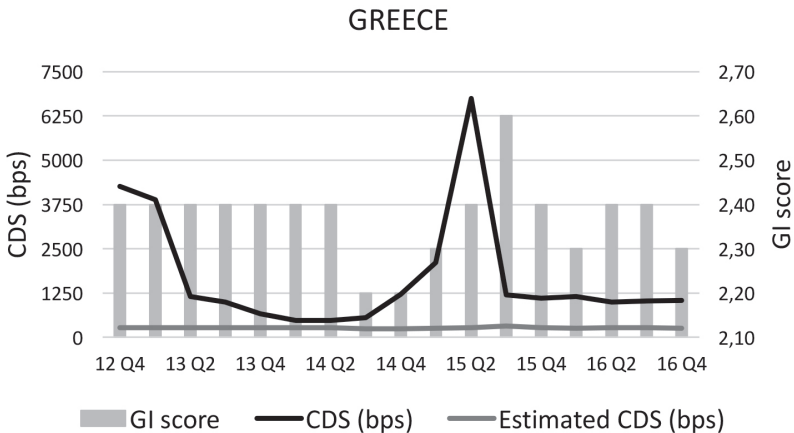
Figure 5.: Comparison of the evolution of Egyptian CDS spread versus GI score



Source: Authors' own compilation.

During this period, Egypt was hit by revolution, protest, coup d'état, insurgency and political revenge. As Figure 6 shows, the Greek sovereign CDS increased nearly six-fold and exceeded the 6000 bps after stalled negotiations between the Greek government and the International Monetary Fund. In this period, the analysis shows low correlation between market indicators, such as sovereign CDS spread and the GI score. Due to the protracted debt crisis, the Greek CDS is still extremely high compared to the other European Union members. We saw earlier, in the case of Hungary and Egypt that after the financial or political consolidation, the market CDS spread and the estimated CDS spread began to converge on each other. By contrast, the Greek CDS is significantly higher than the country risk score would imply. This confirms the hypothesis that the GI score is less volatile to economic and financial uncertainties.

Figure 6.: Comparison of the evolution of Greek CDS spread versus GI score



Source: Authors' own compilation.

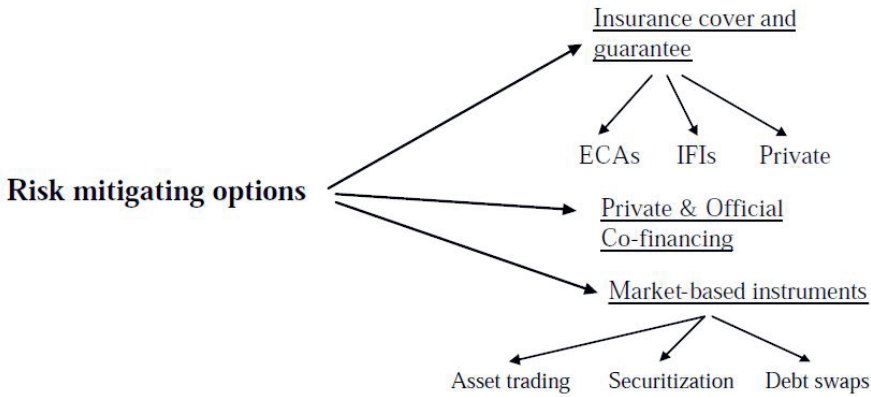
In business decision, discount rate is used in discounted cash flow analysis to determine the net present value of future projects and recoverability of existing assets by taking into account the time value of money, the general industry and country risk or uncertainty of the anticipated future cash flows. One tool for project valuation can be the weighted average cost of capital (WACC). WACC is the weighted average cost of internal and external financing sources. It describes the general business risks of divisions; however, in the discount rate an additional premium needs to be added to assess the risks deriving from the individual country specific risk drivers. Therefore, the discount rate can be added as the sum of WACC and country risk premium (Brealey-Myers, 1996). However, there is no standard way of quantifying country risk premium, but there are a varied number of methodologies and expert approaches.

4. RISK MITIGATION INSTRUMENTS

In international business, the geopolitical environment also drives firm strategy, beside the global market and investment conditions. The economic outlook for the future is greatly influenced by long-term corporate investments, where risk indicators are essential inputs for current business decisions. Due to the increasing geopolitical uncertainty, such as Syrian war, Brexit negotiations or sanctions against Russia, mitigating political risks is a priority for investors and creditors. There are a wide range of financial and institutional instruments to give protection against the different country risk factors. Besides insurance guarantees provided by the political risk insurance industry, there are co-financing programs and market-based instruments (asset trading, securitization, debt swaps), which can be effective tools for risk mitigation. Figure 5 shows the most commonly applied risk mitigation alternatives (Bouchet et al., 2003).

After many economic and financial crises in the last decades, financial instruments became more widely used tools against country risk. There are different types of instruments which help to mitigate risk exposure. Swapping assets with other creditors in the secondary market change the ownership, securitization and debt conversion instruments, when the loans converted into financial assets change the legal nature of the claims. Several instruments give protection against the changes of financial environment (interest rate, currency exchange rates) or financial profiles. Market-based instruments cover risk factors arising from the volatility of the financial market and protect against sovereign defaults; however, they do not reflect to the geopolitical environment. In the next part of the article, we give a comprehensive summary of the political risk insurance industry, which sector helps the investors to mitigate political risks during their business activities.

Figure 5.: Risk mitigating options



Source: Country Risk Assessment: A Guide to Global Investment Strategy, p. 198 (Bouchet et al., 2003).

4.1. THE POLITICAL RISK INSURANCE INDUSTRY

The political risk insurance (PRI) industry includes export credit agencies, multilaterals and private insurers which provide both export and trade credit, and also investments insurance, as Figure 5 shows. These types of insurance services cover the most non-commercial risk events such as direct or indirect interventions of host governments and non-payment cases. The following classification presents one of the potential terminologies to identify political risks insured by the PRI industry. However, there can be differences in the definitions between the several insurers. One possible split divides the insured political risks into three main categories (MIGA, 2013). Insurance against expropriation protects from government activities which can lead to a reduction or elimination of control and ownership rights. Expropriation, confiscation and nationalization of assets or equity of the project company without any compensation make excessively negative impact on foreign investments (Kansal, 2015). The second risk category includes currency risk and risk of transfer restrictions. Extremely high volatility or political sanctions increase the risk of currency inconvertibility when one currency cannot be exchanged for another currency. Due to currency crisis, the investors are unable to honor their foreign debt repayment obligations. Currency risk also includes the risk of devaluation, which strikes down the return expectations on foreign investments. Imposition on capital controls comprises restrictions on cross-border transfer, trade barriers, repatriation of capital or dividends, delays in approving capital transfers and interruption of interest payments. Finally, the PRI sector provides protection against political violence and upheaval including war, military conflicts, occupation, terrorism, civil war, civil disturbance, insurrection, rebellion, revolution, strikes and riots (Kansal, 2015; MIGA, 2013).

The market stakeholders of the PRI industry are the state majority-owned export credit agencies, the multilaterals, the private credit insurers and the reinsurance companies. The public PRI market includes both national and multilateral political risk insurance providers. One can distinguish two main risk categories in private market's PRI. In the first risk category, the risk factors come from political risk activities such as political violence (war, terrorism, civil disturbance) or expropriation. The second category covers the risk of non-payment cases and sovereign defaults (MIGA, 2013).

The Berne Union (BU) is the leading association of investment insurers and export credit agencies. The international non-profit organization was founded in 1934 in order to intensify the global trade and investment flows providing export credit, trade finance and investment facilities. The association objectives are the stimulation of cross-border trade, the standardization of the principles in export credit and foreign investments and information share between the member organizations. At the end of 2016, the Berne Union had 84 member companies comprising government-backed official export credit agencies, private credit insurers, political risk insurers and multilateral institutions. In 2016, BU members provided USD 1.865 trillion payment risk protection to banks, exporters and investors. The total business volume contributed to 11 % of the total international cross-border trade of goods and services (The Berne Union, 2016).

In order to stimulate export activities and international investments, most OECD countries have established their state majority-owned export credit agencies. Export credit can help national governments to support their domestic business expansion, employment movement and gain their geopolitical influence. ECAs have an important role to partly cover the funding gap in the risky geopolitical areas, where the traditional commercial banks do not fund new business activities. Due to providing export credit guarantees, ECAs can mitigate the risk of international investors, making the export-import banks an important player in the market funding. There are three methods through which ECAs provide funds for foreign investments. Direct lending provides loans for purchasing of goods or services from businesses in the host country. Export-import banks can be a catalyst for facilitating capital for large projects and open up commercial bank capacity in many difficult markets. ECAs lend funds to a financial intermediary, such as a commercial bank, that in turn loans the funds to the importing entity. The third method is the interest rate equalization, when a commercial lender provides a loan to the importing entity at below-market interest rates, and in turn receives compensation from the export-import bank for the difference between the below-market rate and the commercial rate (Bouchet et al., 2003). The major ECAs in the Berne Union are the CESCE (Spain), the COFACE (France), the Euler Hermes (Germany), the EXIAR (Russia), the SAUCE (Italy), the UK EXPORT FINANCE and the US EXIMBANK (The Berne Union, 2016).

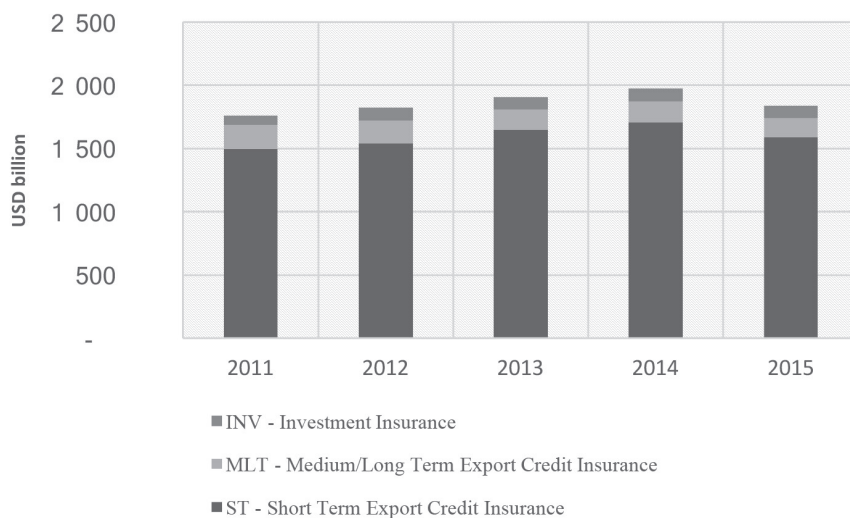
Most of the private insurers in the PRI sector are located in one of the three insurance centers in London, Bermuda and New York. The largest private insurance companies also have offices in Singapore, Hong Kong and China. In the private sector, there are about 20 Lloyd's syndicates and eight private insurance companies, where mainly brokers promote the political risk insurance products. Similarly to other sectors, the private market focuses on the developing countries to give protection against political and non-payment risks (MIGA, 2013). Most multilaterals are also BU members. The main multilaterals are the African Trade Insurance Agency (ATI), the Asian Development Bank, the Inter-American Development Bank, the Arab Investment and Export Credit Guarantee Corporation (Dhahran), the Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC) and the Multilateral Investment Guarantee Agency (MIGA) (The Berne Union, 2016). The major BU-member reinsurer companies are Munich Re and Hannover Re of Germany, Swiss Re of Switzerland, and Berkshire Hathaway/General Re of the United States of America. These companies are also available for trade and investment business activities (MIGA, 2013).

4.2. BUSINESS TRENDS

If we take a look on the PRI industry trends over the last year, we can realize there is a 7% decrease of the total volumes of export credit and investment insurance provided by the members of the Berne Union. Thus, the total volumes decreased from USD 1.996 trillion to USD 1.865 trillion, which still contributes to 11% of the international trade in 2015. Comparing 2014 year-end market data to 2015's data, one can observe a 35% increase in total claims paid by the BU members and 10% decrease in recoveries. The total amount paid for claims was USD 6.271 million, while the total amount of recoveries was USD 2.776 million.

The BU members provide three main types of insurance services. There are short-term (ST) export credit insurance facilities, medium and long-term (MLT) export credit business elements and investment and other cross border risk (INV) insurance services. Figure 6 shows the last five year evolution of new business volumes per business segments. After the growing period between 2011 and 2014, one can observe a slight decrease in the total volumes from 2014 to 2015. The short-term export credit insurance elements represent the highest proportion of the total new business volumes, followed by the medium- and long-term segment, than the investment and other cross-border insurance services.

Figure 6.: New PRI business volumes per business segments



Source: The Berne Union.

In short-term business, the repayment terms are less than one year, typically 30, 60 or 90 days. These types of insurances cover delivery risks such as shipments of consumer goods and natural resources. Furthermore, there are transactions which give protection against the changes in economic environment and market price movements. Similarly to the whole industry, the total volumes of the short-term business segment decreased by 7% in 2015 to USD 1,568 trillion. On the contrary, the claims paid for exporters for defaults on their trade receivables increased significantly. The data show a robust rising from USD 2.019 million to USD 2,584 million, which means a 28% increase from 2014 to 2015. The top five countries, where the highest claims were paid are Russia (USD 237 million), Brazil (USD 205 million), Venezuela (USD 203 million), the USA (USD 161 million) and Saud Arabia (USD 151 million).

Besides the typical core insurance activities, ECAs also provide services in the medium and long-term business segment. In 2015, MLT transactions amounted to 6.9% of the new business and 9.4% of the total BU exposure. In the last year, the new business volume decreased by 7% to USD 154 billion, while the total exposure exceeded USD 708 billion. Due to geopolitical conflicts, there was a significant increase in claims paid to clients under MLT transactions. Comparing 2014 and 2015, the increment was 51% and amounted to USD 3.251 billion. Table 3 shows the top countries in the ST and MLT business segments responsible for claims payments in 2014 and 2015. The top five countries in MLT, where the highest claims were paid in 2015 are Russia (USD 1449 million), Iran (USD 375 million), the USA (USD 301 million), Brazil (USD 193 million) and Ukraine (USD 168 million).

Table 3.: Top 5 countries: Claims paid in 2014 and 2015 in ST and MLT export credit insurance business

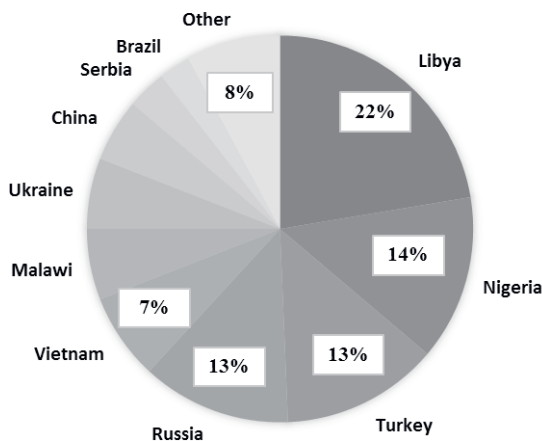
Claims paid in ST business (USD million)			Claims paid in MLT business (USD million)		
	2014	2015		2014	2015
Russia	76	237	Russia	172	1449
Brazil	89	205	Iran	893	375
Venezuela	173	203	United States	169	301
United States	165	161	Brazil	83	193
Saudi Arabia	11	151	Ukraine	132	168

Source: The Berne Union.

The BU members provide investment credit insurance against the typical political risk events such as political violence, military aggression and occupation, expropriation, nationalization, exposure to transfer and currency convertibility risks. Investment credit insurance provides protection against sovereign debt default, when the government is either unable or unwilling to make good on its fiscal promises or honor its foreign debt repayment obligations.

Most claims were paid after such political events like the Arab Spring, which harmed the foreign investments especially in Libya. The political instability and insecurity is likely to persist in the near future, and furthermore, low oil prices also restrain the Libyan recovery. The military conflicts in Eastern Ukraine, the economic and political crisis in Venezuela and sanctions against Russia are also induced claims paid by the BU members. The drop in commodity prices causes economic crisis in Sub-Saharan Africa. In Angola and Nigeria, the government revenues and the economic growth are highly correlated with oil prices, making these countries very vulnerable to periods of low oil prices (European Commission, 2016). Figure 7 shows the top 10 countries, where most claims were paid in 2015 in the investment insurance sector due to the upper political events and economic developments. The largest indemnifications occurred in Libya (USD 34 million), Nigeria (USD 21 million), Turkey (USD 16 million), Russia (USD 13 million) and Vietnam (USD 11 million) (The Berne Union, 2016).

Figure 7.: Top 10 countries in 2015: claims paid in investment insurance business



Source: The Berne Union.

Despite the slight decrease in the new PRI business volumes last year, owing to the importance of political risk mitigation and growing membership, there are good prospects in the insurance market. According to the experts, expectations insurance providers can increase their capacities and intensify the business activities in the coming years.

5. CONCLUSION

In our paper, we analyzed two main approaches to measuring country risk. Using statistical data analysis, we examined the relationship between CDS spread and GI score, and compared the long-term stability of the two measures. Our linear regression model showed moderate correlation between CDS and GI score, with most of the countries located within our tolerance threshold. However, we found some outlier countries, which have much better geopolitical risk assessment than their economic performance indicates, or have a very bad political judgment with stable economic outlook. For instance, Greece belongs to the first group, while Egypt is part of the second group. For these countries, the two measures give significantly different risk profiles. Comparing the long-term stability, we found that the GI score is more stable to economic shocks than the CDS spread. Further research with deeper time series analysis might enhance the robustness of the results in the future. Due to the increasing geopolitical uncertainty, mitigating political risks is a priority for investors and creditors. In the last chapter, we gave a comprehensive summary of the political risk insurance industry, which sector provides effective guarantees and insurance options against country risk exposure. On the basis of the financial state-

ments, we found that the sector continues to evolve, despite the slight decrease in the last year.

6. DISCLAIMER

This paper reflects solely the opinion of the authors, and does not necessarily reflect the official view of MOL Group.

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A TEST OF CAPM IN SHARE VALUATION: THE CASE OF CROATIAN STOCK EXCHANGE

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Paper Category: Preliminary Paper

ABSTRACT

Setting up of the Modern Portfolio Theory in 1952, and later the CAPM model in 1964, initiated a significant scientific research impulse for establishing a model that could be used to forecast the future value of shares in the financial market. A number of models that followed herein were perhaps theoretically more precise, or closer to reality in their assumptions, but also more complicated to calculate. The problem that appeared at the same time, and which has still not been resolved, are certain anomalies which appeared in the capital market that the respective models could not explain. At that point, behavioral finance appears which seeks to explain such anomalies in terms of psychological relationships between the participants in the capital market. This research will try to indirectly test the behavioral elements in the Croatian capital market, following a series of data from 2002 until 2016, with the corresponding sub-periods. It will be done by determining the deviation of the theoretical values that shares should yield, according to the CAPM model, from the real yields that they actually achieved. The hypothesis is that the environment in the capital market will have a significant impact on the applicability of the model for the evaluation of shares. The scientific contribution will be achieved in terms of establishing additional preconditions for the applicability of this model on developing capital markets. This study demonstrated that the SML equation was statistically significant only in 2007, while in all the other years it could not be used to identify wrongly valued shares. Such results confirmed the existence of behavioral elements in the Croatian capital market and its weak relationship with the real economy.

Keywords: Behavioral finance; CAPM; Emerging market; SML

JEL Codes: E22; E71

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1. INTRODUCTION

With the introduction of his Modern Portfolio Theory (MPT) in 1952, Harry Markowitz changed the way people saw share valuation and share portfolio management by quantifying risk for the first time in the history of modern financial theory (Markowitz, 1952). By proving that the realized share returns move according to the rules of normal distribution, he made it possible to establish standard deviation as a risk measure and the definition of risk as a mean quadratic deviation of individual returns from the average expected earnings.

The following contribution to modern financial theory in the area of portfolio management was the one in 1964 by William F. Sharpe, setting the foundation of the Capital Asset Pricing Model (CAPM), which attempts to eliminate some of the imperfections of the MPT model (Sharpe, 1964). First and foremost, it refers to a large number of subjectively introduced variables around the forecast of the future return of a share. The CAPM model introduces more objectivity in portfolio management with a more rational equation used to determine the expected portfolio return. In order to determine the expected return rate of a single share within a portfolio, a Security Market Line (SML) is used, representing a sort of CAPM sub-model.

Although it may be wrong to talk about SML as a separate model, the authors will still use this formulation in the following sections. The linear movement of the average expected risk-based yields (SML line) is one of the CAPM assumptions. Accordingly, the CAPM testing and its applicability should be discussed, as the title of this paper suggests. However, the authors' point of view is that the SML line can be observed separately and, in accordance with the described methodology in this paper, tested separately, which makes it appropriate to call it a separate model.

In its fundamental idea, the SML model should serve potential investors to identify wrongly valued shares, i.e. to determine undervalued and overvalued shares. This is done by putting the expected share return in a ratio with the average expected return value of other shares having the same risk level. As a matter of fact, the SML simply represents the line of the average return per single level of risk exposure measured by means of a beta coefficient. Therefore, if the expected return of a single share is plotted above the SML, such a share will be deemed undervalued because it offers a greater return than the market average for the same risk level. The opposite happens with shares plotted below the SML. Such shares realize a lower-than-average return for their risk level and the market treats them as overvalued. The reaction of the market to overvalued shares shall be such that their offer shall increase and consequently result in a decrease of the market price. The reaction of the market to undervalued shares shall be such that their demand shall increase and consequently result in an increase of the market price. This kind of arbitrary procedure will keep going until the expected share returns are reduced to a balanced level represented by the SML.

Since the SML model should enable the recognition of such investment opportunities, the interest of scientists and practitioners is not surprising. Though numerous other, even more precise models were developed after the CAPM model, the popularity of the CAPM and SML models remains huge owing to the simplicity of their application and the clarity in the interpretation of the results obtained.

With a strong logical foundation in theory, the SML model represents a very useful tool in the hands of potential investors so that the interest for its testing in practical conditions should come as no surprise. The present research moves along those lines and sets the starting hypothesis saying that the SML model for the recognition of under- and overvalued shares can be applied to the capital market of the Republic of Croatia. Furthermore, as a result of intense studying of the application of the CAPM and SML models over a period of several years, the main hypothesis is integrated with an additional hypothesis establishing that stability in capital market is important for the applicability of the mentioned models since it affects the statistical significance of analyzed models. As a matter of fact, it is generally accepted that the relative stability in the capital market, in the sense of a relative stability of share prices, is important for determining the statistical significance of a model. The obtained research results did not confirm this hypothesis, but are nevertheless scientifically interesting and valuable.

It is precisely in this fact that the significance of the conducted research is hiding. In other words, most of the past CAPM's applicability researches were related primarily to the financial markets of developed countries. The CAPM testing on emerging financial markets is represented in a smaller number, and that specifically refers to the studies on the Croatian financial market. This is also the objective of the research carried out, i.e. to point out the specifics of the emerging financial market, such as the Croatian one, and to try to explain the deviations from the theoretically expected assumptions.

Besides this opening part, the paper is organized in five chapters. The second chapter presents the theoretical foundation of the research stating previous empirical works with opposing conclusions, which pointed out the need to conduct this kind of research on the example of the emerging Croatian market. The third chapter lists some methodological notes related to the research presenting the establishment of all elements necessary to conduct the research. The fourth chapter presents the results of the research and the equations used in analysis with the explanation of corrections in methodology in order to adapt it to the needs of the planned research. There is also an interpretation of obtained results from the aspect of both traditional and behavioral finances. The paper ends with a conclusion, the list of literature used and enclosures integrated in the research.

2. THEORETICAL FOUNDATION OF THE RESEARCH

As we already stated, the main reason for huge popularity of CAPM, and consequently the SML model as well, is in the simplicity of their application and interpretation of results. Basically, all known models of portfolio management include two variables, that of return and that of portfolio or single share risk. This assumes a linear connection between the two variables in a way that the acceptance of a higher risk exposure is justified by higher expected return rates. Such a relationship is acceptable up to a certain point, especially if we approach investments as a rational (risk-averse) investor.

However, we have to take into consideration that the CAPM model is based on numerous assumptions that could be reduced to a common denominator of the description of a perfect market. Such assumption can be presented in the following way (Arnold, 2005: 354):

- all investors aim to maximize economic utilities (asset quantities are given and fixed);
- all investors are rational and risk-averse;
- all investors are broadly diversified across a range of investments;
- all investors are price takers, i.e. they cannot influence prices;
- all investors can lend and borrow unlimited amounts under the risk free rate of interest;
- all investors trade without transactions or taxation costs;
- all investors deal with securities that are highly divisible into small parcels (all assets are perfectly divisible and liquid);
- all investors have homogeneous expectations;
- all investors assume all information is available at the same time to all investors.

We think that the causes of diametrically opposite results of their empirical research are to be looked for in the assumptions proposed above. As a matter of fact, there is much research confirming the linear relationship of the expected return and risk, in keeping with the CAPM model. For example, in their research of industrial companies in the Australian capital market, Ball, Brown and Officer find evidence of the said linear relationship when analyzing the period from 1958 to 1970 (Ball, Brown and Officer, 1975). Similar results were obtained when analyzing the use of the CAPM model in conditions of asymmetry of information, even though the CAPM model did not prove to be such a practical tool for the measurement of portfolio performances in these cases (Cornell, 1979).

Besides such confirming results on the linear relationship of return and risk, there are many new empirical researches showing opposite conclusions. For example, Modigliani, Pogue, Scholes and Solnik (1972), on examples of the French, Italian

and British capital markets, prove that the SML acquires movements that differ from those foreseen by the CAPM model. When analyzing the movements of the Japanese capital market, Ramsey, Lau and Quay (1975) come to a similar conclusion.

Dybvig and Ross (1985) come to inconclusive results on the possibility of applying the SML in the measurement of shares performances and its applicability. As a matter of fact, their conclusions range from those saying that in some periods the applicability of the SML model is possible, to those saying that due to the asymmetry of information the application of the model is unreal because it does not give a real image. Furthermore, in their research, Fama and French (1992, 1993, 1995, 1996) deepen the doubt in the validity of using the CAPM and SML models, concluding that the beta coefficient does not have any statistical significance for the shares return, although it should according to the proposed models. Contrary to the expectations, the shares return was more significantly affected by some theoretically irrelevant relations such as the size of the company and the ratio of capital accounting and market value.

A further step in the development of financial thought is represented by the area of behavioral finances. Behavioral elements represent a novelty in financial relationships and, as such, question every financial relation known so far (Barberis and Thaler, 2003). Behavioral elements have their origin in psychological factors affecting the stakeholders of financial relationships. Such influences, mostly deviating from the known assumptions of risk-averse investors and the efficiency of the market, were detected by this paper as well and there is evidence of investor behavior that is not in keeping with the assumptions on their rationality and efficient market.

3. RESEARCH METHODOLOGY

3.1. SHARES SAMPLE DETERMINATION

For the purposes of testing the set hypothesis on the applicability of the SML model on the Croatian capital market, we set out to its calculation. The first step in determining the sample was to select the series of shares from the Zagreb Stock Exchange over which to conduct our research. Since the very essence of our research was to determine different periods in which the SML model shows statistical significance, i.e. where it is not statistically significant, it is necessary to consider the longest possible time period. Unfortunately, the Zagreb Stock Exchange has been publishing data on the trade of listed shares only since 2008. Therefore, the sample is defined from regular shares that satisfy the basic criterion of liquidity. The criterion of liquidity refers to the condition that there has to be at least one trade a week for a share to be considered liquid. Such shares were observed on a weekly basis and for each of them, the average daily price was recorded (Friday was chosen by random

selection), so that the weekly return was calculated on the basis of these data. Table 1. shows the number of shares that form the sample per single year of observance.

Table 1.: Number of regular shares that form the sample for analysis

Year	Number of shares	Year	Number of shares
2007	112	2012	53
2008	59	2013	58
2009	51	2014	62
2010	53	2015	62
2011	53	2016	61

Source: Analysis and authors' own data.

In order to cover the largest possible period for analysis, the research results were compared to the results the authors had already published for the period from 2002 to 2006, following the same methodology and with 28 regular shares as a sample (Učkar and Nikolić, 2008). The year 2007 was also taken into consideration, when, according to the then available data from the Zagreb Stock Exchange, the basic criterion of liquidity was satisfied by the largest number of shares, as many as 112 (authors' own data).

For each share in the sample, the weekly return was calculated using the follow-

$$R_t = \ln \frac{P_t}{P_{t-1}} \quad (1)$$

where:

R_t - share return in time t ;

P_t - share market price in time t ;

P_{t-1} - share market price in time $t-1$.

The data on paid dividends was not taken into consideration and the only correction was made with some shares where, within the analyzed period, there was share split. The market price was also corrected in that period, so that it was increased in the same ratio observed for the share split.

In addition, when calculating the return, natural logarithm was used as a common form in finances, instead of the classical form of return equation. By using a natural logarithm, the normalization of stock price movements is achieved, which is especially important when calculating returns for periods shorter than one year. Also, normality of return distribution is an essential prerequisite of the model tested in this paper.

3.2. DETERMINING A RISK-FREE RATE OF RETURN

In order to determine the risk-free rate of return, we used data from the Croatian National Bank on returns realized on treasury bills and kuna bonds of the Republic of Croatia. From the available data, as an approximation of the risk-free rate of return, we selected a series of data showing the average return on treasury bills with the due date of 364 days (mark TZ 364). This security was selected because it almost entirely covers the analyzed period (for other securities, there are larger interruptions in the data series) - most of the analysis was done on an annual basis so as to be able to compare data - and because, after all, a short-term security can better be used as an approximation of a risk-free rate of return than a long-term security. Risk-free rates of return used in further analysis are shown in Table 2.

Table 2.: Risk-free rates of return in the Croatian capital market

Year	Risk-free rate	Year	Risk-free rate
2007	0,03996	2012	0,03926
2008	0,05982	2013	0,02536
2009	0,07518	2014	0,01845
2010	0,04005	2015	0,01498
2011	0,03905	2016	0,00950

Source: Croatian National Bank, Standard presentation format and authors' analysis.

3.3. DETERMINING MARKET RETURN

If we study the parameters of the CAPM model theoretically, the market return should give information on the average movement of returns in a market. For that to be possible, it would be necessary to include all securities listed on that market in the calculation of the average market return, and their share in the imagined market portfolio should be pondered depending on the share the security holds in the total market capitalization.

Since this theoretical concept is not applied anywhere in practice, we have also made an approximation of the market return in a way as to analyze the movements of the CROBEX stock market index from the Zagreb Stock Exchange. The said index was chosen since it is the oldest index of the Zagreb Stock Exchange and therefore has a long enough series of data, as well as because it encompasses more securities than the other sector share indexes. Following the same methodology as with the calculation of the share return, we registered data on the realized index level on a weekly basis (Friday was chosen randomly). The realized return was calculated according to the equation (1) and for the values of the closure price of the day. As with the calculation of the share return, the paid dividends were not taken into consideration here either. The levels of the realized market return on an annual level are shown in Table 3.

Table 3.: Market return rates in the Croatian capital market

Year	Market return	Year	Market return
2007	0,48450	2012	-0,00078
2008	-1,09926	2013	0,02360
2009	0,12234	2014	-0,02283
2010	0,07618	2015	-0,04973
2011	-0,19312	2016	0,18630

Source: Authors' analysis according to data from the Zagreb Stock Exchange.

3.4. CALCULATION OF THE BETA COEFFICIENT

For each share from the sample, we calculated the beta coefficient by using the equations stated below. Since the entry data were on a weekly basis, the covariance of shares with the market, as well as the market variance was calculated at a weekly level, i.e. with 52 readings at an annual level. The beta coefficient calculated by using such values was identical at the weekly and annual levels. The equation for the calculation of the beta coefficient is as follows (Vidučić, 2006: 71):

$$\beta_i = \frac{\text{COV}_{iM}}{\delta_M^2} \quad (2)$$

where:

β_i - beta coefficient of the share i ;

COV_{iM} - covariance of share i with market M ;

δ_m^2 - market variance M .

The following equations were used for the calculation of covariance and market variance:

$$\text{COV}_{iM} = \frac{\sum_{t=1}^n (R_{i,t} - \bar{R}_i) * (R_{M,t} - \bar{R}_M)}{n} \quad (3)$$

$$\delta_M^2 = \frac{\sum_{t=1}^n (R_{M,t} - \bar{R}_M)^2}{n} \quad (4)$$

where:

$R_{i,t}$ - return of share i in time t ;

\overline{R}_i - average return of share i ;

$R_{M,t}$ - return of market M in time t ;

\overline{R}_M - average return of market M ;

n - number of observations.

4. RESEARCH RESULTS

The equation of the SML is presented with the known expression by which the average return rate of a single security is calculated as a sum of the risk-free rate of return and the market premium corrected with the risk degree shown as beta coefficient for that particular security. In symbols, it is formulated as follows:

$$R_i = R_f + \beta_i (R_M - R_f) \quad (5)$$

where:

R_i - average return rate of a security i ;

R_f - risk-free rate of return;

β_i - beta coefficient of a share i ;

R_M - market return rate.

The enclosures from 1 to 10 show the results of the first part of the research for the period from 2007 to 2016. We analyzed the shares that satisfy the previously defined criterion of liquidity per year. The second column of the tables shows the calculated beta coefficients according to the equation (2). The third column of the tables shows the theoretical return values, i.e. the values of the shares return obtained with equation (5) and using data from tables 2 and 3 for the risk-free rate of return and the market return rate respectively. The last column of the tables shows the values of the real returns of shares calculated with the equation (1) and reduced to the annual level.

Traditional finances would interpret the results thus obtained in the following way. Since the capital markets are efficient and all the assumptions defined by the CAPM model are valid, most of the realized real return rates would have to move around the expected theoretical levels calculated with the equation (5), i.e. they should move in the vicinity of the SML. Such movement would be the consequence of an efficient arbitrary process by which the price of each undervalued share grows with a contemporary decrease of its return rate until the balance level represented by the SML. The opposite movement would happen in case of overvalued shares.

Such an understanding of the SML model would result in the determination of under- and overvalued shares within each analyzed year. This would represent a useful tool for investors since every undervalued share represents an efficient invest-

ment. From the enclosed tables, we can conclude that each share with a real return higher than the theoretical return rate belongs to the category of undervalued shares. Alternatively, should we represent these data graphically, the undervalued shares would be located above the SML.

4.1. DETERMINING THE VALIDITY OF THE SML MODEL

Before accepting the results obtained in this way as statistically significant, it is necessary to test the SML model. This was done by analyzing the variance (ANOVA), and with the F test. In doing so, we made some adjustments of the mentioned methods. Since both methods start from the deviation analysis of single return values from the regression line calculated on the basis of the same entry values, we corrected the methods so as to analyze the deviation of real realized returns from return values calculated with the SML equation, meaning from the theoretical returns. Thereby the deviation testing was done with the following equations (Harnett and Murphy, 1985: 609-612):

$$SST = \sum_{i=1}^n R_{R_i}^2 - \frac{1}{n} * \left(\sum_{i=1}^n R_{R_i} \right)^2 \quad (6)$$

$$SS_X = \sum_{i=1}^n R_{T_i}^2 - \frac{1}{n} * \left(\sum_{i=1}^n R_{T_i} \right)^2 \quad (7)$$

$$SC_{XY} = \sum_{i=1}^n R_{T_i} * R_{R_i} - \frac{1}{n} * \left(\sum_{i=1}^n R_{T_i} \right) * \left(\sum_{i=1}^n R_{R_i} \right) \quad (8)$$

$$SSR = b * SC_{XY} \quad (9)$$

$$SSE = SST - SSR \quad (10)$$

$$S_e = \sqrt{\frac{SSE}{n-2}} \quad (11)$$

$$r^2 = \frac{SSR}{SST} \quad (12)$$

$$MSR = \frac{SSR}{m} \quad (13)$$

$$MSE = \frac{SSE}{n-2} \quad (14)$$

$$F = \frac{MSR}{MSE} \quad (15)$$

where:

SST - variation of real returns, total variation;

SS_X - theoretical returns variation;

SC_{XY} - covariation of real and theoretical returns;

R_{Ri} - real return of share i ;

R_{Ti} - theoretical return of share i ;

SSR - explained variation;

b - direction coefficient from the SML equation;

SSE - unexplained variation;

S_e - standard valuation error;

r^2 - determination coefficient;

MSR - mean square regression;

MSE - mean square error;

m - number of independent variables in the SML equation (numerator degrees of freedom);

$(n - 2)$ - number of readings diminished by two (denominator degrees of freedom);

F - F test value.

The results of the ANOVA test and the F test per single year are shown in the enclosure 11 and contain the calculated values according to the previously explained variables. Among all the presented variables, it is enough to concentrate on just a few. Thus, the SST indicator shows the total variance of which the SSR shows the value of the variation explained with the regression model, while the SSE indicator shows the unexplained variance. By analyzing all presented years, we come to the conclusion that in all years the most part of the variation remained unexplained by the set regression SML model. What is more, we can see illogicalities in the presented results in the sense that in some years the explained variance acquires a negative sign. Such results, though mathematically correct, are not logical and are the consequence of the situation in the capital market in the analyzed years.

As a matter of fact, since 2008 we have begun feeling the consequences of the global financial crisis, which resulted in the creation of negative risk premiums in almost all following years. Besides the years 2009, 2010 and 2016, in all the other years the risk-free rate of return on the market was greater than the average return rate on the market measured with return according to the CROBEX stock exchange index. Such a situation in the capital market is certainly not something that would fit the assumptions of the CAPM model and consequently ensure the applicability of the SML model.

Even though it is not shown in this paper, the results we obtained may be compared with the previously conducted research for the period from 2002 until 2006 (Učkar and Nikolić, 2008). For the whole period, the variance explained with the regression model was $SSR = 0,01504$, while the unexplained variance was $SSE =$

0,63653. With a determination coefficient (r^2) of only 2,308%, the application of the SML model in the Republic of Croatia was not possible then either. Nevertheless, the reason for such results was somewhat different then. In particular, the period from 2002 to 2006 represents the period before the financial and economic crisis that was marked by exceptionally high growth rates in Croatia. The average market premium for that period was as high as 17,404% on an annual level, while the returns of single shares were even higher than 70% annually. In that period of sharp price growth of all shares and a great variability of the stock exchange index CROBEX, which registered standard deviation values of $\pm 5,378\%$, the SML model had again proved to be insignificant.

Table 4.: Standard deviations of the CROBEX index returns

Year	Standard deviation	Year	Standard deviation
2007	$\pm 1,081\%$	2012	$\pm 1,517\%$
2008	$\pm 6,325\%$	2013	$\pm 1,272\%$
2009	$\pm 4,488\%$	2014	$\pm 1,157\%$
2010	$\pm 2,202\%$	2015	$\pm 0,894\%$
2011	$\pm 2,199\%$	2016	$\pm 1,238\%$

Source: Authors' calculation.

The last testing of the model was done using the F test, which created a ratio between the variance explained with the regression model and the variance of the residuals unexplained by the model. On this occasion, the following hypotheses are tested:

H_0 : $b = 0$ - independent variable does not contribute to the forecast of the dependent variable

H_1 : $b \neq 0$ - independent variable contributes to the forecast of the dependent variable

In this case, value b means market premium, i.e. the difference between the market return and the risk-free rate of return ($R_M - R_f$). The calculated values of the F test are in the last three lines of enclosure 11, where the last two lines represent the values read from tables of critical values F with 5% and 1% significance. In order for the SML model to show its statistical validity, it is necessary for the calculated F value to be higher than the table F value. This was reached only in 2007 while the H_0 hypothesis is accepted for all the other years concluding that there is no significant linear connection between real and theoretical shares returns. F value for the period from 2002 to 2006 was 0,61434 and was also lower than the table values (Učkar, Nikolić, 2008).

4.2. INTERPRETATION OF RESULTS

After the complete empirical research and the comparison of the results with the results obtained in the previously published research, the following facts can be established. The whole analyzed period of application of the SML model goes from 2002 to 2016 and it was divided in two periods. The first part covers the period between 2002 and 2006, which corresponds to the pre-crisis period, when the SML model was not statistically significant because of the sharp growth of general return rates on the market. The second part covers the period from 2008 to 2016, thus encompassing the crisis and the post-crisis period. Though this paper presents the data for single years, simulations were done for different periods until the period from 2013 to 2016. The results were always the same, i.e. the significance of the SML model was not proven in any other case.

The only exception in the whole analyzed period is the 2007 analysis when the results confirm the statistical significance of the SML model and the possibility of its practical application. The year 2007 was crucial since the growth of the share value was slowing down and the end of that year marked a slight decrease of their value. It was in that year that the ideal conditions were created that suited the assumptions of the CAPM model and with that the SML model as well. Let us not forget that 2007 was the year when the largest number of shares satisfied the condition of liquidity, as many as 112 shares, which was almost double than the number of liquid shares in other years. This "moment of relative stability" is corroborated by the data on the size of the standard deviation of returns of the CROBEX index which already in 2008 grew by six times.

The year 2008 marks the beginning of a great fall of share prices and the value of the stock exchange index, which is visible from the values of standard deviations shown in Table 4. In such conditions of a great fall of general return rates on the market, the SML model was not even expected to be significant. We must also not forget the negative market premium as an illogicality of the Croatian capital market as an emerging market.

However, the stock exchange index CROBEX reaches its minimal values in 2015, while the following year registers a slow growth and signs of recovery of the capital market. The year 2015 also registered the minimal variability of the general market return measured with standard deviation. It would be rational to expect that the applicability of the SML model is connected to the "relative stability" of the financial market. For that reason, the authors of the research expected at the beginning that the SML model would again be significant in the last years of the analyzed period. Despite all the rational expectations, that did not happen.

The reason for that has to be looked for outside the boundaries of traditional finances, in the sphere of behavioral finances. The primary goal of this paper was not

to prove behavioral elements that govern the behavior in the Croatian capital market but this was nevertheless investigated incidentally. There are many behavioral elements that may influence the making of irrational financial decisions, but in this instance it is appropriate to discuss the availability bias. The availability bias is the reflection of the irrational behavior of investors that is expressed by making decisions on the basis of events in the immediate past. When confronted with a decision, humans' thinking is influenced by what is personally relevant, salient, recent or dramatic. In other words, investors overstate the probability of an outcome based on recently observed or experienced events.

On the example of the Croatian capital market, numerous investors are still impressed by the great loss they experienced during the crisis period. Furthermore, during the crisis years these losses were covered heavily by the media and were stuck in the memory of the investors as a huge negative determinant. In their analysis of 95 dot-com companies during the dot-com boom of 1999/2000, Cooper, Dimitrov and Rau (2001) find that these companies earned statistically significant and sizably positive abnormal returns. The reason for that was not to be found in an improved business operation of the company or a higher realized profit but exclusively in the media pressure. The availability of information and media coverage of Internet stocks was such that people were more inclined to invest in them than they would have otherwise been. A similar situation happened in the Republic of Croatia, but having a negative prefix.

Regarding volatility of the Croatian capital market, beside calculated standard deviations of the CROBEX index returns, we also calculated standard deviations of the nominal exchange rate of the kuna against the euro, three-month ZIBOR (Zagreb Interbank Offered Rate), average and overnight money market interest rates. Although the results are not shown in order to preserve space, they indicate similarity in calculated standard deviations. However, the biggest value of the standard deviation for CROBEX index returns is calculated for 2008, while for the other variables it is calculated for 2009. After 2009, standard deviations for all variables are generally declining because of market stabilization achieved after the initial financial crisis shock. In addition, the obtained correlation coefficients indicate the existence of a relatively high, significant and positive correlation between the CROBEX index returns and money market interest rates. It should be stressed out that Croatian National Bank adopted and implemented a number of measures in order to mitigate the negative impact and consequences of the financial crisis on Croatian capital market and economy (Galac, 2010).

5. CONCLUSION

The lure of the CAPM model, and consequently also the SML model, remains big among investors, tempting many into applying them in the hope of recognizing profitable investment opportunities. However, the applicability of the CAPM and the SML models is limited by their assumptions that the capital market is for the most part ideal. Real conditions in the capital market are far from ideal, especially those in the Croatian capital market which is still emerging.

The basic goal of our research was to test the applicability of the SML model on the Croatian capital market but in a way that would determine additional prerequisites needed for its application on emerging markets. The main idea was that it was crucial to have "relative stability" of the capital market to enable the applicability of the model tested here. Analyzing the period between 2002 and 2016, and dividing it into adequate sub-periods, did not prove the hypothesis that the general situation in the capital market will have a significant impact on the applicability of the SML model.

Quite the contrary, the facts that emerged from the research indicate that in the process of their decision-making, investors are mainly influenced by behavioral elements, first of all by the availability bias. This element affects decision-making so as to prefer certain decisions depending on the exposure to particular types of information. Since the Croatian capital market is registering only a slight recovery, the influence of negative experiences due to negative results during the financial and economic crisis is still stronger than the rational signals in keeping with the traditional understanding of finances.

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**APPENDIX 1. VALUES OF SML MODEL IN THE
CROATIAN CAPITAL MARKET IN 2007**

No.	Share	Beta	Theoretical return	Real return
1	ACI-R-A	-0,25025	-0,07129	0,01200
2	ADPL-R-A	1,17985	0,56445	0,22840
3	ADRS-R-A	0,18100	0,12042	-0,04528
4	AGMM-R-A	0,26216	0,15650	0,06744
5	ARNT-R-A	0,22051	0,13799	0,38273
6	ATLS-R-A	0,16891	0,11505	-0,15762
7	ATPL-R-A	1,36836	0,64825	1,36444
8	AUHR-R-A	0,03081	0,05366	0,23630
9	BCIN-R-A	0,28477	0,16655	-0,15033
10	BD62-R-A	0,60583	0,30927	0,63601
11	BDSS-R-A	0,55056	0,28470	0,10286
12	BLSC-R-A	0,51057	0,26693	0,28198
13	BLJE-R-A	0,46402	0,24624	0,12131
14	BRIN-R-A	0,08947	0,07973	0,17035
15	BRST-R-A	-0,03174	0,02585	0,29019
16	BZJK-R-A	0,50019	0,26231	0,45357
17	CEBA-R-A	0,81240	0,40110	0,08701
18	CKML.R-A	0,35317	0,19696	0,32652
19	CROS-R-A	0,79815	0,39477	0,42222
20	DDJH-R-A	1,27347	0,60607	0,40291
21	DDJM-R-A	0,26352	0,15710	1,10488
22	DIOK-R-A	0,32891	0,18618	0,91647
23	DLKV-R-A	1,13515	0,54458	0,75126
24	DKVS-R-A	0,74903	0,37293	0,29107
25	EIG-R-A	0,71321	0,35701	-0,10561
26	ELKL-R-A	0,13675	0,10075	0,37156
27	ELPR-R-A	0,21696	0,13641	-0,18972
28	ERNT-R-A	1,15966	0,55548	0,32361
29	FNVC-R-A	0,38020	0,20897	-0,09698
30	FRNK-R-A	0,50155	0,26292	-0,22234
31	HDEL-R-A	0,67044	0,33800	1,31005
32	HMAM-R-A	0,33376	0,18833	-0,05066
33	HOMS-R-A	-0,16722	-0,03438	-0,19574
34	HPB-R-A	0,60890	0,31064	0,47225
35	HPDG-R-A	0,75254	0,37449	-0,32005
36	HRBC-R-A	0,65195	0,32978	0,05537
37	HUPZ-R-A	0,94906	0,46185	0,40175
38	IGH-R-A	1,70072	0,79600	1,25946

No.	Share	Beta	Theoretical return	Real return
39	INA-R-A	0,89213	0,43655	0,19482
40	INDG-R-A	0,72705	0,36316	0,48184
41	INGR-R-A	1,47423	0,69532	1,55412
42	IPKK-R-A	1,21066	0,57815	0,61693
43	IPKO-R-A	0,65881	0,33283	1,17315
44	ISTT-R-A	0,48608	0,25604	0,22309
45	JDBA-R-A	0,72523	0,36235	0,03922
46	JDKM-R-A	0,02070	0,04916	0,02983
47	JDPL-R-A	1,20556	0,57588	0,90401
48	JDRA-R-A	0,49518	0,26009	0,17674
49	JNAF-R-A	1,01084	0,48932	0,44449
50	KABA-R-A	0,41854	0,22602	0,08594
51	KBZ-R-A	0,25977	0,15544	-0,26026
52	LPLH-R-A	1,15341	0,55270	0,79493
53	LKRI-R-A	0,42531	0,22903	1,17355
54	LKPC-R-A	1,78966	0,83554	1,12935
55	LEDO-R-A	0,48097	0,25377	1,45086
56	LCDS-R-A	0,73964	0,36876	-0,16441
57	KRAS-R-A	0,86377	0,42394	0,01342
58	KORF-R-A	0,84425	0,41526	0,17693
59	KOKA-R-A	-0,04242	0,02110	0,09129
60	KOEI-R-A	1,40204	0,66322	0,66140
61	KODT-R-A	0,98717	0,47880	0,97405
62	LRH-R-A	0,67061	0,33807	0,25525
63	LVCV-R-A	0,72832	0,36373	0,88974
64	MAIS-R-A	0,43175	0,23189	-0,12219
65	MDKA-R-A	0,68243	0,34333	0,54654
66	MIV-R-A	0,55728	0,28769	0,49328
67	MLNR-R-A	0,29940	0,17305	0,91021
68	PBZ-R-A	0,77710	0,38541	0,44107
69	PDBA-R-A	0,13769	0,10117	-0,04604
70	PIKR-R-A	0,04565	0,06025	0,10405
71	PIVK-R-A	0,33392	0,18840	0,27763
72	PLAG-R-A	0,34876	0,19500	0,07010
73	PLJK-R-A	1,20663	0,57636	0,33079
74	PLVA-R-A	-0,03752	0,02328	0,03593
75	PODR-R-A	0,59742	0,30554	0,06183
76	PRFC-R-A	0,54221	0,28100	-0,04292
77	PTKM-R-A	0,83929	0,41306	0,43273
78	PZC-R-A	0,65319	0,33033	0,07449
79	PUNT-R-A	0,64242	0,32554	-0,03871

No.	Share	Beta	Theoretical return	Real return
80	RIBA-R-A	0,58219	0,29877	0,40547
81	MMTZ-R-A	0,48741	0,25664	0,55534
82	HRBC-R-A	0,66520	0,33567	0,05537
83	RIVP-R-A	0,62478	0,31770	0,09742
84	RIZO-R-A	0,91793	0,44802	0,63706
85	SAPN-R-A	0,35858	0,19936	-0,23157
86	SNBA-R-A	0,41403	0,22401	0,28916
87	SLPF-R-A	1,06727	0,51440	0,13850
88	SLDM-R-A	0,47170	0,24965	-0,21914
89	SNHO-R-A	1,06121	0,51171	0,45692
90	SLRS-R-A	0,54630	0,28281	-0,10644
91	SUNH-R-A	0,54906	0,28404	-0,20067
92	TNLP-R-A	0,99703	0,48318	0,70299
93	THNK-R-A	1,45484	0,68669	0,86316
94	TISK-R-A	0,41869	0,22608	1,18911
95	TOZ-R-A	0,13160	0,09846	0,23524
96	TNSA-R-A	0,20190	0,12971	0,08022
97	TUHO-R-A	0,38350	0,21044	0,03774
98	ULJN-R-A	0,38201	0,20978	0,10324
99	ULPL-R-A	0,75153	0,37405	-0,02907
100	VLHO-R-A	0,61077	0,31147	0,01171
101	VART-R-1	0,82680	0,40751	0,53492
102	VDKT-R-A	1,12726	0,54107	1,16305
103	VIRO-R-A	1,14236	0,54778	0,91319
104	VIS-R-A	1,03230	0,49886	-0,05107
105	ZACBA-R-A	0,84452	0,41538	0,51140
106	ZAPI-R-A	0,31587	0,18038	0,36571
107	BRIN-R-A	0,09401	0,08175	0,17035
108	ZDNK-R-A	1,01627	0,49173	0,66758
109	ZLAR-R-A	-0,22114	-0,05835	0,27871
110	ZVCV-R-A	0,54892	0,28398	0,08622
111	ZVZD-R-A	0,32294	0,18352	0,61904
112	ZTNJ-R-A	0,58952	0,30203	0,87608

Source: Authors' calculation.

APPENDIX 2. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2008

No.	Share	Beta	Theoretical return	Real return
1	ADPL-R-A	0,89171	-0,97375	-1,85561
2	AGMM-R-A	0,15274	-0,11721	-0,54765
3	ARNT-R-A	-0,10947	0,18671	-2,22670
4	ATGR-R-A	0,84911	-0,92436	-0,64270
5	ATLN-R-A	0,68275	-0,73155	-1,36621
6	ATPL-R-A	1,69072	-1,89987	-1,63602
7	AUHR-R-A	0,64930	-0,69277	-0,94974
8	BD62-R-A	0,76658	-0,82871	-1,80660
9	BLJE-R-A	1,28042	-1,42430	-1,24279
10	BRIN-R-A	0,65772	-0,70253	-1,15568
11	CKML-R-A	0,11252	-0,07060	-0,77413
12	CROS-R-A	1,12814	-1,24779	-1,71431
13	DDJH-R-A	1,30160	-1,44884	-1,51678
14	DLKV-R-A	1,43432	-1,60268	-1,41403
15	ELPR-R-A	0,12431	-0,08426	-1,02568
16	ERNT-R-A	0,69927	-0,75070	-1,04546
17	FNVC-R-A	0,61039	-0,64767	-0,69142
18	HDEL-R-A	1,52235	-1,70471	-2,24689
19	HMAM-R-A	0,73042	-0,78680	-0,88772
20	HPDG-R-A	0,79539	-0,86210	-1,04977
21	HTPK-R-A	0,66886	-0,71544	-1,48624
22	HT-R-A	0,59205	-0,62642	-0,49878
23	HUPZ-R-A	0,53325	-0,55826	-0,55168
24	IGH-R-A	1,45534	-1,62704	-1,37245
25	INA-R-A	0,83140	-0,90385	-0,87519
26	INGR-R-A	1,52655	-1,70958	-1,51304
27	IPKK-R-A	1,28457	-1,42910	-1,62073
28	JDOS-R-A	0,65466	-0,69898	-0,94583
29	JDPL-R-A	1,26789	-1,40976	-1,66335
30	JNAF-R-A	1,22856	-1,36418	-1,39361
31	KABA-R-A	0,56050	-0,58985	-1,13320
32	KODT-R-A	0,67543	-0,72306	-1,33346
33	KOEI-R-A	1,17512	-1,30225	-1,09239
34	KRAS-R-A	0,53984	-0,56590	-0,91084
35	LEDO-R-A	1,31442	-1,46370	-1,42339
36	LKPC-R-A	1,55389	-1,74127	-1,55387

No.	Share	Beta	Theoretical return	Real return
37	LKRI-R-A	1,37346	-1,53213	-1,74199
38	LPLH-R-A	1,07372	-1,18471	-1,81737
39	LURA-R-A	0,08928	-0,04366	-0,63914
40	MAIS-R-A	0,12396	-0,08386	-1,39050
41	MGMA-R-A	0,33954	-0,33374	-1,46045
42	OPTE-R-A	1,13954	-1,26100	-1,38040
43	PBZ-R-A	1,36804	-1,52585	-1,35843
44	PDBA-R-A	0,30268	-0,29100	-1,41972
45	PLAG-R-A	0,76045	-0,82160	-1,27601
46	PODR-R-A	0,43808	-0,44795	-0,66750
47	PTKM-R-A	0,83785	-0,91132	-1,04499
48	PUNT-R-A	0,56232	-0,59196	-1,34954
49	RIVP-R-A	0,71385	-0,76759	-1,26849
50	SLPF-R-A	0,63938	-0,68127	-0,88426
51	SNBA-R-A	0,66612	-0,71227	-1,45770
52	THNK-R-A	1,19250	-1,32238	-1,88972
53	TISK-R-A	1,26599	-1,40757	-1,61407
54	ULPL-R-A	1,62148	-1,81961	-1,86130
55	VDKT-R-A	1,41934	-1,58531	-2,58277
56	VIRO-R-A	1,20327	-1,33487	-1,58304
57	ZABA-R-A	1,11972	-1,23803	-1,30935
58	ZVCV-R-A	0,62682	-0,66671	-1,46294
59	ZVZD-R-A	1,12779	-1,24739	-1,64578

Source: Authors' calculation.

APPENDIX 3. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2009

No.	Share	Beta	Theoretical return	Real return
1	ADPL-R-A	0,57206	0,10216	0,74675
2	ADRS-R-A	0,76903	0,11144	0,11333
3	ARNT-R-A	-0,22037	0,06479	-0,16599
4	ATGR-R-A	0,74319	0,11023	0,37026
5	ATLN-R-A	1,03129	0,12381	-0,14409
6	ATPL-R-A	1,16257	0,13000	0,35134
7	AUHR-R-A	0,87232	0,11632	-0,04907
8	BD62-R-A	0,61897	0,10437	-0,38855
9	BLJE-R-A	1,22732	0,13306	-0,08748
10	CKML-R-A	0,16948	0,08317	-0,29117
11	CROS-R-A	1,15107	0,12946	0,50865
12	DDJH-R-A	1,26818	0,13498	-0,33074
13	DLKV-R-A	1,32859	0,13783	-0,21797
14	ERNT-R-A	0,72064	0,10916	0,07386
15	HDEL-R-A	2,06049	0,17235	0,14544
16	HMAM-R-A	0,54704	0,10098	-0,11556
17	HPDG-R-A	0,48038	0,09783	-0,15153
18	HTPK-R-A	0,92528	0,11881	0,47170
19	HT-R-A	0,30905	0,08975	0,26283
20	HUPZ-R-A	0,15563	0,08252	0,12934
21	IGH-R-A	1,85322	0,16257	-0,34226
22	INA-R-A	1,00250	0,12245	0,36171
23	INCR-R-A	1,84446	0,16216	-0,68845
24	IPKK-R-A	0,93882	0,11945	0,16714
25	JDPL-R-A	1,66486	0,15369	0,15290
26	JNAF-R-A	1,12039	0,12801	0,73774
27	KABA-R-A	0,46149	0,09694	-0,31508
28	KODT-R-A	0,96703	0,12078	0,50253
29	KOEI-R-A	1,32483	0,13765	0,06230
30	KRAS-R-A	0,67968	0,10723	-0,03942
31	LEDO-R-A	1,30715	0,13682	0,30822
32	LKPC-R-A	1,58161	0,14976	0,14872
33	LKRI-R-A	1,63048	0,15207	0,10004
34	LPLH-R-A	1,55620	0,14856	0,25052
35	MAIS-R-A	0,83265	0,11444	-0,08894
36	MGMA-R-A	0,51086	0,09927	-0,24102
37	OPTE-R-A	0,26940	0,08788	-0,66829
38	PBZ-R-A	0,89943	0,11759	0,16104

No.	Share	Beta	Theoretical return	Real return
39	PODR-R-A	0,93078	0,11907	0,07961
40	PTKM-R-A	1,57840	0,14961	0,25951
41	PUNT-R-A	1,30726	0,13683	0,02041
42	RIVP-R-A	-2,43641	-0,03971	-0,01743
43	SLPF-R-A	0,25114	0,08702	-0,18124
44	SNBA-R-A	0,92704	0,11890	0,02245
45	THNK-R-A	1,71622	0,15611	-0,18721
46	TISK-R-A	1,29043	0,13603	-0,01304
47	ULPL-R-A	1,39176	0,14081	0,09084
48	VDKT-R-A	1,99525	0,16927	0,02465
49	VIRO-R-A	1,29474	0,13624	0,14404
50	ZABA-R-A	1,09609	0,12687	0,29365
51	ZVZD-R-A	1,04387	0,12441	0,26926

Source: Authors' calculation.

APPENDIX 4. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2010

No.	Share	Beta	Theoretical return	Real return
1	ADPL-R-A	0.45815	0.05660	0.39434
2	ADRS-R-A	0.87406	0.07163	0.07815
3	ARNT-R-A	0.40911	0.05483	0.14126
4	ATGR-R-A	0.20162	0.04734	0.18613
5	ATLN-R-A	0.51726	0.05874	0.49507
6	ATPL-R-A	0.90269	0.07266	-0.29604
7	AUHR-R-A	0.12796	0.04468	-0.42958
8	BD62-R-A	1.86424	0.10739	-0.15534
9	BLJE-R-A	0.96421	0.07488	-0.22658
10	BPBA-R-A	0.43686	0.05583	0.04686
11	CKML-R-A	0.86583	0.07133	0.41586
12	CROS-R-A	0.11353	0.04415	0.03172
13	DDJH-R-A	1.18167	0.08274	-0.01041
14	DLKV-R-A	1.10053	0.07981	-0.24488
15	ERNT-R-A	0.69664	0.06522	0.03988
16	FMPS-R-A	0.74214	0.06686	-0.50147
17	HDEL-R-A	0.94935	0.07435	-0.39632
18	HTPK-R-A	0.49811	0.05805	-0.78996
19	HT-R-A	0.49244	0.05784	0.09748
20	HUPZ-R-A	0.86272	0.07122	-0.26844
21	IGH-R-A	1.40876	0.09094	-0.46974
22	INA-R-A	2.00134	0.11235	0.74786
23	INCR-R-A	1.04741	0.07789	-0.90897
24	IPKK-R-A	0.90729	0.07283	-0.55594
25	JDCT-R-A	0.22168	0.04806	0.20538
26	JDPL-R-A	1.07049	0.07872	-0.17006
27	JNAF-R-A	0.78049	0.06825	0.06592
28	KODT-R-A	0.46874	0.05698	-0.58504
29	KOEI-R-A	0.82898	0.07000	0.21017
30	KRAS-R-A	0.42786	0.05551	0.39820
31	LEDO-R-A	0.50305	0.05822	0.06741
32	LKPC-R-A	0.84363	0.07053	0.00793
33	LKRI-R-A	0.49264	0.05785	0.02072
34	LPLH-R-A	0.73751	0.06669	0.09039
35	MAIS-R-A	0.36718	0.05332	-0.13067
36	MGMA-R-A	1.27514	0.08611	-0.73811
37	OPTE-R-A	0.69437	0.06514	-0.30004
38	PBZ-R-A	0.76887	0.06783	0.04080

No.	Share	Beta	Theoretical return	Real return
39	PLAG-R-A	0,38595	0,05399	0,12428
40	PODR-R-A	1,00098	0,07621	0,07255
41	PTKM-R-A	0,75296	0,06725	0,15623
42	RIVP-R-A	0,37055	0,05344	-0,01302
43	SLPF-R-A	0,42024	0,05523	-0,06672
44	THNK-R-A	1,61384	0,09835	-0,26881
45	TISK-R-A	0,83917	0,07037	-0,70791
46	ULPL-R-A	0,61526	0,06228	-0,09004
47	VART-R-1	1,09837	0,07973	-0,37708
48	VDKT-R-A	1,00622	0,07640	-0,22596
49	VIRO-R-A	1,20304	0,08351	-0,01348
50	ZABA-R-A	0,97195	0,07516	0,05457
51	ZTNJ-R-A	-0,32765	0,02822	-0,32064
52	ZVCV-R-A	0,61442	0,06225	-0,03394
53	ZVZD-R-A	0,75323	0,06726	-0,36822

Source: Authors' calculation.

APPENDIX 5. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2011

No.	Share	Beta	Theoretical return	Real return
1	ADPL-R-A	0,89256	-0,16818	-0,13453
2	ADRS-R-A	0,21566	-0,01102	-0,28167
3	ARNT-R-A	1,48828	-0,30649	0,22554
4	ATGR-R-A	0,50355	-0,07786	-0,47621
5	ATLN-R-A	1,67220	-0,34919	0,03013
6	ATPL-R-A	1,42862	-0,29264	-0,80561
7	AUHR-R-A	0,61345	-0,10337	-0,06373
8	BD62-R-A	0,71262	-0,12640	-0,87499
9	BLJE-R-A	1,44240	-0,29584	0,15747
10	CKML-R-A	0,50425	-0,07802	-0,03762
11	DDJH-R-A	1,55015	-0,32086	0,47416
12	DLKV-R-A	1,24441	-0,24987	-0,69575
13	ERNT-R-A	0,68490	-0,11996	-0,23193
14	HDEL-R-A	1,36980	-0,27898	-0,57593
15	HTPK-R-A	0,71972	-0,12805	-0,11321
16	HT-R-A	0,43732	-0,06248	-0,18062
17	HUPZ-R-A	0,19791	-0,00690	-0,13525
18	IGH-R-A	1,31247	-0,26567	-0,80541
19	INGR-R-A	1,18087	-0,23512	-0,92986
20	IPKK-R-A	0,77177	-0,14013	-0,15159
21	JDPL-R-A	1,13085	-0,22350	-0,59840
22	JNAF-R-A	0,47552	-0,07135	-0,29661
23	KABA-R-A	0,97217	-0,18666	-0,19885
24	KODT-R-A	0,59150	-0,09828	-0,05390
25	KOEI-R-A	0,45980	-0,06770	-0,03104
26	KRAS-R-A	0,68356	-0,11965	0,01373
27	LEDO-R-A	0,80941	-0,14887	-0,15389
28	LKPC-R-A	0,68192	-0,11927	-0,85554
29	LKRI-R-A	1,03496	-0,20124	-0,56742
30	LPLH-R-A	0,21430	-0,01070	-0,66295
31	LRH-R-A	0,46196	-0,06820	-0,21162
32	LURA-R-A	-0,21369	0,08867	0,58773
33	MAIS-R-A	0,62306	-0,10561	-0,30111
34	MGMA-R-A	2,37745	-0,51293	-2,01936
35	OPTE-R-A	0,80237	-0,14724	-0,02772
36	PBZ-R-A	0,58199	-0,09607	-0,17351
37	PLAG-R-A	0,12439	0,01017	-0,03192
38	PODR-R-A	0,80275	-0,14733	-0,28166

No.	Share	Beta	Theoretical return	Real return
39	PTKM-R-A	0,97381	-0,18704	0,15569
40	RIVP-R-A	0,77728	-0,14141	0,12623
41	SLPF-R-A	0,09138	0,01784	-0,02166
42	SLRS-R-A	1,81855	-0,38317	0,10791
43	SNBA-R-A	0,74298	-0,13345	-0,10445
44	THNK-R-A	1,41968	-0,29056	-0,38016
45	TISK-R-A	1,45203	-0,29807	-0,15752
46	TUHO-R-A	0,45277	-0,06607	0,20812
47	ULPL-R-A	0,95128	-0,18181	-0,48983
48	VART-R-1	0,06068	0,02496	-0,07660
49	VDKT-R-A	1,47717	-0,30391	-0,88149
50	VIRO-R-A	0,75402	-0,13601	0,14572
51	VPIK-R-A	1,69252	-0,35391	-0,00361
52	ZABA-R-A	0,79461	-0,14543	-0,44037
53	ZVZD-R-A	1,21239	-0,24243	-0,20350

Source: Authors' calculation.

APPENDIX 6. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2012

No.	Share	Beta	Theoretical return	Real return
1	ACI-R-A	0,30067	0,02722	0,20706
2	ADPL-R-A	0,68796	0,01172	0,05231
3	ADRS-R-A	0,12519	0,03425	0,16671
4	ARNT-R-A	-0,25920	0,04964	0,57188
5	ATGR-R-A	0,33257	0,02594	0,07576
6	ATLN-R-A	0,39610	0,02340	0,08635
7	ATPL-R-A	1,38976	-0,01638	-0,49089
8	AUHR-R-A	0,06943	0,03648	-0,21584
9	BD62-R-A	-0,35167	0,05334	0,08303
10	BLJE-R-A	1,30697	-0,01307	-0,16896
11	CROS-R-A	0,32133	0,02639	0,45426
12	DDJH-R-A	1,60571	-0,02503	0,44046
13	DLKV-R-A	1,58654	-0,02426	-0,66982
14	ERNT-R-A	0,98897	-0,00033	0,22918
15	HDEL-R-A	1,53543	-0,02221	-0,00716
16	HIMR-R-A	-0,10765	0,04357	0,24816
17	HTPK-R-A	0,84362	0,00548	-0,03649
18	HT-R-A	0,64423	0,01347	-0,18576
19	HUPZ-R-A	-0,04280	0,04097	-0,09555
20	ICH-R-A	0,28168	0,02798	-0,40097
21	INA-R-A	0,11875	0,03450	0,05782
22	INGR-R-A	1,65408	-0,02696	-0,76062
23	JDPL-R-A	1,23632	-0,01024	-0,35233
24	JNAF-R-A	0,26459	0,02867	0,03503
25	KODT-R-A	0,60588	0,01500	-0,12323
26	KOEI-R-A	0,64878	0,01329	0,20339
27	KRAS-R-A	0,60772	0,01493	-0,20181
28	KTJV-R-A	0,55359	0,01710	-0,46585
29	LEDO-R-A	0,64289	0,01352	0,41902
30	LKPC-R-A	0,63053	0,01402	-0,18211
31	LKRI-R-A	1,11154	-0,00524	0,12072
32	LPLH-R-A	0,99189	-0,00045	-0,83933
33	MAIS-R-A	0,91833	0,00249	0,26715
34	MGMA-R-A	-1,60840	0,10365	-2,05189
35	PBZ-R-A	0,03754	0,03776	0,06142
36	PLAG-R-A	-0,15995	0,04566	0,29761
37	PODR-R-A	0,92797	0,00211	0,05855
38	PTKM-R-A	1,65016	-0,02681	0,08785

No.	Share	Beta	Theoretical return	Real return
39	RIVP-R-A	0,70500	0,01103	0,29804
40	SLPF-R-A	0,25466	0,02906	-0,36505
41	SNBA-R-A	-0,30435	0,05144	-0,32850
42	THNK-R-A	1,19259	-0,00849	-0,16453
43	TISK-R-A	0,96854	0,00048	0,33755
44	TUHO-R-A	-0,03831	0,04079	0,14980
45	ULPL-R-A	0,77848	0,00809	-0,54142
46	VART-R-1	0,59763	0,01533	-0,71251
47	VDKT-R-A	1,34260	-0,01449	1,08138
48	VIRO-R-A	0,02309	0,03833	0,23397
49	VPIK-R-A	1,13204	-0,00606	0,53757
50	ZABA-R-A	0,85318	0,00510	-0,08089
51	ZTNJ-R-A	0,32174	0,02638	0,00525
52	ZVCV-R-A	0,26062	0,02882	0,03874
53	ZVZD-R-A	0,64835	0,01330	0,22269

Source: Authors' calculation.

APPENDIX 7. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2013

No.	Share	Beta	Theoretical return	Real return
1	ACI-R-A	0.23925	0.02494	0.23656
2	ADPL-R-A	0.84827	0.02386	0.16832
3	ADRS-R-A	0.53410	0.02442	0.07894
4	ARNT-R-A	1.70615	0.02235	0.51097
5	ATGR-R-A	0.93870	0.02371	0.27065
6	ATLN-R-A	0.77123	0.02400	0.31779
7	ATPL-R-A	1.82891	0.02213	0.67209
8	AUHR-R-A	0.51701	0.02445	0.24487
9	BD62-R-A	1.32094	0.02303	-0.80223
10	BLJE-R-A	0.60419	0.02430	-0.23341
11	CKML-R-A	0.27879	0.02487	-0.00064
12	CROS-R-A	0.64014	0.02423	0.11935
13	DDJH-R-A	0.50732	0.02447	-0.15984
14	DLKV-R-A	2.04554	0.02175	-0.64502
15	ERNT-R-A	1.16280	0.02331	0.04612
16	HDEL-R-A	0.86551	0.02383	0.03394
17	HIMR-R-A	0.31435	0.02481	0.20364
18	HMST-R-A	0.41576	0.02463	0.30506
19	HTPK-R-A	0.39596	0.02466	-0.14860
20	HT-R-A	0.93026	0.02372	-0.12651
21	HUPZ-R-A	0.78217	0.02398	0.28533
22	IGH-R-A	1.81390	0.02216	-1.03684
23	INA-R-A	-0.01389	0.02539	-0.12587
24	INGR-R-A	1.35010	0.02298	-0.02966
25	IPKK-R-A	0.34590	0.02475	-0.06204
26	JDCT-R-A	0.34600	0.02475	0.09014
27	JDOS-R-A	-0.11848	0.02557	0.03922
28	JDPL-R-A	1.44441	0.02281	0.58803
29	JNAF-R-A	0.57155	0.02435	0.00021
30	KODT-R-A	0.78277	0.02398	0.18796
31	KOEI-R-A	0.64694	0.02422	0.05638
32	KRAS-R-A	1.65976	0.02243	0.10470
33	KTJV-R-A	0.73501	0.02406	0.02269
34	LEDO-R-A	0.68219	0.02416	0.06993
35	LKPC-R-A	0.63484	0.02424	-0.29337
36	LKRI-R-A	0.38749	0.02468	-0.23849
37	LPLH-R-A	-0.48944	0.02622	1.30173
38	LRH-R-A	-0.88663	0.02693	0.20607

No.	Share	Beta	Theoretical return	Real return
39	MAIS-R-A	1,19511	0,02325	0,46100
40	MGMA-R-A	-0,92388	0,02699	0,36101
41	OPTE-R-A	-0,93461	0,02701	-0,26919
42	PBZ-R-A	0,68712	0,02415	-0,14939
43	PLAG-R-A	0,01438	0,02534	0,21516
44	PODR-R-A	1,38938	0,02291	0,03906
45	PTKM-R-A	1,11610	0,02339	-0,22077
46	SAPN-R-A	1,07246	0,02347	0,65012
47	SLPF-R-A	-0,76497	0,02671	0,45571
48	SLRS-R-A	0,82096	0,02391	0,67410
49	THNK-R-A	1,26350	0,02313	-0,22296
50	TISK-R-A	0,62395	0,02426	-0,11435
51	TUHO-R-A	-0,11342	0,02556	0,25222
52	ULPL-R-A	0,52104	0,02444	-0,04625
53	VART-R-1	-0,71744	0,02663	0,88890
54	VDKT-R-A	1,27084	0,02312	-0,02361
55	VIRO-R-A	0,79405	0,02396	0,16294
56	VPIK-R-A	1,62641	0,02249	0,10785
57	ZABA-R-A	0,92035	0,02374	-0,24109
58	ZVZD-R-A	0,78083	0,02398	0,07201

Source: Authors' calculation.

APPENDIX 8. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2014

No.	Share	Beta	Theoretical return	Real return
1	ACI-R-A	0.42904	0.00074	0.21825
2	ADPL-R-A	0.97989	-0.02200	-0.28887
3	ADRS-R-A	0.94862	-0.02071	0.16000
4	ARNT-R-A	1.45105	-0.04144	0.56342
5	ATGR-R-A	1.00889	-0.02319	0.28259
6	ATLN-R-A	0.12528	0.01328	0.46662
7	ATPL-R-A	1.10253	-0.02706	-0.23913
8	AUHR-R-A	0.44043	0.00027	0.38501
9	BD62-R-A	1.16648	-0.02970	-0.03279
10	BLJE-R-A	1.47413	-0.04240	-0.48992
11	BPBA-R-A	3.01831	-0.10613	-0.92017
12	CKML-R-A	0.48592	-0.00161	0.17527
13	CROS-R-A	0.14072	0.01264	0.04172
14	DDJH-R-A	2.00070	-0.06413	-0.68999
15	DLKV-R-A	1.10205	-0.02704	-0.85936
16	ERNT-R-A	0.57975	-0.00548	-0.08898
17	HBRL-R-A	0.79228	-0.01425	0.59609
18	HDEL-R-A	1.30790	-0.03553	-1.54011
19	HIMR-R-A	0.42572	0.00088	0.73621
20	HMST-R-A	-1.20926	0.06836	0.86216
21	HTPK-R-A	0.71251	-0.01096	0.18872
22	HT-R-A	1.00978	-0.02323	-0.14271
23	HUPZ-R-A	1.29010	-0.03480	0.20121
24	IGH-R-A	1.27084	-0.03401	-0.14299
25	INA-R-A	1.09008	-0.02654	0.02778
26	INCR-R-A	0.84004	-0.01623	-0.17898
27	IPKK-R-A	1.22151	-0.03197	-0.51715
28	JDPL-R-A	0.10027	0.01431	0.03496
29	JMNC-R-A	0.77889	-0.01370	0.29305
30	JNAF-R-A	1.04741	-0.02478	0.35419
31	KODT-R-A	0.46859	-0.00089	0.46859
32	KOEI-R-A	1.08149	-0.02619	0.02841
33	KRAS-R-A	0.45755	-0.00044	-0.07311
34	KTJV-R-A	-0.14943	0.02461	-0.11825
35	LEDO-R-A	0.50120	-0.00224	0.00857
36	LKPC-R-A	0.66251	-0.00890	0.41888
37	LKRI-R-A	0.46840	-0.00089	-0.25339
38	LPLH-R-A	0.85903	-0.01701	0.44061

No.	Share	Beta	Theoretical return	Real return
39	LRH-R-A	0,93273	-0,02005	0,43961
40	MAIS-R-A	1,48933	-0,04302	0,42925
41	MGMA-R-A	2,27896	-0,07561	1,08334
42	OPTE-R-A	-0,25934	0,02915	-0,80669
43	PBZ-R-A	0,80374	-0,01473	0,23275
44	PLAG-R-A	0,58403	-0,00566	0,51789
45	PODR-R-A	0,97672	-0,02187	0,13359
46	PTKM-R-A	2,79421	-0,09688	-1,82193
47	RIVP-R-A	0,93848	-0,02029	0,42984
48	RIZO-R-A	0,05982	0,01598	0,08723
49	SAPN-R-A	0,67155	-0,00927	-0,00439
50	SLPF-R-A	-1,25503	0,07024	0,38299
51	SLRS-R-A	0,90819	-0,01904	0,03975
52	THNK-R-A	0,27399	0,00714	-0,34906
53	TISK-R-A	-0,20554	0,02693	0,19231
54	TUHO-R-A	0,46202	-0,00062	0,48349
55	ULPL-R-A	-2,86297	0,13661	-2,58974
56	VART-R-1	1,12910	-0,02816	0,18167
57	VDKT-R-A	1,43386	-0,04073	-0,27540
58	VIRO-R-A	1,48500	-0,04284	-0,62533
59	VPIK-R-A	0,85707	-0,01693	-0,24884
60	ZABA-R-A	0,57498	-0,00529	0,14605
61	ZVCV-R-A	0,48214	-0,00145	0,50807
62	ZVZD-R-A	0,38269	0,00265	-0,21678

Source: Authors' calculation.

APPENDIX 9. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2015

No.	Share	Beta	Theoretical return	Real return
1	ADPL-R-A	1,41695	-0,07672	0,00959
2	ATGR-R-A	0,70479	-0,03063	-0,14205
3	DLKV-R-A	0,77508	-0,03518	-0,11377
4	HT-R-A	0,87972	-0,04195	-0,08700
5	IGH-R-A	0,90111	-0,04333	-0,57561
6	ILRA-R-A	0,74031	-0,03293	0,25319
7	INA-R-A	0,71167	-0,03107	-0,15403
8	KOEI-R-A	0,41873	-0,01212	-0,04239
9	LEDO-R-A	1,09502	-0,05588	0,08085
10	LKPC-R-A	0,28686	-0,00358	-0,02960
11	LKRI-R-A	0,41718	-0,01202	-0,54517
12	MGMA-R-A	-2,61815	0,18442	-1,17865
13	OPTE-R-A	-1,71895	0,12623	-0,72594
14	PODR-R-A	0,53080	-0,01937	0,10680
15	PTKM-R-A	-0,28340	0,03332	-0,73836
16	RIVP-R-A	1,07657	-0,05469	0,17142
17	ULPL-R-A	1,44025	-0,07822	-0,17096
18	VART-R-1	1,02482	-0,05134	-0,41547
19	VIRO-R-A	2,31048	-0,13454	-0,03155
20	ACI-R-A	0,49754	-0,01722	0,09352
21	ADRS-R-A	1,43628	-0,07797	0,42261
22	ARNT-R-A	1,54687	-0,08513	-0,03762
23	ATLN-R-A	0,20303	0,00184	0,27968
24	ATPL-R-A	2,20516	-0,12773	-0,95670
25	AUHR-R-A	0,19871	0,00212	-0,07898
26	BD62-R-A	-0,62284	0,05529	0,28450
27	BLJE-R-A	0,52792	-0,01918	-0,39967
28	BRIN-R-A	0,12658	0,00679	0,08382
29	CKML-R-A	-0,32780	0,03620	0,25510
30	DDJH-R-A	0,15899	0,00469	-0,29019
31	ERNT-R-A	0,48791	-0,01659	-0,27015
32	HBRL-R-A	0,43368	-0,01308	0,01730
33	HDEL-R-A	1,88954	-0,10730	-0,11857
34	HIMR-R-A	0,27414	-0,00276	0,01597
35	HMAM-R-A	0,74479	-0,03322	0,25174
36	HMST-R-A	0,56085	-0,02131	0,05997
37	HTPK-R-A	1,07869	-0,05483	-0,00200
38	HUPZ-R-A	-1,28644	0,09824	0,11036

No.	Share	Beta	Theoretical return	Real return
39	INGR-R-A	0,64145	-0,02653	0,08066
40	JDGT-R-A	-0,41620	0,04192	0,35111
41	JDOS-R-A	-0,16333	0,02555	-0,10540
42	JDPL-R-A	1,35750	-0,07287	-1,56632
43	JNAF-R-A	0,78111	-0,03557	0,30521
44	KODT-R-A	0,53019	-0,01933	0,10545
45	KRAS-R-A	0,43914	-0,01344	0,28851
46	LPLH-R-A	0,06958	0,01048	-0,08289
47	LRH-R-A	0,26397	-0,00210	0,04183
48	MAIS-R-A	1,15475	-0,05975	0,43164
49	PBZ-R-A	0,09138	0,00907	0,07392
50	PLAG-R-A	0,25130	-0,00128	0,05607
51	RIZO-R-A	0,28157	-0,00324	0,65878
52	SAPN-R-A	0,17591	0,00360	0,19885
53	SLPF-R-A	1,10509	-0,05653	0,01511
54	SLRS-R-A	1,16985	-0,06073	0,15042
55	SNBA-R-A	0,03924	0,01244	0,31634
56	THNK-R-A	0,99271	-0,04926	-0,24308
57	TISK-R-A	0,30636	-0,00484	-0,24846
58	TUHO-R-A	0,99602	-0,04948	0,08004
59	VDKT-R-A	1,20790	-0,06319	0,18746
60	VPIK-R-A	1,34600	-0,07213	-0,59254
61	ZABA-R-A	0,99731	-0,04956	0,06573
62	ZVZD-R-A	0,71894	-0,03154	-0,08731

Source: Authors' calculation.

APPENDIX 10. VALUES OF SML MODEL IN THE CROATIAN CAPITAL MARKET IN 2016

No.	Share	Beta	Theoretical return	Real return
1	ADPL-R-A	0,59484	0,11467	0,37411
2	ARNT-R-A	1,01056	0,18816	0,40346
3	ATGR-R-A	0,47214	0,09298	0,08303
4	DLKV-R-A	0,81768	0,15406	0,04134
5	HPB-R-A	0,43087	0,08568	0,18462
6	HT-R-A	0,60130	0,11581	0,18494
7	IGH-R-A	1,05089	0,19529	0,72607
8	INA-R-A	1,43836	0,26380	-0,07621
9	KOEI-R-A	0,74793	0,14173	0,04907
10	LEDO-R-A	0,54429	0,10573	0,17946
11	LKPC-R-A	0,85037	0,15984	-0,13047
12	LKRI-R-A	1,01365	0,18871	0,15210
13	MDKA-R-A	-0,58087	-0,09319	4,92891
14	MGMA-R-A	4,36124	0,78054	-0,48343
15	OPTE-R-A	1,47806	0,27082	0,48877
16	PODR-R-A	1,24974	0,23045	0,16130
17	PTKM-R-A	0,96887	0,18079	0,31372
18	RIVP-R-A	0,90777	0,16999	0,40071
19	TPNG-R-A	0,23943	0,05183	-0,00200
20	ULPL-R-A	1,35508	0,24907	0,23897
21	VART-R-1	1,38832	0,25495	0,02312
22	VIRO-R-A	0,77241	0,14606	0,17734
23	ACI-R-A	0,28807	0,06043	0,13292
24	ADRS-R-A	1,27550	0,23500	0,09037
25	ATLN-R-A	1,06160	0,19719	0,27669
26	ATPL-R-A	2,11975	0,38426	0,86608
27	AUHR-R-A	0,46288	0,09134	0,76757
28	BD62-R-A	1,14941	0,21271	0,06403
29	BLJE-R-A	1,13838	0,21076	0,01120
30	CKML-R-A	0,15903	0,03762	0,27220
31	DDJH-R-A	0,55378	0,10741	0,59410
32	ERNT-R-A	0,90195	0,16896	0,15873
33	HBRL-R-A	-0,11179	-0,01026	0,32271
34	HHLD-R-A	2,46876	0,44596	0,80405
35	HIMR-R-A	1,10202	0,20433	0,48794
36	HMST-R-A	0,51901	0,10126	-0,03584
37	HUPZ-R-A	0,60562	0,11657	0,38800
38	INCR-R-A	1,12812	0,20895	0,12147

No.	Share	Beta	Theoretical return	Real return
39	IPKK-R-A	1,79854	0,32747	0,58442
40	JDGT-R-A	0,38479	0,07753	-0,00653
41	JDPL-R-A	1,64253	0,29989	0,65841
42	JNAF-R-A	0,07399	0,02258	0,17091
43	KODT-R-A	0,07948	0,02356	0,19818
44	KRAS-R-A	-0,02564	0,00497	0,08573
45	KTJV-R-A	0,00486	0,01036	0,59021
46	LPLH-R-A	0,42554	0,08474	0,09648
47	LRH-R-A	0,13707	0,03374	0,03608
48	MAIS-R-A	1,15830	0,21429	0,16797
49	PBZ-R-A	0,52063	0,10155	0,26307
50	PLAG-R-A	0,18964	0,04303	0,24376
51	RIZO-R-A	1,40813	0,25845	-0,35315
52	SAPN-R-A	0,13138	0,03273	0,18660
53	SLPF-R-A	0,69119	0,13170	0,41297
54	SLRS-R-A	0,83855	0,15775	0,13414
55	THNK-R-A	0,69720	0,13276	0,43505
56	TUHO-R-A	0,26633	0,05659	0,12629
57	VDKT-R-A	1,84443	0,33559	0,09951
58	VLEN-R-B	0,64731	0,12394	0,43078
59	VPIK-R-A	2,49159	0,45000	0,04323
60	ZABA-R-A	1,12688	0,20873	0,39689
61	ZVZD-R-A	0,97690	0,18221	0,55342

Source: Authors' calculation.

APPENDIX 11. TESTING THE VALIDITY OF SML MODEL (ANOVA AND F TEST)

Variable	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
SST	20.63044	11.19024	4.51331	5.86515	9.31559	11.00414	7.98795	22.79941	9.05608	25.65922
SSX	3.66430	15.36589	0.05492	0.01221	0.74583	0.03255	8.55E-05	0.07630	0.17036	1.07728
SCXY	4.10047	6.56450	0.04686	-0.02206	0.93764	-0.11884	0.00764	-0.00891	-0.10341	-1.37447
SSR	1.82282	-7.60882	0.00221	-0.00080	-0.21770	0.00476	-1.35E-05	0.00037	0.00669	-0.24300
SSE	18.80761	18.79907	4.51110	5.86595	9.53329	10.99938	7.98796	22.79905	9.04938	25.90222
Se	0.41350	0.57429	0.30342	0.33914	0.43235	0.46441	0.37768	0.61643	0.38836	0.66259
r2	0.08836	-0.67995	0.00049	-0.00014	-0.02337	0.00043	-1.69E-06	1.61E-05	0.00074	-0.00947
MSR	1.82282	-7.60882	0.00221	-0.00080	-0.21770	0.00476	-1.35E-05	0.00037	0.00669	-0.24300
MSE	0.17098	0.32981	0.09206	0.11502	0.18693	0.21567	0.14264	0.37998	0.15082	0.43902
F	10.66115	-23.07045	0.02400	-0.00693	-1.16461	0.02206	-9.44E-05	0.00097	0.04437	-0.55350
Ftab5%	3.92739	4.00987	4.03839	4.03039	4.03039	4.03039	4.01297	4.00119	4.00119	4.00398
Ftab1%	6.87103	7.10153	7.18214	7.15949	7.15949	7.15949	7.11029	7.07711	7.07711	7.08496

Source: Authors' calculation.

TOURISM TRACK

CHANGES IN VAT RATE AND LIQUIDITY INDICATORS IN THE HOSPITALITY AND CATERING INDUSTRY IN THE REPUBLIC OF CROATIA

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ABSTRACT

This paper deals with the increase of the value added tax (VAT) rate in the hospitality and catering industry from 13% to 25%, in part related to food and beverage preparation and service in hospitality and catering facilities, as implemented since January 1st, 2017 as part of a tax reform. The accurate analysis of the effects of increased VAT rates is time-consuming, which is why in this paper the liquidity of hospitality and catering entities within the National Classification of Economic Activities 56 - Food and beverages service activities - has been analyzed as one of the most important measures of business stability, but in a reversed situation, based on past tax changes. The analysis covers the period when the VAT rate was reduced from 25% (as it was in 2012) to 10% (in 2013), or to 13% (in 2014). Using a representative sample of hospitality and catering enterprises from eight most developed tourism-oriented counties (public disclosure obligators which in 2015 generated over 5.2 million HRK of total revenues, thus excluding micro-enterprises), a significant increase in liquidity was confirmed for that period. The average current ratio grew by 55% in 2013, i.e. by 66% in 2014, the average quick ratio by 70% in 2013, i.e. by 76% in 2014, while the cash ratio rose by as much as 104% in 2013, i.e. by 117% in 2014. All the differences in average indicators for the current, quick and cash ratios between 2012 and 2013, and between 2012 and 2014 were statistically significant, which was not the case with differences in average values between 2013 and 2014. Although in the period 2012 - 2014 many other reasons, apart from the VAT rate reduction, could have affected the results, they point towards a significantly higher liquidity of hospitality and catering entities in terms of lower VAT rates, as well as to the need to research it in more detail in future studies.

Keywords: Hospitality and catering services; Liquidity; Reduced rate; Value-added tax

JEL Codes: H25; L83

1. INTRODUCTION

The value-added tax (VAT) in the Republic of Croatia is an indirect national tax based on the destination principle; it is a consumption type tax, and a credit method is used for its calculation. It is a sales tax that is calculated at every stage of production - sales cycle, but only to the amount of added value that is created at a certain stage, and not to the entire value of production (Kuliš, 2007a). The VAT represents the highest yielding tax revenue of the general government's budget with the widest range of taxpayers (Šimović and Deškar-Škrbić, 2016). The VAT revenues make up for more than a half of all tax revenues of the consolidated general government without social security contributions (Jelčić and Bejaković, 2012). As per the data released by the Ministry of Finance, the share of value added tax revenues in the gross domestic product (GDP) from 2010 to 2014 ranged from 11,57% to 12,67% (Annual Reports 2010-2014; Ministry of Finance). According to the above mentioned, it's obvious that the value added tax is the most important state budget revenue and it's not surprising that the laws and regulations that define value added tax have been changed many times since it was first introduced.

The VAT was introduced in the Republic of Croatia due to the need to reform the entire Croatian tax system in the new economic and political circumstances, fiscal requirements imposed on a modern tax system and the need to harmonize the Croatian tax system with the tax systems of the European Union (Kuliš, 2007a). It was introduced by the Value Added Tax Act from 1995 ("Official Gazette", No. 47/95), when a uniform standard rate of 22% was set for all goods and services, but because of the assumption that it could cause an inflationary effect, the Act came into force on January 1st, 1998. Since the beginning of its implementation, the standard VAT rate has changed several times through amendments to the Act. So on August 1st, 2009 the standard VAT rate rose to 23% ("Official Gazette", No. 94/09), while the last amendment was added in 2012 ("Official Gazette", No. 22/12), when the VAT rate of 23% was replaced by the rate of 25% on March 1st, 2012. The new VAT Act ("Official Gazette", Nos. 73/13, 99/13 and 148/13) also determined the rate of 25%, which is still in force. This ranked the Republic of Croatia among the countries with the highest VAT rate in the European Union.

Beside the wish to increase revenues, some changes in the value added tax system have been made to stimulate certain economy sectors or to encourage the reduction of prices of certain products. In the case of increasing revenues, the changes made have been extremely successful, while the results of the changes made for the other mentioned reasons were more or less successful.

Having first introduced the flat VAT rate system, amendments to the Act as soon as in 1999 ("Official Gazette", 105/99) introduced a zero rate on a whole range of goods and services, mainly those of social character. Then, in 2006 ("Official Ga-

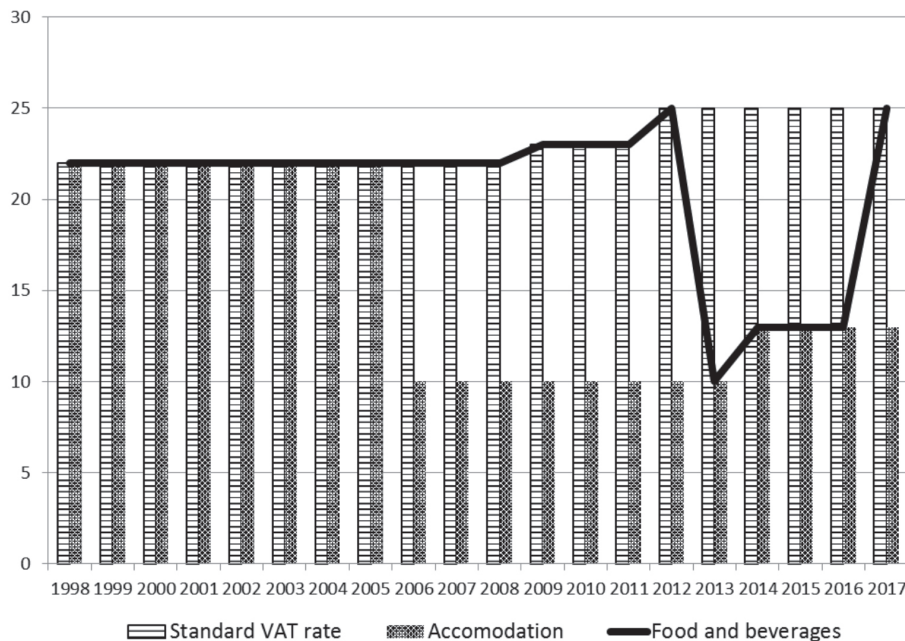
zette", 90/05) a reduced rate of 10% was introduced, and gradually the scope of goods and services to which the reduced VAT rate was applied expanded. The VAT system with multiple rates is characteristic in the practice of the EU countries, and today only Denmark has a flat VAT rate system.

The reduced VAT rate of 10% introduced on January 1st, 2006 applies, among other things, to the taxation of accommodation services in commercial hospitality and catering facilities. From January 1st, 2013 ("Official Gazette", 22/12) reduced VAT rate of 10% applied, in addition, to the provision of accommodation services, and also for hospitality and catering services. This refers to hospitality and catering services in all types of facilities, no matter whether a restaurant, a coffee bar or any other type of hospitality and catering facility is concerned.

This change should have strengthened the competitiveness of the Croatian tourism, increase investments, stimulate new employment, and consequently increase the budget revenues and growth of the overall economy. It is estimated that the expected results failed and, although this could have been affected by a number of other reasons, after only one year of implementation, the rate was, through new amendments of the VAT Act, once again increased to 13% on January 1st, 2014 within the scope of general increase in the VAT inter-rates at that time, but it remained in effect for both accommodation and hospitality and catering services of preparing and serving food and beverages ("Official Gazette", 148/13).

However, the latest amendments to the VAT Act ("Official Gazette", 115/16), applicable since January 1st, 2017, abolished the reduced rate of 13% on the aforementioned hospitality and catering services and the same standard VAT rate of 25% is now applicable. As an exception, the application of 13% rate remains for hospitality and catering services of accommodation or accommodation with breakfast, half board or full board in hotels or similar facilities, including accommodation during the holidays, space rental in vacation camps or locations for camping and accommodation in nautical tourism facilities. In these facilities, 13% VAT rate is calculated only on services for which exceptions were listed, while on all the other food services and preparation and serving of food and beverages, the standard VAT rate of 25% is applied.

Figure 1.: Standard VAT rate changes and the VAT rate on accommodation services and food and beverages preparation and serving in hospitality and catering industry, 1998 - 2017



Source: Data processed by the authors based on the VAT Act.

According to the Hospitality and Catering Industry Act ("Official Gazette", Nos. 85/15 and 121/16), hospitality and catering activities include preparation and serving of food, drinks and beverages and the provision of accommodation, as well as preparing food, drinks and beverages for consumption elsewhere with or without serving (in vehicles, at shows, and the like), and the supply of those meals, beverages and drinks (catering). Hospitality and catering facilities, with respect to the type of services they provide, are divided into groups: hotels, camps, other accommodation facilities, restaurants, bars, catering facilities and simple service facilities.

In this paper, we will focus on the VAT rate reduction from 25% to 10% and 13% on particular services in the hospitality and catering services and in this way partly try to foresee what could happen in the future with the actual increase in the VAT rate on the same services from 13% to 25%. For this purpose, we will use liquidity indicators to test the liquidity of hospitality and catering entities before and after the VAT rate change from 25% to 10%, i.e. 13% (2012, 2013 and 2014).

Liquidity indicators are used to assess the ability of companies to pay their due current liabilities. Enterprises in their operations seek to preserve liquidity and ability to meet their liabilities timely (Šarlija, 2009). The most common liquidity indicators are current ratio, quick ratio, cash ratio and net working capital.

The current ratio (current assets / current liabilities) should amount to 2 or more in order to ensure that the company has sufficient liquidity and that it can cover twice the amount of its liabilities. "It is important that a company has a minimum two times more current assets than current liabilities due to the risk of monetization of current assets (for example, in our system receivables are often not charged in the planned volume and planned schedule)" (Žager et al., 2008, p. 249). "However, excessively high current ratio can also suggest bad management. Extremely high current ratio might also be a sign of unused cash, too high inventory levels in relation to the real needs and poor management of receivables, which results in excessive receivables. At the same time, the above described situation may mean that possibilities of being credited by suppliers are not used enough" (Vukoja, 2009, p.7).

The quick ratio ((current assets - inventories) / current liabilities) demonstrates the ability of a company to provide a certain amount of money for the settlement of liabilities very quickly, and since, unlike cash ratio, it includes both receivables and cash, it may be considered a somewhat better liquidity indicator. Normally, its value should be 1 or higher than 1, which means that a company wanting to maintain a normal liquidity should have assets that can be monetized quickly in the amount of current liabilities (Žager et al., 2008, p. 249).

The cash ratio (cash / current liabilities), i.e. the ability of a company to meet its liabilities instantly (Belak, 2014), shows how much money the company has in its account to settle one monetary unit of liabilities. At the moment of maturity of liabilities, it should be at least 1. However, making a conclusion about a company's liquidity only on the basis of this ratio could lead to inaccurate information and error, so in order to get a more complete picture of a company's liquidity, other indicators should also be analyzed.

Another liquidity indicator is net working capital (current assets - current liabilities). A company with negative net working capital has problems with the settlement of its current liabilities, because its current assets are too small to cover them, while a company whose net working capital is positive will meet its current liabilities without a problem. "One of the major objectives of net working capital management is to achieve an optimal balance between current assets and current liabilities. The optimum level of net working capital is the level at which a balance between efficiency and business risk is achieved" (Milković, 2012, p. 31).

2. LITERATURE REVIEW

As liquidity is one of the most important measures of company's performance, the impact of the VAT on liquidity is an important professional question. At the same time, it is an extremely complex research question (Bubić et al., 2016) since the change in the VAT rate is only one of the determinants and in terms of research

it is difficult to isolate it as a variable, isolated from other factors and their complex interrelations.

In Croatia, there has been almost no research on the effects of VAT on liquidity and company's business. One recent study has confirmed the negative correlation between changes in the standard VAT rate and certain liquidity indicators, especially in the group of bankrupt companies (Bubić et al., 2016). According to one foreign analysis, the increase in the VAT rate as part of tax reform directly affected the liquidity of Spanish companies (Ashurst, 2013). Another study on the relationship between the VAT rate on one hand and liquidity and profitability on the other, established a negative impact of VAT rate on asset management and debt management (Varedi and Ebrahimi, 2015).

Opinions by Croatian tax experts on the number of rates are divided, so proponents of the multi-rate system emphasize the benefits of multiple rates, while advocates of a smaller number of rates explain the theoretical and practical groundlessness of applying more rates (Kuliš, 2007b). Professional and general public opinions are divided on whether the Republic of Croatia should apply reduced or standard VAT rate on hospitality and catering services, what were the effects of rate's reduction and how the increase in VAT rate could affect the hospitality and catering industry and tourism sector. A question related to it is which effects, positive or negative, have reduced / standard taxation on the tourism industry, the state budget and the economy as a whole.

In the explanation of the tax reform, the Ministry of Finance was of the opinion that in Croatia there are too many tax reliefs, exemptions, exclusions (according to reports by the European Commission, the International Monetary Fund and an in-depth analysis of tax expenditures) the effects of which are questionable, but they should have a specific purpose, be properly selected and targeted, based on real needs and consistent with the economic and social objectives. With regard to the VAT increase, the explanation is that there is a large discrepancy between the standard and reduced rates and that the criteria for determining the goods and services included in the reduced rates are not clear enough (Marić, 2016).

Some analyses showed that it was the introduction of reduced rates from 2012 and 2013 for hospitality and catering services and other transactions of goods and services that undermined the effectiveness of the VAT, which includes compensation of the same through growth of both reduced and standard tax rates (Šimović and Deskar-Škrbić, 2016). Therefore, as a benefit of the abolition of the reduced rate for hospitality and catering services, the possibility of a future reduction of the standard rate is mentioned, especially in a situation of recovery and growth in personal consumption. Another important argument is a violation of the principle of VAT neutrality, which introduces the element of inequality in the business (Šimović and Deskar-Škrbić, 2016).

At the same time, foreign and domestic research and analyses show that the potential increase in the price of accommodation and hospitality and catering services, as a result of increased tax, leads to a high risk of redirecting guests to other, more affordable and competitive destinations.

Croatia has one of the highest standard VAT rates in the European Union. Only Hungary has a higher rate - 27%, while Denmark and Sweden have 25%, just as Croatia. Compared with competing tourist Mediterranean countries (Greece, Spain, France and Italy), Croatia has a higher standard VAT rate.

Table 1.: VAT rate in tourism and hospitality and catering industry in selected countries of the European Union (%); situation on January 1st, 2017

Country	Standard VAT rate	Hotel accommodation	Restaurants and catering
Croatia	25	13	25
Greece	24	13	24
Spain	21	10	10
France	20	10	5.5*/10
Italy	22	10	10
Cyprus	19	9	9
Malta	18	7	18
Portugal	23	6	13
Hungary	27	18	18/27
Austria	20	13	10
Slovenia	22	9.5	9.5**/22

Legend: * refers to school canteens; ** refers to food preparation

Source: Data processed by the authors, according to the European Commission (2017) VAT rates applied in the Member States of the European Union: Situation on January 1st, 2017.

Table 1. shows that all EU countries have a reduced VAT rate on hotel accommodation, and that Portugal has the lowest rate of 6%, while Hungary has the highest rate of 18%. Unlike hotel accommodation, the situation with VAT rates in hospitality and catering industry (category *Restaurants and Catering*) is far more diverse. Like Croatia, where with the latest amendments the VAT rates in hospitality and catering are equalled to the standard VAT rate of 25%, the same situation is present in Greece (24%) and Malta (18%), whilst in all the other observed countries VAT rates in hospitality and catering industry are lower than the standard rate. Furthermore, many countries make difference between restaurants on one hand and bars and cafés on the other. For example, in Slovenia, Austria and Hungary, reduced rate applies to restaurants, i.e. food preparation, while in the bars and cafés the standard VAT rate is calculated. Some countries applying reduced rates in the hospitality and catering industry make an exception for nightclubs where standard VAT rate is calculated; e.g.

such is the case in Italy, Cyprus and Portugal, while cafés and bars have a reduced rate. In general, observing competitive tourism countries and other European countries, a new VAT change ranks Croatia among the countries with the highest VAT rate in the hospitality and catering industry in the European Union. Only Hungary has a higher VAT rate, but exceptions are still restaurants where reduced rate of 18% is applied. In developed tourism countries such as Spain, Italy and France, the VAT rate in the hospitality and catering industry is 10%, which compared to 25% in Croatia makes a significant difference. It is important to note that, except for the aforementioned exceptions, many countries apply specific taxation rules for some goods and services, for example serving spirits and alcohol in the hospitality and catering industry are specifically defined and equated with the standard VAT rate despite the existing reduced tax rate for the hospitality and catering industry.

These differences put our hospitality and catering sector in a less favorable position, especially taking into account that these countries are our direct tourism competitors.

For example, in an analysis on the impact of reducing VAT rates in neighboring Italy from 10% to 5% for the hotel and restaurant industry, positive effects were established on consumption, investment and the state budget, as well as the increase of employment by introduction of 100,000 new work places (Manente and Zanette, 2010).

Since many competitive countries have a lower rate, in Croatia even the VAT rate of 10% was estimated insufficiently competitive by some experts, even more because it relates only to a part of hospitality and catering services (Bratić et al., 2012). Comparing the impact of macroeconomic policy instruments: the VAT, interest rates and exchange rates on the competitiveness and economic position of hotel companies, some authors believe that measures in the period from 2001 to 2013 in Croatia were less encouraging than in the selected competitive countries, which suggests Croatia's "incomplete development policy of tourism and hotel industries" (Perić et al., 2014). In one Croatian analysis it is stated that lower prices would result in greater demand, production, consumption and ultimately filling the budget, and that the appropriate VAT system is crucial for the tourism and hotel industry in the turbulent market (Dombrovski and Hodžić, 2010). One comparative research on the competitive position of Croatian tourism and hotel industry (based on the criteria: average daily room price, revenue per available room and occupancy rate) in relation to Spain, France, Greece, Italy, Turkey and Portugal, showed that Croatia was below the average of the observed group, i.e. it shared the last place with Portugal. It was also concluded that the Croatian hotel industry was less competitive than the overall tourism of the country, which implies a need to encourage hotel activities (Pletikosa, 2015).

Tourism development strategy of the Republic of Croatia until 2020, as one of the measures of tourism policy, states proactive fiscal policy in tourism and states that fiscal burden of added value as well as the overall fiscal and parafiscal burden of

tourism activity are higher than in countries from relevant competitive circle. It is announced that the possibility of further reduction of fiscal pressure should be considered, having in mind that at the time of adopting the Strategy, reduced VAT rate of 10% was in force, and it referred both to accommodation and hospitality and catering services of preparing and serving food and beverages.

Strong reactions to the increased VAT rate by the representatives of hospitality and catering entities warn that it will negatively affect the level of economic activity (increase in prices, decrease in demand, decline in investment, including the already problematic foreign investments, a decline in employment rate, reduction of wages, loss of skilled staff, creation of a "grey zone") and harm tourism in general (Coordination of Caterers from the Primorje-Gorski Kotar County, 2016).

3. OBJECTIVE AND HYPOTHESES

3.1. OBJECTIVE

The aim of this paper is to examine whether the reduction in the VAT rate to 10%, i.e. 13% in the period from 2012 to 2014 was accompanied by improving the liquidity of companies in hospitality and catering business, in order to assume and analyze the possible impact of recent changes in the VAT rate to 25% on their future liquidity.

For this purpose, it was necessary to conduct an analysis of selected liquidity indicators for the reference years: 2012 - the year before the change, 2013 - the year when the reduced rate of 10% entered into force, and 2014 - the year when the reduced rate rose to 13%.

Four major liquidity indicators are analyzed: current ratio, quick ratio, cash ratio and net working capital, which take into account the following basic inputs: current assets, current liabilities, inventories and cash. It is expected that the VAT rate change could be seen through liquidity indicators because the VAT obligation represents a current liability, and a lower rate should affect the reduction of current liabilities of the company (with other conditions unchanged).

3.2. HYPOTHESES

In accordance with the stated aim of the paper, it was assumed that there were statistically significant differences for each of the listed liquidity ratios: a) current ratio, b) quick ratio, c) cash ratio and d) net working capital between the years 2012, 2013 and 2014, and that such differences exist:

- between 2012 (VAT rate of 25%) and 2013 (VAT rate of 10%),
- between 2012 and 2014 (VAT rate of 13%), and
- between 2013 and 2014,

and that the direction of these differences is reversed (greater liquidity with a lower VAT rate).

4. RESEARCH METHODOLOGY

4.1. SAMPLE

According to the data provided by the Financial Agency in 2015, 5,732 entrepreneurs operated within the National Classification of Economic Activities (NACE) 56 (56.10, 56.21, 56.29, 56.30) - Food and beverages service activities. NACE 55 entities (Accommodation) are not taken into account since the last changes in the VAT rate did not affect them to the full extent, i.e. it affected only a part of their services (services of restaurants and bars exclusively, while half-board and full-board remained under the reduced rate), thus their inclusion would not be applicable.

As the population of this research, we selected entities that achieved over 5.2 million of total revenue, that are public disclosure obligators, and operate / have headquarters in one of the eight most developed tourist counties, where the possible effects of changes in the VAT rate are of particular importance for tourism (state) income: the City of Zagreb, the Lika-Senj, Primorje-Gorski Kotar, Istria, Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva Counties. Of the aforementioned total of 5,732 entrepreneurs within the NACE 56, as many as 82.4% of them operate in one of these eight counties. The limit of 5.2 million of total revenue which, according to the Accounting Act ("Official Gazette", 78/15, 134/15, 120/16), is one of the three legal criteria for classification of entrepreneurs in micro-entrepreneurs, was set in order to ensure that the sample included the category of entities with higher income: small, possibly medium and large entities, excluding micro-entities (with the assumed greater influence of unsystematized variable factors on business results).

Taking into account the above criteria, the population consists of 178 entities from which a sample of 50 hospitality and catering companies was created using a combination of stratified and random sampling. In order to form a representative sample, a proportional number of entities was taken from each of the counties, in order to make their number in the total sample depend on the proportion of hospitality and catering entities in the county, compared to the population (for this purpose, the counties were grouped into classes 0 - 10%, 10 - 20%, 20 - 30% etc. with respect to percentage representation of associated hospitality and catering entities in the entire population). The entities from each county were selected at random.

4.2. VARIABLES

As mentioned above, the subject of analysis is liquidity of hospitality and catering entities through four important liquidity indicators: a) current ratio, b) quick ratio, c) cash ratio, d) net working capital, in three time periods: for 2012, 2013 and 2014.

4.3. DATA PROCESSING

In addition to descriptive indicators, repeated measures ANOVA for the liquidity indicators were used to test the significance of differences for 2012, 2013 and 2014, for each liquidity indicator separately. Data were analyzed using SPSS 24 statistical program.

5. RESULTS AND DISCUSSION

Descriptive data presented in Table 2, indicate that in 2012 all observed average liquidity indicators (current, quick, cash ratio and net working capital) were lower than in 2013 or in 2014.

Table 2.: Liquidity indicators in 2012, 2013 and 2014 - descriptive data

Liquidity indicators	Year	N	M	SD
current ratio (CUR)	CUR 2012	49	0,88	0,84
	CUR 2013	49	1,36	1,05
	CUR 2014	48	1,46	1,19
quick ratio (QUR)	QUR 2012	50	0,67	0,74
	QUR 2013	50	1,14	1,04
	QUR 2014	48	1,18	1,09
cash ratio (CAR)	CAR 2012	50	0,24	0,46
	CAR 2013	50	0,49	0,82
	CAR 2014	49	0,52	1,01
net working capital (NWC)*	NWC 2012	50	-1.058.064,12	4.356.037,82
	NWC 2013	50	-9.496,80	2.882.424,53
	NWC 2014	50	629.561,14	3.883.194,60

Legend: N = sample size (number of values in the sample), M = arithmetic mean, SD = standard deviation, * value in HRK

Source: Authors.

The statistical significance of the differences between the aforementioned arithmetic means is tested using the repeated measures ANOVA, as displayed in Table 3.

Table 3.: The results of repeated measures ANOVA for the liquidity indicators for 2012, 2013 and 2014

Liquidity indicators	Wilks's Lambda	F	p	η^2	Differences*	ΔM	p
current ratio (CUR)	.710	9.411	.000	.290	CUR ₂₀₁₂ - CUR ₂₀₁₃	-.446	.000
					CUR ₂₀₁₂ - CUR ₂₀₁₄	-.601	.000
					CUR ₂₀₁₃ - CUR ₂₀₁₄	-.155	.151
quick ratio (QUR)	.691	10.282	.000	.309	QUR ₂₀₁₂ - QUR ₂₀₁₃	-.405	.000
					QUR ₂₀₁₂ - QUR ₂₀₁₄	-.551	.000
					QUR ₂₀₁₃ - QUR ₂₀₁₄	-.146	.144
cash ratio (CAR)	.775	6.831	.002	.225	CAR ₂₀₁₂ - CAR ₂₀₁₃	-.219	.001
					CAR ₂₀₁₂ - CAR ₂₀₁₄	-.303	.005
					CAR ₂₀₁₃ - CAR ₂₀₁₄	-.084	.284
net working capital (NWC)	.775	6.959	.002	.225	NWC ₂₀₁₂ - NWC ₂₀₁₃	-1048567.320	.010
					NWC ₂₀₁₂ - NWC ₂₀₁₄	-1687625.260	.080
					NWC ₂₀₁₃ - NWC ₂₀₁₄	-639057.940	.280

Legend: η^2 = effect size, ΔM = difference between the arithmetic means, p = probability

* The mean value of CUR₂₀₁₃ was subtracted from the mean of CUR₂₀₁₂, as was done for the other variables in the same manner.

Source: Authors.

The figures in Table 3. indicate statistically significant results in case of all four liquidity indicators: Wilks's Lambda = .710, $F(2, 46) = 9.411, p < .001, \eta^2 = .290$ (current ratio); Wilks's Lambda = .691, $F(2, 46) = 10.282, p < .001, \eta^2 = .309$ (quick ratio); Wilks's Lambda = .775, $F(2, 47) = 6.831, p < .01, \eta^2 = .225$ (cash ratio), and Wilks's Lambda = .775, $F(2, 47) = 6.959, p < .01, \eta^2 = .225$ (net working capital). Great values of effect sizes (η^2) were yielded, which indicated a solid practical significance of these differences. Cohen (1988) pointed out that small effect sizes are those of around .01, medium-sized effects are approximately .06, and the large ones are around .14 (and greater than this value). Therefore, our effect sizes fall into the category of large ones.

However, we have to use a *post hoc* test in order to make comparisons between each pair of arithmetic means within each liquidity indicator. For that purpose, LSD

test was used (the results are shown in the last three columns of Table 3.). There were two statistically significant differences in the case of current ratio: this indicator calculated for 2012 was significantly lower than that of 2013 ($\Delta M = -.446, p < .001$) and that of 2014 ($\Delta M = -.601, p < .001$). Similar (statistically significant) findings were obtained for quick ratio: the difference between its value for 2012 and that of 2013 was equal to $-.405$ ($p < .001$), whereas the difference between quick ratio for 2012 and quick ratio for 2014 was $\Delta M = -.551$ ($p < .001$). The same trend in data followed the differences for cash ratio indicator: the average value of this indicator in 2012 is significantly lower in 2013 ($\Delta M = -.219, p < .01$) and in 2014 ($\Delta M = -.303, p < .01$). Therefore, when VAT was 10% and 13%, these indicators were significantly greater compared to the year when VAT was 25%. On the other hand, the only statistically significant difference for net working capital was found in the case of 2012 and 2013, where net working capital for 2012 was significantly lower compared to net working capital for 2013 ($\Delta M = -1048567.320, p < .05$). In other words, in the year when VAT was equal to 10%, NOK was significantly greater than in the year when VAT was 25%.

Total revenue in the hospitality and catering industry, and thus indirectly financial indicators, including liquidity and profitability, may be at the same time affected both by the VAT rate and other macroeconomic changes, and their particular impact is therefore hard to measure. In the observed period, among those the impact of which could be more dominant, as per the reports of the Central Bureau of Statistics and the Croatian National Bank, there was an increase in the average consumer price index (105,8 in 2012, 107,9 in 2014; the year 2010 = 100), an increase in purchasing power of domicile population (5,085 in 2012, 5,231 in 2014; in Euros), an increase in average purchasing power in the EU (12,802 in 2012, 13,112 in 2014; in Euros), the change in exchange rate (1,12 in 2012, 0,75 in 2014; in percentages compared to the preceding year), as well as the increase of overnight stays of tourists registered in the previous years. Total revenue in the hospitality and catering industry is affected by all of the aforementioned even though (different from the VAT rate) there are proportionally mild changes and trends in the observed period.

Although many other factors mentioned above, in addition to changes in the VAT rate, could have affected the changes in liquidity indicators, according to the data in Tables 2 and 3, the fact is that the fall of the VAT rate from 25% in 2012 to 10% in 2013 was followed by a significant increase in all four observed liquidity indicators. Higher values for three of the four observed liquidity indicators (other than net working capital) were also statistically validated in 2014 when the VAT rate was 13%, compared with 2012.

This is not just statistically significant, but also a large increase in the average value of liquidity indicators. Thus, the average current ratio was increased by 55% in 2013 and by 66% in 2014. The average quick ratio was increased by 70% in 2013 and by 76% in 2014, and the average cash ratio by as much as 104%, i.e. 117%.

The obtained results, along with the aforementioned methodological limitations, are in accordance with already indicated findings on the positive impact of reducing, resp. a negative impact of increasing the VAT rate (Manente and Zanette, 2010; Dombrowski and Hodžić, 2010; Ashurst, 2013; Bubić et al., 2016).

These results, with the necessary methodological caution, need to be perceived in the light of actual tax reform which caused a reverse effect on the hospitality and catering activities in the VAT policy, since from January 1st, 2017 the VAT rate was increased sharply from 13% to 25%. It is reasonable to ask the question of what might be the consequences of such a decision, not only in terms of liquidity, but also in terms of profitability and the overall business performance of hospitality and catering entities, as well as the tourism sector as a whole.

The representatives of hospitality and catering industry, through their associations, are pointing out that the increased VAT rate and the consequent unavoidable increase of prices result in the fact that the sold quantities are decreased. With the reduction of competitiveness, total revenue is also decreased, and if it falls under a certain point, it could prove insufficient to cover the total costs. The break-even point is thus not reached, which has illiquidity as a consequence, owing to the fact that, as providers complain, many of them otherwise operate on the edge of costs coverage (*Koordinacija ugostitelja Primorsko-goranske županije*, 2016), and there are also many other negative financial impacts.

On the other hand, some experts stress possible positive effects of the high VAT rates on tourism development, as well as the necessity to increase the VAT rate for the state budget.

Tourism, including hospitality and catering as its integral part, has a significant share in the GDP, and thus a relevant impact on the state budget in which the VAT is a major part.

Croatia is a desirable destination and it is realistic to expect that the number of tourists will grow. However, comparative analyses show that consumption per tourist is much lower compared to competitive countries, and because of that we should tend to increase the supply and quality of services, in order to attract guests with higher consumption. Therefore, some experts justifiably wonder whether Croatia can be "more competitive" with reasonable prices, or tourist targets should be achieved otherwise. Or, in other words, if the demand for tourism services is growing, and the society at the same time seeks to (re) direct itself towards the guests with higher purchasing power and the increase in consumption per tourist, the question is if the VAT rate in the hospitality and catering industry, as one of the components of the tourism offer, should be reduced. Furthermore, tourism is an export industry in which Croatia has a chance to transfer a part of its tax burden to non-residents, which is not feasible for a number of other activities.

Among the most important factors that affect our tax system is the size of the public sector and the scope of state's competence, especially regarding indebtedness and budgetary deficit. The balance of tax yield, which refers to the sufficiency of public revenues to cover public needs, has not been realized yet. In these conditions the state policy seeks to levy the burden according to the principle of tax capacity (ability), where tourism, due to its significant impact on tax revenues and the GDP, can hardly be compensated.

With all mentioned above, the importance of the stability of the tax system is indisputable, and both the government and entrepreneurs agree on that (Ministry of Finance, 2016; Coordination of Caterers from the Primorje-Gorski Kotar County, 2016). Sudden and frequent changes in the VAT rate that have occurred in Croatia over the previous years endanger the business conditions of hospitality and catering industry, as well as the stability of tax instruments, which should also be taken into consideration.

Although its results are indicative, one should bear in mind the basic methodological limitations of this study, and above all the fact that, with the effects of the decrease in the VAT rate, other changing circumstances in the period between 2012 and 2014 could have also affected the results, for example gradual recovery of the economy, growth in personal consumption, growth in foreign tourist arrivals, etc. Due to that same reason, any assumption about the possible future impact of re-increase of the VAT rate requires the necessary caution.

Owing to the importance of the topic studied, it would be advisable to proceed with the empirical research in this area, including monitoring of other financial indicators, especially profitability, with an effort to use appropriate research methodology to control the influence of other relevant factors that could affect the results.

6. CONCLUSION

For all four examined liquidity indicators for hospitality and catering entities: current, quick and cash ratio and net working capital, a statistically significant difference between the average values in 2012 (when the VAT rate was 25%) and in 2013 (when the rate of VAT was 10%) was determined, thus confirming the first hypothesis of this study.

For three liquidity indicators: current, quick and cash ratio, but not for the net working capital, a statistically significant difference between the average values for 2012 and 2014 (when the VAT rate was 13%) was also determined, which largely confirms the second hypothesis of this study.

The direction of differences was also in line with the expectations of the first and second hypothesis, since lower VAT rates were followed by greater liquidity. Statistically significant differences were also nominally large: current ratio grew by 55%

in 2013 and by 66% in 2014, quick ratio increased by 70%, i.e. 76%, and cash ratio increased by as much as 104%, i.e. 117%.

None of these indicators showed statistically significant differences in average values for 2013, compared to 2014, which means that the third hypothesis is not confirmed.

Since at the turn of the year 2016 to 2017, the changed VAT rate re-entered into force for hospitality and catering services (food and beverages), but in the opposite direction (from 13% to 25%), in addition to monitoring whether the expected growth in budget revenue from value added tax is realized, it would be necessary to continue to monitor financial indicators, first of all profitability, as well as other indicators of business operations of hospitality and catering entities, which are covered by the mentioned measure of the actual tax reform.

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TOURISM AND HOSPITALITY PROFESSIONALS' CROSS-CULTURAL COMMUNICATION COMPETENCE: TOURISTS' AND TOURISM PROFESSIONALS' PERSPECTIVES

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ABSTRACT

The tourism and hospitality industry is one of the largest and fastest developing industries of global economy. In parallel with the industry's growth worldwide, customer expectations are rising, while competition is intensifying, setting up additional challenges for tourism and hospitality organizations to distinguish themselves in service quality and overall performance. Taking the view that employees are one of the most important assets for tourism organizations, the current study is aimed at exploring the industry's professionals' cross-cultural communication competence as a potential source of competitive advantage. Based on a sample of 157 respondents employed in the tourism and hospitality sector, and 328 British and Irish tourists visiting the City of Pula and neighboring municipalities in the County of Istria, Croatia during the 2016 tourist pre-season, our study examines the tourism professionals' cross-cultural communication competence as perceived by the professionals themselves, as well as by the tourists who participated in the survey. In particular, this study investigates the two dimensions of cross-cultural communication competence as identified by the authoresses: communicative effectiveness and intercultural sensitivity. The 12-items research instrument to examine the two dimensions was developed and adapted from the Cross-Cultural Communication Competence Model by Matveev et al. (2001). The results showed slight differences between the professionals' and tourists' perceptions of the two dimensions, demonstrating how tourists' expectations somewhat exceed professionals' self-perceived capabilities. Statistically significant differences in the perceptions of the two studied groups were, however, found for one item in each dimension. Our findings have important practical implications for the tourism sector: they may help professionals improve their working efficiency and advance their career prospects, and provide the employers with a better understanding of customers' expectations when integrating cultural elements with communicative skills in ensuring proper further education for their employees, as well as provide a valuable tool in managing human resources and recruiting qualified personnel. The authoresses suggest it is crucial for the industry to take into account the potential impact of personnel's cross-cultural communication competence on both the service providers' success, and on the service recipients' satisfaction. Finally, they suggest ways of implementing strategies to successfully improve interactions in intercultural tourism settings.

Keywords: Tourism and hospitality sector; Cross-cultural communication competence; Communicative effectiveness; Intercultural sensitivity; International tourism settings

JEL Codes: L83

1. INTRODUCTION

The tourism and hospitality industry is one of the largest and fastest developing industries of global economy, while international tourism generates a great share of the global economic activity. The World Tourism Organization reported 2016 to be the seventh consecutive year of sustained growth in international tourism: as a result, 300 million more international tourists travelled the world in 2016 as compared to the pre-crisis record in 2008 (UNWTO, 2017). According to the World Travel and Tourism Council, the global travel and tourism sector generated 10.2 % of the global GDP and 292 million jobs in 2016, equivalent to one in ten jobs in the global economy (WTTC, 2017). According to certain forecasts, the industry will continue to grow and employ even more people throughout the twenty-first century and, in parallel to such growth, consumer expectations and demands for quality will continue rising, while competition will be intensifying, setting up additional challenges for tourism and hospitality organizations to distinguish themselves in service quality, customer satisfaction, and overall performance (Kusluvan, 2003; Zainal et al., 2012). Customer satisfaction is one of the most important concerns within the field of international tourism since it considerably influences tourists' choice of a destination and consumption of tourist products and services. As both the workforce and the consumers of international tourism become more diverse, the expectations of customers based on their cultural values rapidly increase - tourists and consumers of tourist products and services become more knowledgeable about the intercultural tourism environment, setting higher standards and demanding new, innovative and more personalized services. With the increasing role of tourism in the global economy and growing competition in the global tourism market, the importance of enhancing the satisfaction level of tourists is being recognized as a way of expanding and maintaining a loyal customer base for long-term success (Bhat & Qadir, 2013; Jadhav & More, 2010; Eraqi, 2006; Anderson et al., 1994). Furthermore, a body of research has already shown that employees represent key assets in enhancing a company's productivity and overall performance (Wart, 2010; Renckly, 2004; Kusluvan, 2003; Sveiby, 1997). The overall organizational success in the highly competitive tourism and hospitality sector greatly depends on the skills and competencies exhibited by the tourism and hospitality professionals and other staff whose everyday business activities include frequent, direct interactions with customers in intercultural tourism settings. One such particular set of skills and competencies that is required from tourism and hospitality professionals refers to their ability to efficiently communicate with customers of different linguistic and cultural backgrounds (Inkaew, 2016; Barrett et al., 2013; Bennett, 2009; Byram, 2008; Spitzberg & Changnon, 2009). The growing cultural, racial, and ethnic diversity within the field of international tourism thus reinforces the importance of communication competencies, foreign language

skills and cultural awareness as attributes that might substantially contribute to one's employability and professional development, as well as to the overall success of tourism and hospitality service providers. All these trends within the dynamic field of international tourism lead to new challenges for the industry; challenges that need to be identified and acted upon for the benefit of long term success of all businesses and organizations, the overall tourism sector, as well as the economy at large. Taking the view that employees are one of the most important assets for tourism and hospitality organizations in establishing efficient communication and satisfying relationships with foreign customers, the current study is aimed at exploring the industry's professionals' cross-cultural communication competence as a potential source of competitive advantage contributing to the overall performance and customer satisfaction.

1.1. EFFICIENT COMMUNICATION IN INTERCULTURAL AND CROSS-CULTURAL TOURISM SETTINGS

Cross-cultural communication is a field of study that looks into how people from different cultures communicate among themselves, but also how they communicate across cultures. When members of one cultural group come in contact with individuals or groups of cultural backgrounds different from their own, we talk of intercultural communication. In other words, while *cross-cultural* implies a comparison and contrast between two or more cultural groups regarding a particular cultural trait or concept, the term *intercultural* refers to what happens (symbolically, contextually and otherwise) when people from different cultural groups interact and communicate (Ferraro, 2002; Gudykunst, 2003; Lustig & Koester, 2010). Intercultural communication, therefore, refers to communicative interactions between people of different cultural and linguistic, ethnic, racial, and religious backgrounds. The ability to engage in and create positive, effective and mutually satisfactory interactions with people of diverse cultural backgrounds - sometimes significantly different from one's own - depends on a person's ability to successfully mediate both communicative and cultural discrepancies that arise and become more evident in direct intercultural contacts. Understanding the link between communication efficiency and cultural awareness might be the first step in devising ways of overcoming such barriers for the benefit of efficient intercultural and cross-cultural communication.

The ability to establish efficient communication helps us improve our social interactions, decision making and problem solving, and enables us to communicate even the negative or difficult messages without creating conflict and destroying trust. Although efficient communication is generally indispensable in conducting business, intercultural and cross-cultural tourism settings pose additional challenges in that regard. In order to establish efficient communication with their customers, one of such challenges for tourism and hospitality providers is to suc-

cessfully overcome linguistic, communicative and cultural barriers that arise within the diverse and dynamic field of international tourism. As a central aspect of any human interaction, communication is not only about exchanging information, but also about the ability to understand the emotions and intentions behind the information being exchanged. In other words, successful communication depends not only on the linguistic or verbal exchange processes, but on our sensitivity to the nonverbal context and understanding of nonverbal and cultural cues as well (Lewis, 2006; Ferraro, 2002). R. W. Griffin defined effective communication as “the process of sending a message in such a way that the message received is as close in meaning as possible to the message intended” (Griffin, 2014: 348). But effective communication is always a two-way street: a successful communicator is concerned not only about conveying a message so that it is received by others in exactly the way one intended, but also about how we listen to others in order to gain the full meaning of what is being said and to make the other person feel heard and understood. According to Terry and Franklin, effective communication implies the most accurate sending and receiving of information, full comprehension of the message by both parties and a suitable action following as a result of successful information exchange (Terry & Franklin, 1997). In order to establish efficient communication and an interpersonal relationship with a foreign national, and avoid misunderstanding or even conflict, a person should be equipped with a particular set of skills and competencies, including *verbal communication skills* (and linguistic skills in foreign languages) such as using appropriate grammar and vocabulary, presenting ideas clearly, carefully choosing words and avoiding slang, and *nonverbal communication skills* such as our posture, gestures, facial expression, approachability and attentiveness towards others (Martin et al., 1994; Martin & Hammer, 1989; Dinges, 1983). But even more than that, efficient communication requires the *interpersonal skills*, reflected in a person’s ability to build mutual trust, respect and satisfying relationships with others. Past research identified various characteristics that constitute cross-cultural communication competence, including relationship skills, communication skills, and personal traits such as inquisitiveness and curiosity of cultural diversity, empathy and human warmth, and the ability to keep non-judgmental attitude and manage anxiety and uncertainty due to cultural ambiguity (Saeed, 2008, 2007; Black & Gregersen, 2000; Mendenhall, 2001; Gudykunst, 2003, 1998; Kealey & Protheroe 1996). Therefore, besides the language we use, effective cross-cultural communication implies a set of skills such as engaged listening, the ability to communicate assertively and successfully deal with misunderstandings, the ability to display respect, flexibility and patience towards people of diverse cultural and linguistic backgrounds, and the capacity to recognize and understand one’s own emotions, intentions and communication patterns, as well as those of the person one is communicating with.

Besides communicative effectiveness, an equally important presumption of successful and efficient intercultural exchange is the ability to display cultural awareness, or one's capacity to recognize and understand the various cultural traits we may encounter within intercultural and cross-cultural contexts, as well as the ability to recognize one's own cultural conditioning and its impact on establishing successful intercultural communication (Lewis, 2006; Ferraro, 2002; Lustig & Koester, 2010; Gudykunst, 2003). Cultural awareness, or what we may term intercultural sensitivity, implies knowledge and understanding of different cultural groups, their values and belief systems, social structures and various perceptions, manners, communicative styles, decision-making practices etc., and is reflected in one's openness to cultural differences, the ability to deal with cultural uncertainty and ambiguity, and show a spirit of inquiry about other cultures, their values, customs and diverse communication patterns. In intercultural and cross-cultural tourism settings, it becomes essential to achieve efficient communication with customers of diverse cultural backgrounds. In order to do so, one of the first tasks for people working in the tourism and hospitality industry, whose everyday business activities include frequent contacts with foreign visitors is to alleviate cultural and communicative differences that arise in intercultural and cross-cultural contexts. In this sense, establishing efficient communication goes far beyond knowing the customers' native language(s); even more so, it is about understanding their diverse cultural backgrounds, and the ability to properly tackle the cultural and communicative diversity. As Ferraro (2002) said: "Communicating effectively - so essential to the conduct of business affairs - involves more than a proficiency in sending and receiving messages. Effective communication requires an understanding of how people think, feel, and behave. In short, it involves knowing something about the cultural values, attitudes, and patterns of behavior, and one of the best ways to gain cultural awareness is through a culture's language" (Ferraro, 2002: 70). Efficient intercultural communication thus requires not only verbal and nonverbal communication skills, nor mere fluency in foreign languages, but also intercultural sensitivity to value differences found in various nationalities and cultural groups, an understanding of others' cultural values and communication styles in relation to one's own, as well as the interpersonal and communicative skills needed to appropriately deal with such diversity. Since cultural values are usually at the core of breakdowns in intercultural contacts, those engaging in intercultural communication should be equipped with a set of skills and competencies that allows them to understand and learn about people whose cultural backgrounds and communication patterns are not the same as theirs, so as to be able to anticipate and hopefully avoid potential miscommunication.

1.2. DIMENSIONS OF CROSS-CULTURAL COMMUNICATION COMPETENCE: COMMUNICATIVE EFFECTIVENESS AND INTERCULTURAL SENSITIVITY

Over the past decades, the accelerating processes of globalization, economic integration, immigration, and the expansion of international tourism have increased opportunities for intercultural communication among individuals or groups of different linguistic and cultural backgrounds, leading to a rising value of knowledge about different cultures and understanding of diverse cross-cultural and intercultural contexts (Lustig & Koester, 2010; Lewis, 2006; Gudykunst, 2003; Ferraro, 2002). Travelers can now visit destinations not only geographically, but culturally and socially far removed from their homelands, while tourism and hospitality workforce becomes increasingly diverse as well. The growth of the international tourism and hospitality industry increases the need for efficient cross-cultural communication, dependent on the extent to which people express their openness to an intercultural experience, regarding linguistic, communicative and cultural differences as enriching and stimulating, rather than an obstacle to successful communicative interactions.

The current study is an attempt to offer a framework for research and understanding of cross-cultural communication competence as a series of such desirable skills and behaviors that might be crucial for establishing efficient intercultural communication between customers and service providers in international tourism settings. The studied set of cross-cultural skills and competencies is regarded as reflective of one's *communicative effectiveness*, such as a person's ability to interact cooperatively with others, give and receive constructive feedback or successfully deal with misunderstandings, and of a person's *intercultural sensitivity*, referring to one's perception of and responsiveness to others' cultural perspectives and standards, including for instance the ability to appreciate dissimilar values, beliefs and ideas, and non-judgmental stance toward the ways things are done in other cultures. The research instrument was developed based on the Cross Cultural Communication Competence Model (3C Model) devised by Matveev and colleagues, who investigated the relationship between cross-cultural communication competence and multicultural team performance (Matveev, 2017, 2002; Matveev & Nelson, 2004; Matveev et al., 2001). According to the model developed by Matveev et al. (2001), cross-cultural communication competence extends over four different, yet interconnected dimensions: interpersonal skills, team effectiveness, cultural uncertainty and cultural empathy. For the purposes of the current study, the four dimensions were integrated into two domains of cross-cultural communication competence, as defined by the authoresses. Determining the areas of overlapping among the four domains, we integrated the dimensions of interpersonal skills and team effectiveness into the *com-*

communicative effectiveness dimension. In the communicative effectiveness dimension, a person recognizes differences in the communicative and interactional styles of people from different cultures, demonstrates awareness of their own cultural conditioning and flexibility in resolving misunderstandings, and feels comfortable when communicating with foreign nationals. In addition, the communicative effectiveness dimension includes such skills as the ability to communicate clearly and interact cooperatively with others, the ability to give and receive constructive feedback, the ability to display respect towards others, discuss and solve problems, and successfully deal with conflict situations. Furthermore, the dimensions of cultural uncertainty and cultural empathy were integrated into the *intercultural sensitivity* domain as another, yet related area of study. The intercultural sensitivity dimension reflects the ability of a person to display openness, patience and flexibility in intercultural settings, as well as tolerance of ambiguity and uncertainty due to cultural differences. In the intercultural sensitivity dimension, a person displays a spirit of inquiry about other cultures, an appreciation for a variety of communication patterns in these cultures, and the ability to view the ways things are done in other cultures not as bad, but as simply different.

The current study aims to explore the tourism and hospitality professionals' cross-cultural communication competence, reflected in their communicative effectiveness and intercultural sensitivity as two different yet interconnected facets of cross-cultural communication. Since the intersection of international tourism and communication provides opportunities for advancement in both fields, the current study is an attempt to contribute to both. While international tourism provides unique intercultural and cross-cultural contexts for the study of communication, both the industry and the scholars can greatly benefit from insights into the stakeholders' perceptions of crucial cross-cultural communication competencies and behaviors. This study attempts to bridge the gap between theory and practice by integrating academic discussion on cross-cultural communication and look into the practical implications of the studied communication skills and behaviors.

2. THE AIM OF THE STUDY AND RESEARCH QUESTIONS

The quality of interpersonal contacts in intercultural and cross-cultural tourism settings greatly depends on the quality of communication between the service provider and the service recipient. Drawing upon the importance of tourism and hospitality in today's global economy, the consequential increase of consumer expectations and rising competition within the industry, and the interdisciplinary interrelatedness of tourism and communication studies, this research is focused on exploring the tourism and hospitality professionals' cross-cultural communication competence as a potential source of competitive advantage contributing to the overall

organizational performance and tourist satisfaction. Taking the view that employees are one of the most important assets for the tourism and hospitality industry, the study is focused on exploring their cross-cultural communication competence as evaluated by the professionals themselves, and as perceived by the tourists with whom they interacted in intercultural tourism settings.

In particular, the current study is aimed at answering the following research questions:

- *How do the tourism and hospitality professionals self-assess the two dimensions of the adopted levels of cross-cultural communication competence?*
- *How do the tourists evaluate the two dimensions of cross-cultural communication competence adopted by the industry's professionals?*
- *Are there any major differences between the professionals' and the tourists' perceptions of cross-cultural communication competence exhibited by the industry's professionals?*

The studied cross-cultural skills and behaviors were examined in the context of the tourism and hospitality professionals' competencies exhibited in their interactions with foreign tourists - from the professionals' perspective, we wanted to learn about their self-perceived levels of cross cultural competence; from the tourists' perspective, the study looks into their perceptions of the skills and competencies exhibited by the professionals during their encounters in intercultural tourism settings; finally, any differences between the professionals' and the tourists' perceptions of the two dimensions might indicate the potential weak points and a fertile area for further advancements.

3. METHODOLOGY

This chapter describes the selection of the focus group sample, the research instrument development, and data collection and analysis. The City of Pula and neighboring municipalities in the County of Istria, Croatia were determined as target area, and the tourist pre-season of 2016 as the focus period. The pre-season period was chosen because of a future plan to make this research part of a larger project. It was estimated by the authoresses that tourist profiles differ widely between the pre-season and post-season periods, which is why in the future we plan to investigate the perceptions of tourists during post-season and compare them to the results obtained through the current study.

The tourism and hospitality professionals employed in major Istrian hotels and adjoining facilities, and the British and Irish tourists visiting the target area for a minimum of one-week, or a maximum of two-week stay were chosen as two focus groups which had to evaluate the levels of cross-cultural communication competence among the industry's professionals. The research instrument of this study, employed

in quantitative data collection from key informants, included a modified two-part questionnaire to collect key data. Cronbach's alpha was used to test the scale reliability for the two dimensions, while a review of descriptive data analysis was chosen as a means of presenting the research findings and answering the first two research questions. Finally, the authoresses employed a series of paired t-tests as a means of comparing the two studied groups in order to answer the third research question and see if there are any significant differences in their perceptions regarding the professionals' cross-cultural communication competence.

3.1. PARTICIPANTS

The tourism and hospitality professionals employed in major hotels and adjoining facilities in the City of Pula and neighboring municipalities, and the British and Irish tourists visiting the area during the 2016 tourist pre-season were targeted as the main participants of the study. The survey was conducted among 157 tourism professionals and key personnel, and 328 British and Irish visitors of 17 major hotels and adjoining facilities such as bars, restaurants, sports facilities, wellness and recreation centers, and renting services. The initial selection of hotels was identified using the inventory of categorized tourist facilities provided by the Ministry of Tourism of the Republic of Croatia and available online. The final selection of hotels was determined according to their location for matters of convenience and accessibility, and according to estimated high levels of tourists' fluctuation and concentration of visitors during the pre-season period. The selected locations were then visited in order to distribute the questionnaire and collect as many responses, mainly during weekends, in periods of greatest tourists' rotations. In addition, questionnaires were sent to human resources and general managers, and were left with front desk clerks who helped us distribute the questionnaire to both the personnel and to the guests at the end of their stay.

In the final sample, the respondents employed in the tourism and hospitality sector included those who had most opportunities to interact with the British and Irish tourists participating in the study. The hotel staff were represented by receptionists and other front office staff, guest service officers and reservation clerks, housekeeping staff, room services attendants, concierges, bellboys, baggage porters, cloakroom and lobby attendants, telephone operators and security officers, and other related supporting staff, while the key personnel of adjoining facilities included waiters and food servers, bar attendants and sommeliers, restaurant receptionists, tourist animators and hostesses, gift shop and flower shop staff, health club and spa attendants, swimming pool attendants and beach lifeguards, holders of sports and beach equipment and other renting services, and other professional staff whose everyday activities include frequent direct contacts with tourists, and whose working ef-

iciency and success depends on maintaining such contacts on a high-quality level.

The British and Irish tourists were targeted because they represent one of the largest and fastest growing tourism markets for the County of Istria, Croatia. Starting in 2017, British Airways Plc. introduced additional flights from Great Britain to Croatia, thanks to the growing numbers of their visitors. We estimate that tourist profiles differ greatly between the preseason and postseason periods, where tourists in the preseason are mostly middle-aged and families with small children, as opposed to the young British and Irish visitors who predominantly arrive during postseason thanks to the music and film festivals for which the region is becoming increasingly popular. Table 1 shows the demographic profile of the British and Irish tourists who participated in the study during the 2016 preseason period. The majority of tourist respondents were female tourists (60.67%). Well over half of the tourist respondents were between the ages of 36 and 55 (55.49%), and almost a quarter were aged 56 or above (23.78%). The younger population between the ages of 18 and 35 were represented by only one fifth (20.73%) of the total number (see Table 1.). In the future, a similar research will be conducted targeting the younger population during postseason period, which will enable us to compare the two profiles and investigate if there are any significant differences in their perspectives on cross-cultural communication. At this point, we speculate that tourists' expectations in the two groups might vary with regard to gender and age.

Table 1.: Demographic profile of the British and Irish tourist respondents

Tourist demographics	Frequency (N=328)	Percent (%)
Gender		
Male	129	39.33%
Female	199	60.67%
Total	328	100%
Age Category		
18 to 35 years	68	20.73%
36 to 55 years	182	55.49%
56 years and above	78	23.78%
Total	328	100%

Source: Authoresses.

The British and Irish tourists to participate in the study were selected in accordance with two criteria: first, that they had spent at least one or two weeks at the location, and second, that they answered the questionnaire at the end of their stay. Such criteria were used because the tourists had to have enough time for establishing relationships with the staff in order to be able to assess their competencies and skills, and because we wanted to make sure that both the staff and the tourists had

enough opportunities for interaction so as to increase the probability they had found themselves in as many diverse communicative situations. In light of this research, we specifically dedicated our attention to those participants in both groups who had most opportunities to interact and communicate because the skills and behaviors pertaining to cross-cultural communication competence are most evident in direct interactions between people involved in diverse intercultural and cross-cultural contexts. The skills and competencies exhibited by the tourism and hospitality professionals can greatly influence the quality of such interactions within intercultural tourism settings.

3.2. RESEARCH INSTRUMENT

The current study was quantitative in nature and utilized a survey research design to collect key data from the two focus groups. The research instruments used were structured, self-administered questionnaires designed to obtain the information on the two dimensions of cross-cultural communication competence among the industry's professionals - as self-assessed by the professionals, and as evaluated by the British and Irish tourists participating in the study. The research was initiated by conducting a questionnaire survey in terms of which we measured the professionals' self-perceived levels of cross-cultural communication competence regarding their participation in intercultural exchange with tourists, as well as the levels of cross-cultural communication competence among the professionals as perceived by the tourists they interacted with during the focus period. The questionnaire was divided into two sections - one part was designed to measure the professionals' communicative effectiveness as the first dimension, and the other part measured their intercultural sensitivity as the second dimension of cross-cultural communication competence.

For the purposes of the research, a self-administered questionnaire was developed based on the Cross-Cultural Communication Competence Model (3C Model) devised by Matveev et al. (2001). The 3C Model was adapted in accordance with the needs of the current study, and its four dimensions of cross-cultural communication competence were transformed into two main domains, as defined by the author-esses: the *communicative effectiveness* domain, and the *intercultural sensitivity* domain. In the questionnaire containing two sets of questions, the respondents were asked to evaluate the levels of adopted cross-cultural communication skills and behaviors exhibited by the professionals in a two-fold manner: first, the professionals had to determine the self-perceived levels of competence, and second, the tourists had to determine the levels of competence displayed by the professionals during their interactions in intercultural tourism settings. The perceived levels of the adopted cross-cultural communication competence within the studied tourism and hospitality professionals team was assessed by the respondents using a modified scale com-

prised of twelve items identified by the authoresses to be the most representative of the two studied domains of cross-cultural communication. Regarding the scales used in the questionnaire, the respondents were asked to express their agreement with each given statement using a five-point, Likert-type scale (*from 1 = strongly disagree, to 5 = strongly agree*).

In order to ensure accuracy of the collected data, the questionnaire was distributed in a bilingual English-Croatian format, so that the respondents were able to choose the language of preference. The questionnaire included a cover letter and data confidentiality note, as well as tourists' demographic characteristics such as gender, nationality and age, and was completed with no personal identification so as to ensure anonymity and increase the probability of honest responses. Altogether, 1300 questionnaires were distributed equally to the tourism and hospitality personnel who agreed to participate in the study and to randomly selected British and Irish tourists at the end of their one- or two-week stay in the area. The total number of responses returned was 157 from the professionals and 328 from the tourists (485 in total), yielding a respectable response rate of 37.31 % of the total sum.

3.3. DATA ANALYSIS

The questionnaire data were coded, computed, and analyzed using SPSS for Windows (Statistical Package for Social Sciences).

4. RESULTS AND DISCUSSION

In order to present our findings, compare the two focus groups and answer the research questions, the research results are classified and presented in two parts: 1) the communicative effectiveness dimension of cross-cultural communication competence - computed mean scores (Figure 1.) and paired t-tests for the communicative effectiveness dimension (Table 2.), and 2) the intercultural sensitivity dimension of cross-cultural communication competence - computed mean scores (Figure 2.) and paired t-tests for the intercultural sensitivity dimension (Table 3.). The values of Cronbach's Alpha associated with the communicative effectiveness dimension and the intercultural sensitivity dimension indicated high levels of internal consistency, .81 and .78 respectively.

4.1. THE COMMUNICATIVE EFFECTIVENESS DIMENSION OF CROSS-CULTURAL COMMUNICATION COMPETENCE

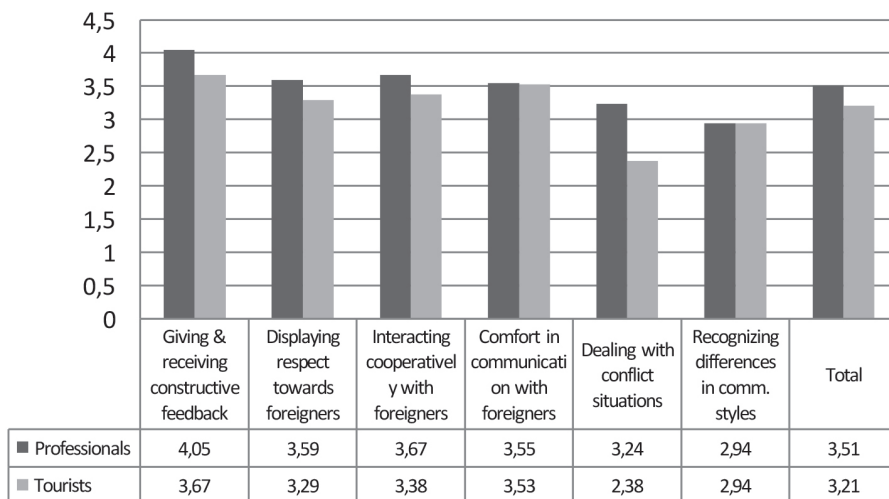
By means of structured questionnaire assessments, we measured the perceived levels of cross-cultural communication competence among the tourism and hospi-

tality staff as self-assessed by the professionals, and as externally evaluated by the tourists they interacted with in intercultural tourism settings. The participants were asked to express their agreement with any given specified item of cross-cultural communication using a five-point, Likert-type scale (*from 1 = strongly disagree, to 5 = strongly agree*). The two parts of the questionnaire measured the professionals' and the tourists' perceptions of the two dimensions of cross-cultural communication, while a series of paired t-tests was conducted to compare the two studied groups. The first part of the research instrument was designed to look into the communicative effectiveness dimension of cross-cultural communication competence.

4.1.1. COMPUTED MEAN SCORES FOR THE COMMUNICATIVE EFFECTIVENESS DIMENSION

In the first part of the questionnaire, the participants were asked to assess which positive skills or behaviors pertaining to the first dimension of cross-cultural communication competence - communicative effectiveness - were predominantly exhibited by the professionals in their communicative interactions with tourists. That is, the professionals were asked to reflect on their interactions with the visitors, and determine which communicative effectiveness items related to them, using a five-point scale (*from 1 = strongly disagree, to 5 = strongly agree*). The tourists were asked to consider the same checklist of communicative effectiveness items, marking which items related to the staff they mostly interacted with during their one- or two-week stay. All communicative effectiveness items scored relatively high, with all mean scores being above 3.0, except for the item '*ability to acknowledge differences in communication and interaction styles*', where mean scores for both groups were below average ($m=2.94$), and a noticeable drop in the tourists' estimation on the '*ability to deal with misunderstandings and conflict situations*' item ($m=2.38$). The total mean scores were also rather high, with a slight difference between the tourism professionals ($n=157$) and tourists ($n=328$), 3.51 and 3.21 respectively, meaning that both groups of participants assessed the staff to be rather successful in the communicative effectiveness domain (see Figure 1.).

Figure 1.: Computed mean scores for the communicative effectiveness dimension of cross-cultural communication competence



Source: Autoresses.

The results presented in Graph 1 suggest that domestic tourism and hospitality professionals are quite efficient in their communicative interactions with foreign tourists, and that they predominantly display positive skills and attitudes needed to establish efficient cross-cultural communication. The total mean score for the professionals' self-assessment is rather high ($m=3.51$), meaning that the tourism and hospitality professionals who participated in the study generally believe they are competent to effectively communicate and efficiently cooperate in intercultural tourism settings. Furthermore, the tourists share similar attitudes with the professionals, evaluating them to be highly effective in communicative interactions with them, with the total mean score 3.21. However, the slight difference in the total mean scores might suggest that the tourists' expectations somewhat exceed the professionals' self-perceived capabilities in the communicative effectiveness dimension. This might be due to cultural differences in communicative styles, or because domestic tourism professionals still lack additional training and interpersonal skills regarding certain aspects of efficient professional and business communication in varying intercultural contexts.

The highest score for the professionals was achieved on the communicative effectiveness item *'ability to give and receive constructive feedback'* ($m=4.05$), meaning that the professionals believe they are able to successfully avoid covert criticism or disapproval, and provide useful information without disrupting the gained trust and respect. It seems that the tourists agree with them in that regard, since the highest mean score for the tourists' evaluation of professionals was for the same communicative effectiveness item ($m=3.67$). On the other hand, the professionals scored lowest

on the item 'ability to acknowledge differences in communication and interaction styles' (m=2.94), meaning they have difficulties recognizing and understanding the cultural conditioning behind the different ways in which people interact and communicate. The lowest mean score for the tourists' evaluation was for the 'ability to deal with misunderstandings and conflict situations' (m=2.38), indicating that domestic professionals still lack the communicative skills needed to avoid confrontation and efficiently deal with misunderstandings that inevitably arise in intercultural contacts. Though misunderstandings cannot be completely avoided, it is necessary to possess the skills and competencies to efficiently deal with them for the benefit of efficient communication within the diverse and dynamic field of international tourism.

4.1.2. PAIRED T-TESTS ON THE COMMUNICATIVE EFFECTIVENESS DIMENSION

In order to see if there are any significant differences between the two studied groups' perceptions regarding the levels of communicative effectiveness among the professionals, a series of paired t-tests was applied. The six t-tests showed slight, but indicative differences between the professionals' and the tourists' assessment on the dimension of communicative effectiveness (see Table 2.).

Table 2.: Paired t-tests on the communicative effectiveness dimension

Communicative Effectiveness	Tourism & hospitality professionals	Tourists	t	p
	Mean score N=157	Mean score N=328		
Ability to give and receive constructive feedback	4.05	3.67	0.96	0.36
Ability to display respect towards foreign visitors	3.59	3.29	1.05	0.29
Ability to interact cooperatively with foreigners	3.67	3.38	0.96	0.33
Comfort when communicating with foreign nationals	3.55	3.53	0.02	0.67
Ability to deal with misunderstandings and conflict situations	3.24	2.38	2.50	0.01
Ability to acknowledge differences in communication and interaction styles	2.94	2.94	0.00	1.00
<i>p < 0.05 on paired t-tests</i>				

Source: Authoresses.

Statistical comparison of the two studied groups of participants showed statistically significant difference in the mean scores on the communicative effectiveness item *'ability to deal with misunderstandings and conflict situations'*, $t(2.50) = 0.01, p < 0.05$. The tourism and hospitality professionals' mean score on the *'ability to deal with misunderstandings and conflict situations'* item ($m=3.24$) was significantly higher than that of the group of tourists ($m=2.38$). In other words, according to the tourists' perceptions, the tourism and hospitality professionals are less flexible in dealing with misunderstandings than they believe, and do not possess the required skills and competencies to understand the communicative difficulties, anticipate and prevent potential misunderstandings, and clearly communicate in conflict situations. We share similar results to those presented in the research of Baum et al. (2007), in which the authors declared that cultural differences cause communication difficulties, and in turn, communication difficulties continually cause misunderstandings and even conflict. Our findings are also similar to those presented in the work of Denton (1997), in which he stated that people of different cultural backgrounds tend to protect their own culture at the expense of efficient interpersonal communication, which is why conflicts at times easily occur in multicultural settings (Denton, 1997).

No significant differences between the tourism and hospitality professionals and the tourists were observed on the *'ability to give and receive constructive feedback'*, ($t(0.96) = 0.36, p > 0.05$), although the mean score for the professionals ($m=4.05$) was slightly higher than for the tourists ($m=3.67$). Similarly, no significant differences between the professionals and the tourists were observed on the *'ability to display respect towards foreign visitors'* item, ($t(1.05) = 0.29, p > 0.05$), the *'ability to interact cooperatively with foreigners'* item ($t(0.96) = 0.33, p > 0.05$), and the item *'comfort when communicating with foreign nationals'* ($t(0.02) = 0.67, p > 0.05$), with the mean scores being slightly higher for the tourism and hospitality professionals than for the group of tourists. In addition, it is interesting to notice that both groups of participants showed the same mean score regarding the communicative effectiveness item *'ability to acknowledge differences in communication and interaction styles'*, ($t(0.00) = 1.00, p > 0.05$), meaning that both groups of participants recognize the difficulties that arise due to the inability to successfully adapt to diverse interactional and communicative styles in intercultural and cross-cultural contexts.

The ability to effectively cooperate with people of diverse linguistic and cultural backgrounds is one of the essential skills that tourism and hospitality managers require but may often lack (Baum et al., 2007), which increases the possibility of miscommunication in the workplace. As suggested by Doherty et al. (2007), one possible way of overcoming such obstacle is for companies to hire competent and eligible global managers who possess the necessary skills and competencies to successfully cooperate and work with people from diverse cultural circles (Doherty et al., 2007). Furthermore, Powell (2006) stated that language differences often result in miscom-

munication, while cultural background differences are the second factor that causes communication gaps (Powell, 2006). Investing time and money in foreign language training, alongside targeted training in cultural aspects of intercultural communication might be one possible answer to bypassing communication gaps within the field of international tourism. In addition, it is also important to emphasize that communication competence is an acquired set of skills, which can be practiced and learnt so as to minimize the difficulties employees might face in trying to understand linguistically, culturally and otherwise diverse groups of tourists easily and correctly, regardless of their foreign language skills or their lack thereof. As Elmuti (2001) recognized, companies will have to become more sophisticated in managing cultural differences, such as providing language and cultural training to overcome communication barriers (Elmuti, 2001). We believe constant additional training, especially foreign language and cross-cultural training should be conducted so as to help employees recognize and understand the requirements, as well as the benefits of cultural diversity, and provide them with the skills that are necessary to properly tackle, anticipate and overcome the potential misunderstandings in intercultural and cross-cultural tourism settings.

4.2. THE INTERCULTURAL SENSITIVITY DIMENSION OF CROSS-CULTURAL COMMUNICATION COMPETENCE

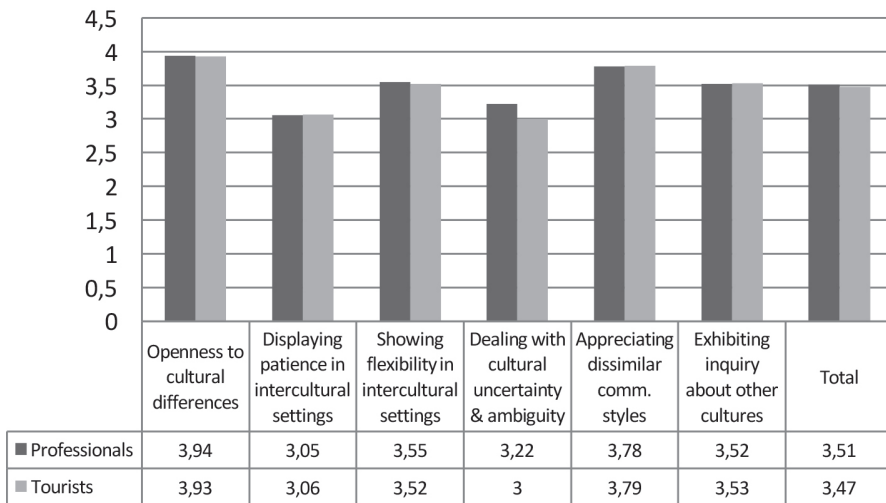
The second part of the research instrument sought to establish explanations concerning intercultural sensitivity as another dimension of cross-cultural communication competence. Intercultural sensitivity was again measured in terms of the perceived levels of cross-cultural communication competence among the industry's professionals as self-assessed by the professionals themselves, and as externally evaluated by the tourists they interacted with in intercultural tourism settings. The participants were asked to express their agreement with any given specified item of intercultural sensitivity using a five-point, Likert-type scale (*from 1 = strongly disagree, to 5 = strongly agree*). By means of structured questionnaire assessments, the participants evaluated the dimension of intercultural sensitivity, while a series of paired t-tests was conducted to compare the two groups.

4.2.1. COMPUTED MEAN SCORES FOR THE INTERCULTURAL SENSITIVITY DIMENSION

In the second part of the questionnaire, the participants were asked to assess which positive skills or behaviors pertaining to the second dimension of cross-cultural communication competence - intercultural sensitivity - were predominantly exhibited by the professionals in their interactions with tourists. That is, the professionals were asked to consider the specified items of intercultural sensitivity, and

evaluate the levels to which the items related to them using a five-point scale. The tourists were asked to consider the same checklist of intercultural sensitivity items, marking which items related to the staff they mostly interacted with during their stay. All items scored relatively high, with all mean scores being at or above 3.0. The total mean scores were also rather high, with a slight difference between the professionals (n=157) and the tourists (n=328), 3.51 and 3.47 respectively, meaning that both groups of participants assessed the professionals to be rather successful in the intercultural sensitivity dimension of cross-cultural communication (see Figure 2.).

Figure 2.: Computed mean scores for the intercultural sensitivity dimension of cross-cultural communication competence



Source: Authoresses.

Regarding the results presented in Figure 2., we may conclude that domestic tourism and hospitality professionals predominantly display positive attitudes and behaviors, and exhibit sensitivity to cultural and value differences needed to establish efficient cross-cultural communication. The total mean score for the professionals' self-assessment on the dimension of intercultural sensitivity was rather high (m=3.51), meaning they believe to be competent enough to efficiently deal with cultural diversity and ambiguity in intercultural tourism settings. The tourists seem to share similar beliefs with the professionals in this regard, evaluating them to be highly sensitive to cultural differences and able to display positive skills and behaviors such as openness, patience, and inquisitiveness in intercultural tourism settings, with a rather high total mean score (m=3.47).

The tourism and hospitality professionals scored highest on the intercultural sensitivity item *'ability to show openness to cultural differences'* (m=3.94), and the high-

est mean score for the tourists' evaluation was for the same intercultural sensitivity item (m=3.93), meaning that both groups of participants consider domestic tourism professionals to be highly aware of and flexible to cultural diversity within international tourism settings. The lowest mean score for the professionals was achieved on the intercultural sensitivity item '*ability to display patience in intercultural settings*' (m=3.05), meaning that although they expect to encounter cultural differences and though they feel flexible enough not to resent or disrespect such diversity in their everyday interactions with foreign tourists, they sometimes lack the capacity to stay acquiescent and permissive when such diversity causes any disturbance or possible misunderstandings that might arise in intercultural communication. Furthermore, the lowest mean score for the tourists' evaluation on the intercultural sensitivity dimension was for the '*ability to deal with cultural uncertainty and ambiguity due to cultural differences*' item (m=3.00), meaning that the tourists recognized the staff sometimes lacked the required behavioral and affective skills needed to successfully manage anxiety and uncertainty that appear when cultural differences become more pronounced in intercultural communicative exchange.

4.2.2. PAIRED T-TESTS ON THE INTERCULTURAL SENSITIVITY DIMENSION

In order to define if there are any significant differences between the two studied groups' perceptions regarding the levels of intercultural sensitivity, a series of paired t-tests was applied. Statistical testing for relevant differences in mean scores between the two studied groups showed there are only slight differences in their perceptions regarding intercultural sensitivity among the tourism and hospitality professionals. In general, the six t-tests showed small, but indicative differences between the professionals' and the tourists' assessment on the dimension of intercultural sensitivity (see Table 3.).

Table 3.: Paired t-tests on the intercultural sensitivity dimension

Communicative Effectiveness	Tourism & hospitality professionals	Tourists	t	p
	Mean score N=157	Mean score N=328		
Ability to show openness to cultural differences	3.94	3.93	0.04	0.53
Ability to display patience in intercultural settings	3.05	3.06	0.01	0.87
Ability to show flexibility in intercultural settings	3.55	3.52	0.02	0.67

Communicative Effectiveness	Tourism & hospitality professionals	Tourists	t	p
Ability to deal with cultural uncertainty and ambiguity due to cultural differences	3.22	3.00	2.04	0.05
Ability to appreciate dissimilar communicative styles in intercultural settings	3.78	3.79	0.04	0.55
Ability to exhibit a spirit of inquiry about other cultures and communication patterns	3.52	3.53	0.01	0.88
<i>p < 0.05 on paired t-tests</i>				

Source: Authoresses.

Statistical comparison of the two groups showed statistically significant difference in the mean scores on the intercultural sensitivity item *'ability to deal with cultural uncertainty and ambiguity due to cultural differences'*, $t(2.04) = 0.05, p \geq 0.05$. Such conclusion is based on the computed t-test of the differences between the two groups (2-tailed significance levels) shown in Table 3. The tourism and hospitality professionals' mean score on the *'ability to deal with cultural uncertainty and ambiguity due to cultural differences'* item of intercultural sensitivity ($m=3.22$) was significantly higher than for the tourists who participated in the study ($m=3.00$). In other words, according to the tourists' perceptions, the tourism and hospitality professionals are less able to deal with ambiguity due to cultural differences than they believe, and are less comfortable when dealing with cultural uncertainty. The ability to deal with uncertainty and ambiguity due to cultural differences depends on a person's capacity to empathize and behave as though he or she understands the world from the other's perspective, while the inability to display such flexibility causes the person to perceive cultural uncertainty as threatening and to try to avoid it at all costs. This is what Hofstede (1980) termed "uncertainty avoidance", as a cultural orientation which indicates whether uncertainty and ambiguity are perceived as threatening within a particular culture (Hofstede, 1980). Uncertainty avoidance refers to the extent to which people seek orderliness, consistency and structure (Javidan & House, 2001), where low uncertainty avoidance cultures demand less rules, while high uncertainty avoidance cultures prefer consistency and clearly articulated expectations. Uncertainty is present whenever we try to establish cross-cultural interaction for the first time, while reducing uncertainty through the ability to accurately predict and explain the behavior of others is one of the critical factors for establishing efficient intercultural communication (Berger & Calabrese, 1975; Matveev & Nelson, 2004). Therefore, the intercultural sensitivity dimension of cross-cultural communication competence reflects a person's ability to keep patience, tolerance and flexibility even in situa-

tions when cultural differences cause uncertainty on the most appropriate course of action. The tourists who participated in our study seem to have estimated a certain lack among the professionals in that regard, evaluating them as less flexible towards and less comfortable with cultural uncertainty than is needed to establish satisfying intercultural relationships. Our results are similar to those presented in the work of Baum et al. (2007), in which they stated that different knowledge or experience causes people to have more difficulty in interpreting others' behavior, which increases their uncertainty of how other people will respond to communication in an intercultural setting (Baum et al., 2007). Our findings are consistent with that of other previous studies as well (e.g., Blue & Harun, 2003; Sizoo et al., 2005; Shapero, 2006). In line with Caudron's conclusions (1991), the majority of all failures in intercultural communication are caused by cultural difference gaps. In order to increase the employees' awareness of and sensitivity to cultural differences and effectively manage cultural diversity so as to maximize organizational productivity, we suggest specific cultural diversity management training needs to be carefully designed and implemented by the tourism and hospitality organizations.

No significant differences between the tourism and hospitality professionals and the tourists were observed on the '*ability to show openness to cultural differences*', ($t(0.04) = 0.53, p > 0.05$), and on the '*ability to show flexibility in intercultural settings*' item, ($t(0.02) = 0.67, p > 0.05$), although the scores for the professionals were slightly higher than those of the tourists (see Table 3). Similarly, no significant differences between the two groups of participants were observed on the intercultural sensitivity item '*ability to display patience in intercultural settings*' ($t(0.01) = 0.87, p > 0.05$), the '*ability to appreciate dissimilar communicative styles in intercultural settings*' ($t(0.04) = 0.55, p > 0.05$), and the intercultural sensitivity item '*ability to exhibit a spirit of inquiry about other cultures and communication patterns*' ($t(0.01) = 0.88, p > 0.05$), with the mean scores being slightly higher for the tourists than for the professionals, meaning that the tourists' evaluation was slightly more favorable towards the staff than they estimated themselves. According to the tourists' perceptions, the tourism and hospitality professionals are able to display more patience and appreciation of a variety of interactional and communicative styles in intercultural settings, and exhibit interest in other cultures and communication patterns more than they believe, rendering them capable enough of managing cultural diversity in intercultural tourism settings. Such results indicate that domestic tourism and hospitality professionals are generally able to meet customers' expectations with regard to their sensitivity and positive attitudes toward cultural and communicative differences.

In the tourism and hospitality industry, the employees are considered to be the crucial factor in establishing successful interpersonal relationships and efficient communication with international customers. We believe that reducing potential misunderstandings by understanding the cultural differences and eliminating com-

munication barriers in intercultural and cross-cultural tourism settings can greatly increase working efficiency and substantially advance the overall organizational performance. In that regard, our results support Shapiro's conclusion, who noticed that intercultural competence generally increases customer satisfaction as well (Shapiro, 2006). Blue and Harun (2003) also emphasized the growing worldwide need for frontline workers in the tourism and hospitality industry who would be able to effectively communicate with foreign guests (Blue & Harun, 2003). In addition, according to the research carried out by Sizoo et al. (2005), the working personnel with high levels of intercultural sensitivity performs significantly better in terms of intercultural duties such as service quality and interpersonal skills, and scores higher in general job satisfaction and social satisfaction within the context of cross-cultural encounters. The tourism and hospitality employees equipped with intercultural sensitivity are able to appropriately and effectively cooperate with international guests and deal with cultural diversity, just as they are able to carry on communication behavior in order to elicit a desired response in a specific intercultural environment (Chathoth & Sharma, 2007). We advocate the position that integrating such insights might be helpful in standardizing the quality of education and providing a valuable framework for the educators to consider during tourism and hospitality curricula formulation, as well as provide the employers with a better understanding of the specific requirements of international tourism, and help them wisely manage human resources so as to improve the overall performance and output of tourism and hospitality organizations.

5. CONCLUSION

The growing cultural and communicative diversity within the expanding field of international tourism has elevated the value of effective and efficient cross-cultural communication. The international tourism environments demand the tourism and hospitality professionals to exhibit not only high professional expertise, but also an understanding of cultural and communicative diversity, as well as the intercultural and communicative competencies needed to establish efficient communication with foreign customers. Successful cross-cultural communication is thus reflected in a person's ability to appropriately deal with cultural, linguistic and communicative diversity in intercultural contexts. If tourism and hospitality organizations want to sustain and grow their businesses in the competitive international tourism markets, they must be able to provide high quality personnel, as well as a platform to further develop their employees' skills and competencies.

Though seemingly difficult to be measured due to their scope and extensiveness, communicative effectiveness and intercultural awareness imply a set of skills that can be learnt and assessed. It takes time and effort to develop the competencies

required to become an efficient communicator, but the benefits of investing time and money to develop them might be substantial. Companies and organizations that have trained their employees to a higher level of intercultural sensitivity are at a greater advantage. The tourism and hospitality industry is faced with challenges of intercultural encounters, while companies and organizations within the industry continuously need to assess their overall performance against the way their services and products are communicated and delivered to their customers. The potential misunderstandings and difficulties within cross-cultural and intercultural communication become easier to overcome if the industry's professionals are well educated in terms of linguistic capabilities, communication skills and intercultural sensitivity. Diversity management training and multicultural education can help in diminishing stereotypes and enable the employees to show more respect and understanding of others' cultural backgrounds, and achieve more understanding of others' beliefs and their traditions (Fernandez et al., 2005). In this regard, employers cannot simply rely on their employees' frequent exposure and communication with people of diverse backgrounds, but should be able to provide the much needed education and a platform for further advancement. Proper cross-cultural training should provide the knowledge, understanding and heightened awareness of cultural differences, as well as communicative, linguistic and cultural skills required to communicate efficiently across cultural barriers. As efficiency in cross-cultural communication for those providing tourism and hospitality services becomes increasingly important, the industry should take steps towards providing proper further education for their employees, while educators should consider tourists' expectations when integrating cultural elements, communicative competence and language training. Targeted training, such as language and cultural training courses intertwined with education in business communication, specifically tailored to meet communicative requirements in intercultural tourism contexts, might enable tourism and hospitality professionals to adequately communicate the products and services to international customers, and supply them with the skills and competencies to understand and interact more effectively with customers of different cultural backgrounds.

The results of our research may provide a valuable tool in managing human resources and recruiting qualified personnel, helping companies and organizations in determining key skills and competencies to ensure service quality, customer satisfaction and overall success. However, it is also important to note that the set of skills pertaining to cross-cultural communication competence might be difficult to measure outside the real intercultural communicative contexts, which is why the authoresses suggest it is crucial for the industry to take an active role in providing the platform for further education, matching the required skills with the labor market and educational institutions. As a conclusion, the authoresses would suggest it is crucial for the tourism and hospitality organizations that they adopt strategies for dealing with commu-

nicative and cultural barriers, as this might help them achieve additional competitive advantage and improve their performance in international tourism markets.

5.1. LIMITATIONS OF THE STUDY

The limitation of this study is a rather small sample, limited locally to the City of Pula and neighboring municipalities in the County of Istria, Croatia, and to the British and Irish tourist alone. We advocate more representative samples on national and international levels for further research, including focus groups of various nationalities, and multicultural teams of professionals. In addition, we advocate research of cross-cultural communication competence of tourism professionals in contact with as many culturally, linguistically and otherwise diverse groups of tourists as this would provide a more clear view of the cross-cultural and intercultural communication in international tourism. Though the results of this research are interesting, it is hard to place them in relation to those of other cross-cultural and communication studies in the context of international tourism. We advocate larger samples across various cultural groups as this would allow researchers to compare and interpret the results in terms of the wider area of cross-cultural and intercultural communication within international tourism and communication research.

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THE ROLE OF ORGANIZATIONAL CULTURE IN TOURIST DESTINATION DEVELOPMENT

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ABSTRACT

Organizational culture is a success factor for each organization, including a tourist destination. It has a crucial role in the success and competitiveness of a tourist destination that includes a large number of stakeholders from the public and private sectors. The research is based on the role of organizational culture in tourist destination development. The main purpose is to determine whether there is a connection between the main stakeholders' organizational cultures and how they affect the success of a tourist destination management. Tourist destination management based on a cluster model introduces multiple advantages for the stakeholders, thereby implying some organizational changes as well. The research results indicate that common targets, basic values and symbols of the stakeholders lead to the development of a recognizable, successful and competitive tourist destination. The cooperation of stakeholders in a tourist destination requires a continuous, multi-year work and effort to maintain a tourist destination brand. Human resources have the key role particularly in implementing destination projects, promoting basic destination values, strengthening brand identity and increasing guest satisfaction with the tourist destination offer. Higher level of employee motivation to achieve common targets at the level of tourist destination influences a more open and flexible approach of employees to organizational changes. The qualitative research was conducted on the example of the Northwest Istria tourist cluster (Croatia) using the method of interviewing the formal stakeholders' representatives and the survey by a questionnaire applied for the other main offer holders within the Cluster. This research contributes to a better understanding of the role of organizational culture in managing tourist destination development.

Keywords: Croatia; Development; Organizational culture; Stakeholders; Tourist destination

JEL Codes: D23; M14

1. INTRODUCTION

Modern tourism recognizes and pays great attention to intensive investments in the development of tourist destinations. The demanding tourists directly affect the undertaking of various development strategies that enable faster and more efficient positioning of tourist destinations in the tourist market. The stakeholders from the public and private sectors within tourist destinations are increasingly opting for cooperation, coordination, and synergy, and are taking responsibility for tourist destination management. Such a decision leads to gradual changes in their organizational values, artifacts and basic assumptions, as well as activities in a tourist destination.

In recent years in Croatia, considerable attention has been given to tourist destination management and the development of destination management organizations (DMO) and companies (DMC). The decision about the establishment of DMO and DMC requires a strong motivation on the part of key stakeholders in a tourist destination. They are requested to harmonize their activities and material, financial and human resources to achieve common goals and creating a better and more competitive destination. Each stakeholder brings its own organizational culture. Are the stakeholders' organizational values, norms of behavior and motivation of employees mutually compatible? Are they adapted or changed by introducing a new model of tourism destination management?

There is an undeniable importance of investing in human resources and creating of soft variables within an organization. However, this paper aims to stimulate investment in the creation of a strong and recognized 'destination culture' whose core values gradually create, share and strengthen all stakeholders in tourism destination management.

2. THE ORGANIZATIONAL CULTURE WITHIN A TOURIST DESTINATION

The analysis of the role of organizational culture in one of the main and most propulsive economic activities such as tourism is certainly of great relevance. The complex relationships among stakeholders within a tourist destination, guided by common interests and goals, are particularly interesting.

2.1. DEFINITION, ELEMENTS AND CHANGES OF THE ORGANIZATIONAL CULTURE

There are many authors who presented their thoughts and tried to define the concept of organizational culture, with different interpretations depending on the aspect from which it is considered. According to Schein (1992, p. 12), organizational

culture is “a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration”. Sikavica and Novak (1993), as mentioned by Žugaj et al. (2004) point out that organizational culture can be defined as a system of values, beliefs and customs within an organization which, through the process of interaction with the formal structure, produces behavior norms. A more contemporary approach led by Robbins and Judge (2009) comprises a common system of meaning for the organization’s members that makes one organization different from the other. According to most definitions, the key terms pointed out are common values, beliefs, symbols, behavior norms, traditions and customs, as well as social ideals that influence and guide the behavior of individuals within an organization and shape their behavior and attitude toward an organization.

As Žugaj et al. (2004) highlight, the factors that affect the development of organizational culture can be recognized in the internal (e.g., personalities, traditions, rituals, symbols, management and communication style, strategy and goals), and external environment (e.g., market and market changes, economic, technological, ecological, social, legal and cultural conditions). As recognized by Robbins (2009), the level of innovation is not to be excluded, led by the competitive spirit that improves the development of communication models and of course the employee reward system. The last one, compared to the conditions in other organizations, should be motivating the organization’s members.

According to Sikavica and Novak (1993), as specified in the book by Žugaj et al. (2004), there are several organizational culture types (e.g., dominant and subculture, strong and weak, clear and unclear, participatory and non-participatory culture, etc.). Regardless of the type, an organizational culture consists of several elements. The Schein’s model (1985) distinguishes three levels of organizational culture:

- artifacts
- values
- basic assumptions.

Artifacts are clearly distinct primarily because they are visible, tangible and can be heard and felt. This group consists of norms, standards, symbols and customs, all of which can be recognized already when entering the premises of an organization. Considering the level of visibility, the values shared by an organization’s members are less explicit. They are more pronounced if better and widely accepted. Strategies, goals, principles and qualities considered desirable are those organization’s values that should be respected, followed, shared and transmitted to others. According to the opinion of Robbins and Judge (2009), organizational culture is stronger the higher the number of members who accept these core values. Bahtijarević-Šiber and Sikavica (2001), as mentioned by Brčić and Vuković (2008), consider organizational values as a very powerful tool in human resource management. In addition to the fundamental values of an organization, the system of individual personal values has

an important role in shaping an organizational culture as well. These values follow an individual from one's childhood, through the influence of parents and the environment in which one grows up. The basic assumptions, as the third level of organizational culture, are based on values and are shaped and developed by continuous repetition of certain situations. The results are common, widely accepted rules, policies and procedures that exist within an organization. In Keyton's opinion (2005), the assumptions include a particular level of abstract and implicit beliefs of members about themselves, their relations with other members within an organization, but also with external stakeholders such as clients, customers or suppliers. Beside the above mentioned elements considered to be the most significant, there are authors who emphasize other elements such as communication and language, as well as the impact of new technologies applied and used within an organization. These aspects also have an important role in the process of culture shaping and developing within an organization.

Sometimes, due to one or more factors from internal or external environment, certain changes within an organization can happen, suddenly or as planned in order to be proactive and achieve certain goals. Robbins and Judge (2009) highlight that there are several fundamental forces that stimulate organizational changes, such as the nature of the workforce, technology, economic shocks, competition, social trends and world politics. The role of the founders, leaders or managers is of key importance in making timely and proactive decisions in order to adapt the organization, as well as its culture, to new conditions.

According to Armstrong (1990), as mentioned by Žugaj et al. (2004), there are different forms of implementing organizational changes. The most important forms are reorganization, organizational development, communication, training, selection of new people, management by objectives, management by results, and reward management. From this point of view, organizational culture should facilitate and simplify these changes, so that they can be implemented quickly and effectively, without significant resistance by the organization and its members.

2.2. THE ELEMENTS OF ORGANIZATIONAL CULTURE IN A TOURIST DESTINATION

The main objective of this research is to determine the role of the organizational culture of the key tourist destination's stakeholders in its development. Tourism is undoubtedly one of the main and most propulsive economic activities at the global, as well as regional, national and local level. In particular, tourism in Croatia represents an activity that is continually growing and achieving positive results. Tourism is considered to be "labor intensive and low profitable economic activity that offers a low income, but also a long-term business, and employs a relatively large number

of workers and has a positive effect on the local community” (Agency for Vocational Education and Training and Adult Education, 2012, p. 86). The importance of the role of tourism is also recognized in its multiplier effect on other economic activities such as trade, agriculture, craft trades, personal services and others.

The authors have focused the research on the study of organizational culture within tourist destination. Hitrec (1995), as reported by Petrić (2011, p. 15), describes the destination as “flexible, dynamic space whose boundaries are determined by the tourism demand, i.e. the tourists, regardless of the administrative boundaries”. Magaš (1997) also asserts the unimportance of the administrative boundaries, defining destination as an optimally combined and market adjusted space that, in comparison with the competition, will achieve long term good results developing dominant capabilities. However, a more complete definition also mentions tourist products that offer the guests a complete satisfaction of their tourist needs (Križman Pavlović, 2008).

Each stakeholder within the tourist destination has defined its specific plans and goals whose achievement is significantly influenced by human resources. One of the important assumptions for successful participation in the tourist destination management is a strong will of the stakeholders to adapt their own goals and plans to those that are defined at the level of the overall tourist destination. The stakeholders should express the willingness to participate in their implementation.

The second very important assumption for success is the stakeholders’ synergy in investing financial resources that will be directed to define common projects and priorities. First of all, it is necessary to define a mutual participation model that will set the parts of financial resources and responsibilities for each stakeholder.

Organizational culture consists of the members of an organization and the human factor has a key role in shaping and developing its culture. Very often, the dominant role is played by the manager(s) who can transmit the vision and basic values, and significantly impact the creation of an appropriate working environment and climate.

The working climate within an organization is characterized by the relations of its members and certain groups. According to Robbins (1992), some of the main motives of connection and action of people in the group are as follows:

- sense of security, self-esteem, power and status
- increased sense of importance for belonging to a particular organization
- feeling of support in achieving the common goal
- importance to achieve prestige and recognition of the organization
- pleasure by interacting with other members

At the level of a tourist destination, the various stakeholders’ main motive for connecting and joint cooperation in the tourist market is the need and readiness for support in achieving common goals. A pleasant, positive and motivating climate in the everyday work environment often encourages the development of different formal and informal groups.

At a time when a stakeholder decides to start acting together with other tourism supply holders in a tourist destination, organizational values should be recognized and 'incorporated' as far as possible into the basic values of the whole tourist destination. It is necessary that the destination's values are recognized in any stakeholder, and for that to be possible, what is essential is the participation and encouragement of the members and employees to accept, believe in, and spread these common values.

Although success depends on the contribution of all employees, a manager or a responsible person who leads the team in front of a specific interest group plays the key role. The management style involves a variety of ways and forms of management, control and monitoring, as well as communication and transmission of information to all employees. The Likert's management system, as one of the most important among different leadership styles concepts, highlights that human resource management is the most important management task because the whole business depends on a successful selection, schedule and employee management (Žugaj et al., 2004). Different management styles (e.g., autocratic, paternalistic, consultative, participative), according to Žugaj et al. (2004), vary depending on the motivation level, type of communication, interaction and influence, decision-making, targets and control system.

Destination management in cooperation with other stakeholders includes the introduction, development and strengthening of certain common values, symbols and other elements of organizational culture. Each stakeholder continues to strengthen its own organizational culture, but influenced by certain changes due to the acceptance and the development of new, extended values at the level of a whole tourist destination.

In the context of this research, the role of the above mentioned elements of the organizational culture is observed at the level of any organization (company, institution or other entity) that represents each stakeholder. All of them are connected by a development goal of a whole tourist destination based on common rights, duties, responsibilities and activities.

3. THE IMPACT OF ORGANIZATIONAL CULTURE ON TOURIST DESTINATION DEVELOPMENT - EXAMPLE OF THE NORTHWEST ISTRIA TOURIST CLUSTER IN CROATIA

The importance of organizational culture and its contribution in achieving the defined objectives and tasks is not questionable at all, but the question is how the culture of stakeholders within a tourist destination can influence the direction, intensity and success of a destination development. Analyzing the examples of international best practices in the field of destination management, there are many cases that confirm that the role of synergy between the public and private sectors is of the utmost

importance. Among them, there is the example of the Italian mountain tourist destination Val Gardena. The basic organizational structure of Val Gardena is composed of three tourist offices¹, which are mutually dislocated in accordance with the administrative boundaries, and whose work is coordinated by the head tourist organization² in the role of the destination management organization. It is basically in charge of the development of marketing strategies, public relations, promotion policies and care for the destination image. The tourist destination Val Gardena has been developing destination management for several decades, and the results of a common communication concept are confirmed by the successful all-year-round business and a positive impact on the physical and financial results. According to the statistics office of the Autonomous Province of Bolzano (2016), tourist arrivals and overnight stays have recorded continuous growth since 1950, except for a mild decline in the early 1980s and mid-1990s. The coordination and destination branding development of Val Gardena began in the late 1960s in parallel with the preparations for the FIS Alpine World Ski Championship of 1970. On this occasion, a common logo was accepted and the development of destination management started. The years 1992 and 1993 represent a very important period when the tourist organization was formally established.

Based on the experiences of several European tourist destinations, the Croatian National Tourist Board has been trying to convince the key stakeholders of different tourist regions within Croatia that the networking of tourist boards is the best solution for destination development. For this purpose, the Croatian National Tourist Board has been implementing several policies that affect changes in quality structure and creating new selective types of tourism as a motive for choosing a particular destination. Among these policies, there is a program named 'Croatia 365', as a special project created to encourage the improvement of existing and the development of new tourist products for the period of pre- and post-tourist season. This type of cooperation among the key stakeholders represents an important step forward for the majority of destinations that have until recently operated uncoordinated and often wasting the limited funds and resources. Also, in accordance with national and regional strategic documents for the development of tourism, the new organizational structure would include the national tourist organization (NTO), regional (RMO) and destination (DMO) management organization. Furthermore, one of the key guidelines in revising and rationalizing the tourist board system is to encourage "the association of some local communities on spatial and functional principles and product integrity" (Ministry of Tourism of the Republic of Croatia, 2013, p. 58).

However, it should be mentioned that Istria, as the leading tourist region in Croatia, incorporated such a new form of destination management in the *Marketing plan of Istrian tourism*, a strategic document for tourism development for the period

1 Associazioni turistiche (It).

2 Consorzio turistico (It).

2004 - 2012. The document set a cluster model of networking various tourist sites, defining in total seven clusters within the Istrian region. But although defined by a strategic document at the regional level, the proposed concept based on a partnership model has been only partially (or not at all) accepted primarily because of the resistance to change detected at the local level.

Since 2004, certain circumstances have occurred in Croatia and at the international level, including the following:

- the need to develop regional brands
- a significant step forward from the low-cost concept
- the development of new forms of accommodation facilities like small, boutique hotels with all year-round business
- a vision of tourism development of high value, targeted toward the demanding market which recognizes the best value and quality
- the need for a recognizable and defined tourist brand
- the reorganization of the tourist board system by announcing appropriate legislative changes
- an effort to create long-term sustainable destinations
- the appearance of tourism with higher emphasis on destination's products for the purpose of creating a year-round tourism.

Based on these reasons, the key stakeholders in the northwest Istria have opted for a strategic development of their tourist destination, which was the first such instance in the Istrian Region and in wider Croatia. It represents a formal establishment and systematic development of the Northwest Istria tourist cluster, including the coastal Umag and Novigrad, as well as the inner area, i.e. Buje and Brtonigla.

3.1. ESTABLISHMENT AND ORGANIZATION OF THE NORTHWEST ISTRIA TOURIST CLUSTER

The key stakeholders of the Northwest Istria tourist cluster (in further text, the NW Istria tourist cluster) have taken up a challenge of planning and developing a strategy model of systematic tourism destination management. The main purposes have been: creating a new story of the tourist destination, repressing seasonality, increasing the average expenditure per tourist and improving the appearance of their destination on the tourist market.

The process of establishing the NW Istria tourist cluster was conducted in several steps. The initial phase included organizing three workshops called *Destination Marketing Management*, led by an external associate with the participation of the key representatives of public and private tourism sectors.

According to the Cluster Umag, Novigrad, Brtonigla and Buje (2010, p. 3), the main tasks of the workshops were:

- to bring the key stakeholders together
- to make the key stakeholders aware of and educated about the importance and ways of mutual cooperation
- to agree on a vision and positioning of the cluster
- to identify basic problems of cluster functioning
- to find solutions and define an action plan for their achievement
- to define existing and create new events at the cluster level and to set up an action plan for their implementation and organization
- to define cluster marketing activities and set up an action plan for their implementation.

Further on, the targets of the workshops were to define the structure of the accommodation offer, analyze the available general infrastructure and the level of accessibility to the destination, allocate tourist products, as well as jointly identify and analyze the competitive advantages and weaknesses of the destination. Based on the held workshops and the analysis of the collected data, a document named *Destination Management System - Report from the destination marketing management workshop* was prepared in order to prepare the participants to proceed with the next phase.

The second phase started with the formal definition of frame model of the NW Istria tourist cluster, wherein "the basic idea is that, with a clear distinction of the products, agreed at the cluster's strategy level, each stakeholder takes its position in the cluster without compromising the position of other stakeholders" (Cluster Umag, Novigrad, Brtonigla and Buje, 2011, p. 3). The basic precondition for formal partnership was the acceptance of a common development strategy, vision, goals and participation model of financing the destination projects. At the end of 2010, the formal partners within the NW Istria tourist cluster became the tourist boards of Umag, Novigrad, Buje and Brtonigla, which represent their members (small family-owned hotels, holiday renters in private accommodation, travel agencies, restaurateurs and others), and hotel companies Istraturist Umag and Laguna Novigrad³. Their common aim is to advance the quality of products and to strengthen the position of Northwest Istria as ideal for vacation.

Based on the cluster analysis, the NW Istria tourist cluster implemented its marketing plan as a basic operative document for the realization of the defined cluster objectives. It included specific guidelines and action plan for the implementation of defined cluster projects for a period of one year. According to cluster marketing plan, each partner participates with a certain share in financing the planned cluster projects for a period of one year. The common financial resources are directed to the promotion, e-marketing activities, and the development of destination products and events.

3 Since autumn 2015, the hotel company Laguna Novigrad JSC, with the head office in Novigrad, has been operating in the market under the brand *Aminess hotels & campsites*.

The first phase of formally organizing the NW Istria tourist cluster included defining and harmonizing stakeholders' responsibilities, and nominating responsible persons and teams for the implementation of agreed actions. For this purpose, the Cluster board has been formed, which is responsible for managing cluster projects. The members of the Cluster board are representatives of the key stakeholders. Further on, project teams have been formed for a more successful development of each strategic destination tourist product. Creation, coordination and ultimately commercialization of new destination products and experiences from the cluster's area have been entrusted to the newly registered company ISTRAD.M.C. LLC, within the Group Istraturist Umag. It operates as a destination management company which has taken over the commercial aspect of the destination tourist offer and products. Over the past few years, the company has become the holder of many international sporting, gastronomic and other events in the area.

3.2. KEY ELEMENTS OF ORGANIZATIONAL CULTURE IN THE DESTINATION MANAGEMENT OF THE NORTHWEST ISTRIA TOURIST CLUSTER

Analyzing the organizational culture within the NW Istria tourist cluster, it should be mentioned that its basic elements are the vision, mission and goals of the destination. The cluster key stakeholders have decided to direct the development of their destination to diverse and all-year-round tourism offer based on excellence, using all available resources and identified advantages. Development is guided by the cluster's vision to have a reputation of a superior cluster in Croatia because of "its diversity and high level of quality accommodation, recreational facilities, typical food and wine, strong traditions and authentic hospitality; [...] year-round program of activities and unique events [...] system of named products / experiences, which will support a differentiated development of tourism on the coast and the interior" (Cluster Umag, Novigrad, Brtonigla and Buje, 2011, p. 4). According to the described vision, the development of the NW Istria tourist cluster is directed to four key elements, i.e. sports, gastronomy, nature and sea. These elements represent the basis in defining the destination's visual identity.

The NW Istria tourist cluster is the first cluster in the Istrian Region, which has accepted the application of the marketing concept that relies on the promotion of the whole cluster as a tourist destination. A common brand has been defined which is accepted and applied by all formal partners within the cluster. They have agreed to apply the destination brand through joint marketing strategy primarily based on online platforms and cooperation with PR agencies for target markets, visual and verbal identity of the formal partners through various communication channels (e.g., business correspondence, road signage, promo materials and others).

In addition to the destination’s visual identity, the slogan ‘... in all the colours of Istria’ has been designed with the main purpose to communicate that it is through colors that the tourist cluster of Northwest Istria presents its peculiarities and differentiation within Istria. The cluster applies a complex communication system aimed at guests, cluster members and employees (online and offline communication channels).

It should be mentioned that the stakeholders, in addition to their personal values and the values of their organization, are familiar with the new common values of the tourist destination. The assumption of joint activities and synergies in the destination management is the acceptance of these new values. One of the goals of the research in the context of this paper is to verify the degree of acceptance of new cluster’s values and their compliance with the personal value systems of the interviewed stakeholders.

3.3. NORTHWEST ISTRIA TOURIST CLUSTER BEFORE AND AFTER IMPLEMENTING DESTINATION MANAGEMENT BASED ON THE CLUSTER MODEL

With the aim of presenting the tourist cluster of NW Istria, several key indicators have been shown in Table 1., comparing periods before and after the formal introduction of destination management based on the cluster model.

Table 1.: NW Istria tourist cluster before and after implementing destination management based on the cluster model

	2008	2015
Tourist arrivals	500.457	712.902
Overnight stays	2.878.967	4.187.548
Share of overnight stays in Istria	15%	18%
Share of overnight stays in Croatia	5%	6%
Average length of guests’ stay (in days)	5,8	5,9
Destination products	/	5
Destination events in pre- and post-tourist season	/	> 10

Source: Made by the authors based on the data available at <http://www.istra.hr/hr/pr/statistika>, <http://www.mint.hr/default.aspx?id=976> and <http://www.coloursofistria.com/hr/dogadjanja>.

It is apparent that the five-year period (2011 - 2015) of destination management based on the cluster model has contributed to relevant positive results of the NW Istria tourist cluster. In addition to the significant increase of tourist traffic, the cluster has been raised to a higher level concerning the quality and number of destination products, with a special emphasis on the pre- and post-season.

4. RESULTS OF THE EMPIRICAL RESEARCH

The main goals of this research were as follows:

- to verify the impact of organizational culture on the development of tourist destination,
- to certify the effect of destination management based on a cluster model on the success of the tourist destination,
- to verify the impact of introducing a new model of destination management on motivation and the sense of belonging to the destination.

The achievement of these objectives has enabled the acquisition of new knowledge about the role of the elements of organizational culture in the development of a tourist destination.

For the purposes of researching the organizational culture in the NW Istria tourist cluster, a combination of qualitative and quantitative methods was applied. The research was conducted from March to April 2016, applying two different research instruments:

- a structured interview with representatives of formal partners within the NW Istria tourist cluster, i.e. mayors of Umag, Novigrad, Buje and Brtonigla (in the dual role of head of the local government, and tourist board president), tourist board directors and representatives of the hotel companies Istraturist Umag and Laguna Novigrad,
- a structured questionnaire intended for other tourist offer representatives of the tourist cluster of NW Istria.

The research included the total number of 22 persons. The interview was composed of 6 general and 18 specific questions, three of which offered the possibility of multiple responses. The questions were addressing 5 key categories, i.e. the vision of destination, management (leadership) styles, organizational culture changes, motives for implementation of cluster model, and satisfaction with the results. The online questionnaire was composed of 6 general and 15 special questions, which were structured by using a 5-point Likert scale. The questions were particularly focused on the degree of integration of the basic values of cluster and its stakeholders, organizational changes, the sense of belonging to the organization and destination, motivation for taking part in the cluster projects and activities, the level of acceptance of the cluster brand, and the degree of satisfaction with the destination offer. The main results of the research are presented in two groups, i.e. the results of the research conducted with the formal partners, and with the other tourist offer representatives of the NW Istria tourist cluster.

4.1. RESULTS OF THE RESEARCH CONDUCTED WITH THE FORMAL PARTNERS OF THE NORTHWEST ISTRIA TOURIST CLUSTER

The respondents were asked if, five years ago, they had imagined the destination of NW Istria the way it is today. The majority of them (60%) have confirmed that the destination is how they imagined it at the beginning. Those who answered that today’s destination corresponds only partially with their expectations (40%), mentioned the following reasons: inappropriate name of the NW Istria tourist cluster (insufficiently clear), need for further development of additional tourist products, and the non-fulfillment of the announced legal requirements (e.g., amendments to the Act on Tourist Boards and the Promotion of Croatian Tourism and passing Act on Tourism Land).

Assessing the main competitive advantages of the tourist destination of Northwest Istria, all interviewees opted for a multiple answer. Table 2. gives the scale of 5 main advantages ranked by the interviewees.

Table 2.: The main competitive advantages of the tourist destination of NW Istria

No.	Competitive advantages
1	Destination location
2	Diversity of tourist offer
3	Sea and sun; Human resources
4	Tradition
5	Other (high-quality tourist products, infrastructure)

Source: Authors.

Personal involvement in the initial process of creating the NW Istria tourist cluster has been confirmed by 50% of the respondents, while 20% of them, with regard to the function they perform, was indirectly involved through associates. The rest of the respondents did not participate in the initial stage, but they joined the project later on because of subsequent employment in the organization.

Table 3. shows the established model of defining the initial objectives of cooperation within the NW Istria tourist cluster. It is important to mention that none of the respondents made a decision independently, without previous consultation and cooperation with co-workers.

Table 3.: The model of decision making about the initial objectives of cooperation within the NW Istria tourist cluster

No.	Types of decision making
1	Team work - together with narrower associates.
2	Other (approval of competent authority; Management Boards of the two hotel companies; indirectly through other organizations - partners in the cluster).
3	Combination of different types (based on the Strategy for the tourism development; involving the key tourist offer holders in destination).
4	Based on the strategic document of the organization.

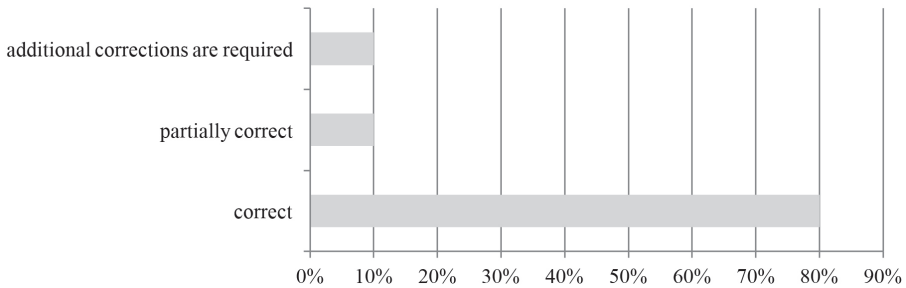
Source: Authors.

One of the targets of the research has been to examine whether the implementation of the cluster model of destination management has caused certain changes in the organizational culture of formal partners within the cluster. The majority of the respondents (70%) confirmed that over the past five-year period certain changes in the organizational culture have been noticed. Negative answer was given by the rest of the interviewees. In the organizations where changes of the organizational culture have been noticed, managers have mostly applied organizational development (57%) or the combination of several forms of implementing organizational changes (43%), such as organizational development and communication, selection and recruitment of new people or reorganization.

When asked whether certain resistance was noticed from the side of employees or associates, only 20% of the interviewees confirmed that some resistance was partially noticed, primarily because of the fear of losing the destination's identity and dissatisfaction with the need for additional engagement in the realization of cluster activities. The resistance has been overcome by free communication in a pleasant working environment and by continuous information about new projects and cluster activities.

Analyzing the financial involvement of the formal partners and the impact of cluster activities on their budgets, it was found that 80% of the interviewees think that the implementation of joint cluster activities has significantly affected the budget of their organization. A few respondents (20%) evaluated that the implementation of cluster activities has insignificant financial impact on the budget of their organization. This refers to the representatives of local governments. The opinion about the correctness of the financial participation model in the cluster is presented in Figure 1.

Figure 1.: Opinion about the correctness of the financial participation model in the cluster of NW Istria



Source: Authors.

The above figure shows that the majority of the respondents agree about the correctness of the applied participation model, 10% of interviewees considers the model partially correct, in part of taking responsibilities and obligations, while the rest of interviewees thinks that the model needs additional corrections due to the impact of legal restrictions (e.g., perennial and still not passed Act on Tourism Land).

Further on, the received interviewees' answers indicate a division in the application of certain tangible or intangible benefits. According to the results, 50% of interviewees consider that the cluster model of cooperation has brought positive changes in terms of tangible and intangible factors. Within these organizations, the intangible benefits dominate (80%), or a combination of tangible and intangible benefits is applied (20%). Among intangible benefits, education and access to new knowledge and practices through networking absolutely dominate. In the opinion of 40% of the respondents, no tangible or intangible benefits have been applied, while 10% of the respondents believe that positive changes in this regard have been partially highlighting the possibility of innovation through education.

Analyzing the success⁴ of the stakeholders - formal partners within the NW Istria tourist cluster, 70% of the respondents confirmed a greater success of their organizations over the past five years due to the synergy within the cluster. From the point of view of 20% of the respondents, the continuous success of their organizations is only partially attributed to the cluster, while only 10% of them expressed the opinion that the success is not a result of the implementation of a cluster model of destination management.

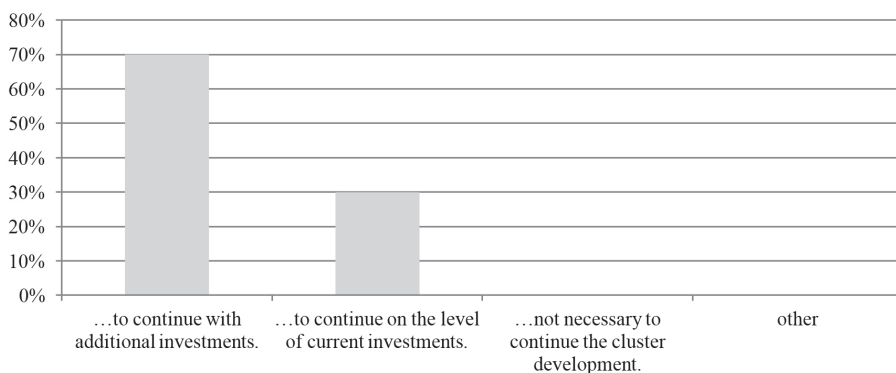
Further on, the majority (80%) of the interviewees consider that the relationship with other stakeholders within the cluster has been improved over the past five years of cooperation. The respondents were also asked about their personal satisfaction with the level of visibility that their organization occupies within the NW Istria

4 Success primarily means greater visibility, more effective allocation of resources, planned destination development, greater competitiveness and better coordination.

tourist cluster. As much as 90% confirmed a high level of satisfaction. Anyway, it is interesting that 10% of the respondents did not agree with highlighting the concern for the loss of visibility and recognition of major destinations due to the strengthening of the destination brand.

Finally, the respondents were asked about their attitude toward future development of destination management based on the cluster model. The responses are shown in Figure 2.

Figure 2.: Attitude of formal partners toward future development of the cluster model of NW Istria



Source: Authors.

According to the presented data, all respondents share the same opinion, i.e. that there is the need for further development of the destination management of the NW Istria tourist cluster, including the synergy of the public and private sectors. According to the results, 70% of the respondents believe that the development of the cluster should be continued with additional investments, mentioning particularly:

- further development of the already defined concept;
- the development of new destination products and inner area of the cluster.

The remaining 30% of the respondents consider that the development of the cluster should be continued, but from the financial standpoint, at the level of previous investments.

It is possible to recognize a positive, unique view, and the wish and readiness to continue the cluster cooperation. Certainly, intense multi-year work on joint projects of the NW Istria tourist cluster has resulted in positive impacts that are recognized by all partners. However, in the forthcoming period the partners should consider and agree on possible further investments, as well as define the priorities in the development of the cluster.

4.2. RESULTS OF THE RESEARCH CONDUCTED WITH OTHER TOURIST OFFER REPRESENTATIVES WITHIN THE NORTHWEST ISTRIA TOURIST CLUSTER

The collected data were processed and sorted by a review of average range and coefficients of variation. Accordingly, the highest average, i.e. respondents' approval, has been detected by the following stances of other tourist offer representatives of the tourist cluster of NW Istria, as shown in Table 4.

Table 4.: Review of respondents' stances with the highest average

No.	Respondents' stance	Average (AVG)	Coefficient of Variation (CV)
1	My personal value system (e.g., level of (self) respect, fairness, loyalty, ethical behavior, social responsibility) is identified and supports the basic values represented within the cluster of NW Istria.	4.58	10.76%
2	Corporate strategy, strategic goals and principles, as basic values of the organization where I am employed, are recognizable, transparent and clear.	4.58	13.97%
3	Continuous adaptation to challenges of coordinated NW Istria tourist cluster activities is necessary in order to achieve greater business success of the organization.	4.50	14.34%

Source: Authors.

On the other side, the highest respondents' disapproval has been detected by the following stances (Table 5).

Table 5.: Review of respondents' stances with the lowest average

No.	Respondents' stance	Average (AVG)	Coefficient of Variation (CV)
1	The common activity within the cluster of NW Istria has caused to the organizations or their employees a certain level of uncertainty in the initial business relationships.	3.00	27.22%
2	Since the introduction of destination management based on cluster model, intangible forms of benefits have been significantly encouraged within the tourist cluster of NW Istria (e.g., participation, promotion, fostering a sense of respect and appreciation, many privileges, etc.).	3.58	24.06%

Source: Authors.

Furthermore, the received results indicate a significant degree of acceptance of the destination marketing concept, which relies on the promotion of the NW Istria destination brand and its visual identity. In fact, 67% of respondents fully agree with the view that the destination brand has been clearly presented and is already recognized among the stakeholders within the cluster. The remaining percentage of respondents has equally expressed that they generally agree or partially agree with this opinion.

The results also confirm that 50% of all respondents fully agree with the view that destination management based on cluster model has been recognized and accepted by the guests through the destination tourist offer, high quality level of products and services and destination marketing concept. However, the coefficient of variation (CV = 30.31%) indicates a significant deviation from the average due to the contribution of 25% of respondents who neither agree nor disagree, and 17% who partially disagree with such opinion.

Also, half of respondents expressed the opinion that they fully agree or generally agree (33%) with the position that a significant increase in interest in destination tourist products (e.g., gastronomy, cycling, wellness) has been noticed in daily communication with the guests (through queries, offers, reservations and sales of tourist services). The coefficient of variation (CV = 25.61%), however, indicates a significant deviation from the average due to the 17% that partially disagree with the mentioned opinion.

Through a set of answers based on the questionnaire, the respondents have confirmed the importance of the role of human resources. According to the respondents' stances, the importance of the role of human resources in the development of the NW Istria tourist cluster has been significantly recognized in several key activities of the development process of cluster (Table 6.).

Table 6.: Review of respondents' stances about the role of human resources in the development of the NW Istria tourist cluster

No.	Activity
1	Successful implementation of destination projects.
2	Clear presentation of the destination brand.
3	Quality of attitude toward guests and successful spread of destination culture.
4	Willingness to accept organizational changes.

Source: Authors.

It is apparent that the role of human resources has been recognized in the key activities of the cluster implementation. Positive attitudes and readiness to organizational changes from the side of the responsible and involved people have certainly contributed to the better and more successful representation of the whole destination.

5. CONCLUSION

The results of the conducted empirical research have confirmed the basic hypothesis that common goals, basic values and symbols of stakeholders within the tourist cluster, as well as changes of their organizational cultures influence the shaping of more recognizable, successful and competitive destination with a stronger image and a better position on the tourist market. The organizational culture, in the opinion of many authors, represents basic values, a series of rituals, common beliefs, assumptions and stories of members of the organization. In a fact, it represents the general pattern of behavior of members of an organization.

The basic elements of the stakeholders' organizational culture influence tourist destination development. Stakeholders with a stronger organizational culture, wider accepted among employees, are characterized by greater acceptability of the destination concept toward the external environment, too. Also, greater recognition of the basic values of stakeholders, a positive effect on the quality and an open work environment with other stakeholders within the cluster, encourage greater success of the whole tourist destination in the realization of common projects.

Furthermore, better and high-quality cooperation between stakeholders within the cluster contributes to a clearer presentation of the destination brand. Increased employee motivation to achieve common destination goals and a more pronounced sense of belonging to the organization as well as destination, influence the development of a more flexible acceptance of organizational changes on the part of the employees. Willingness and flexibility of stakeholders to accept the cluster concept, according to the perception of respondents, have affected the guests, increasing their satisfaction with destination tourist products and services, as well as recognition of their quality.

A considerable degree of acceptance of the destination marketing concept has also been confirmed among the stakeholders within the cluster and, according to the perception of respondents, partially among the guests, too. The research has confirmed a positive impact of the introduction of the destination management based on a cluster model, through the synergy of stakeholders from the public and private sectors on the success of tourist destination, particularly the increased tourist traffic, improvement of existing and development of new destination tourist products, and strengthening destination brand identity in the market.

This research paper has enabled a new perspective on the role of organizational culture, which has confirmed its importance and indispensable influence on the development and success of the tourist destination observed from the point of view of the main stakeholders. In the opinion of prominent authors such as Robbins, placing the organization and its members at the forefront was the starting point for this research. Following the assumption that there is a connection between the

stakeholders' organizational cultures within the tourist destination, this research paper has aimed to stimulate greater achievements in the development of a strong and recognizable destination culture. Thus, the NW Istria tourist cluster, examining the elements of the organizational culture of its main stakeholders, has determined their influence on the destination's development. Also, considering the realized tourism traffic, the structure of destination tourist products, as well as the events and the visibility of the destination in the tourist market, the influence of introducing destination management based on a cluster model on the success of the whole tourist destination has been confirmed, according to respondents' perception.

Despite many benefits of developing tourist destination management based on a cluster model, certain aspects that require further improvements have been identified. An additional engagement to meet the initial expectations of the cluster model of cooperation, intensive activities on maintaining destination brand and encouraging employee motivation to work on destination projects have to be taken into consideration in order to achieve even better results and greater success. In order to obtain more complete feedback for making good and timely decisions on further development of co-operation in the destination based on a cluster model, a continuous evaluation of the achieved results is proposed by examining all stakeholders, as well as the guests in the tourist cluster.

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SUSTAINABLE DEVELOPMENT POTENTIAL OF FORTIFIED HERITAGE IN CROATIA

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ABSTRACT

The paper presents the analysis of current best practices in valorization of fortified heritage in Croatia and selected examples of fortified heritage valorization in the city of Pula taken as a case study. After elaborating the theoretical approach and methodology, the authors analyze the economic, social, environmental and cultural impacts of the valorization of fortified heritage of the city of Pula through four case-studies. The analysis was based on available statistical data and interviews with key stakeholders (experts and the local population). Although exceptionally valuable, the former military architecture in Pula is mostly neglected, often devastated and still not recognized as the potential catalyst of the local social and economic development. The paper is focused on cultural heritage valorization through the sustainable four domain development approach. The emphasis is put on fortified and former military heritage as a specific category of a common European heritage, which is still waiting for an integrated approach for its proper protection and valorization, especially in the Central Europe and SEE region. As a living witness to the dramatic history of conflicts between European nations, fortified heritage is today often neglected and abandoned, waiting for an opportunity for a new life and function. Bearing in mind global trends and strategic guidelines of international organizations in culture and tourism, the authors indicate possible models of the valorization of the former military architecture for different civil initiatives, cultural and scientific purposes, as well as the promotion of the core humanistic values such as peace, democracy, human rights and intercultural dialogue.

Keywords: Sustainable development; Cultural heritage; Fortified heritage; Community development; Croatia; Pula

JEL Codes: Q01

1. INTRODUCTION

Inequality, insecurity, unemployment, disintegration and unsustainable growth are the main socioeconomic challenges in the turbulent global context, characterized by the political, economic, social and environmental crisis. On the other hand, recent forecasts predicting global megatrends by 2050 (The Economist, 2012) propose "sustainable well-being based on renewable energy" (Randers, 2014) as the new paradigm of sustainable growth. Despite the current chaotic events, according to leading experts, "there is every chance that the world in 2050 will be richer, healthier, more connected, more sustainable, more productive, more innovative, better educated, with less inequality between rich and poor and between men and women, and with more opportunity for billions of people" (The Economist, 2012, 12). In this context, balancing between the global and the local, between cultural and economic values (Randers, 2014, 190-191), migration flows, finance crisis, regional conflicts and environmental changes will mostly affect the Euro-Mediterranean region, characterized by rich cultural diversity and natural resources as the basis for tourism development as one of the main economic activities.

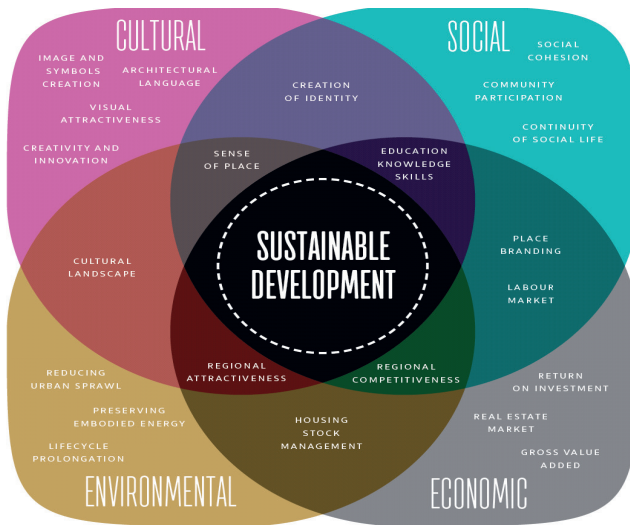
The paper elaborates development potential of a proper valorization of certain specific categories of heritage in sustainable tourism. Besides the analysis of current best practices in the fortified heritage valorization in Croatia, it will present selected examples of valorization of fortified heritage of the city of Pula taken as a case study. After the introductory theoretical approach and methodology, the authors analyze the economic, social, environmental and cultural impacts of the valorization of fortified heritage of Dubrovnik, Šibenik and the city of Pula through four case-studies. The analysis was based on available statistical data and interviews with key stakeholders (experts and the local population). The research indicates that, although exceptionally valuable, the former military architecture in Pula is mostly neglected, often devastated and still not recognized as the potential catalyst of the local social and economic development.

The paper is focused on the valorization of cultural heritage through the sustainable four domain development approach. The emphasis is put on fortified and former military heritage as a specific category of common heritage, which is still waiting for an integrated approach for its proper protection and valorization, especially in the Central Europe and SEE region. As a living witness to the dramatic history of conflicts between European nations, fortified heritage is today often neglected and abandoned, waiting for an opportunity for a new life and function. Bearing in mind global trends and strategic guidelines of international organizations in culture and tourism, the authors indicate possible models of the valorization of the former military architecture for different civil initiatives, cultural and scientific purposes, as well as the promotion of the core humanistic values such as peace, democracy, human rights and intercultural dialogue.

2. THEORETICAL APPROACH AND METHODOLOGY

Valorizing and measuring socio-economic impacts generated by cultural heritage projects includes various impact assessment practices, methods and techniques, based on both qualitative and quantitative, multidisciplinary and participative research, which allow a greater inclusion of all stakeholders concerned with cultural heritage (Dümcke & Gnedovszky, 2013; Europa Nostra & ENCATC, 2015; Van Balen & Vandesande, 2016). Development of innovative methodologies and toolboxes aimed to raise greater awareness on the multiple benefits of cultural heritage was the main goal of the recent European project Cultural Heritage Counts for Europe, which proposed strategic recommendations for the EU policy makers for tapping into heritage’s full potential.

Figure 1.: The holistic four domain approach to sustainable development



Source: Europa Nostra, ENCATC (2015): Cultural Heritage Counts for Europe - Final Report, p. 101.

Starting from the principles of the Faro Convention (Council of Europe, 2005) and the Hangzhou declaration (UNESCO, 2013), which recognize the humanistic values of cultural heritage as a driver for sustainable development, as well as recent strategic documents which affirm the importance of cultural heritage as a strategic resource for a sustainable and peaceful Europe, the holistic four domain approach to cultural heritage impact research was proposed, providing compelling evidence of the value of cultural heritage and its impact on Europe’s economy, culture, society and environment. The evidence presented in the report suggests that safeguarding cultural heritage works as a “multiplier” through which investment can have positive impacts beyond those initially intended, thereby increasing the level of benefit and sustainability of the initial investment.

Another very useful methodological approach was developed during the Ljubljana Process: Rehabilitating our Common Heritage, the most ambitious joint initiative of the Council of Europe and the European Commission, focused on the instrumental potential of cultural heritage in sustainable development and promotion of European democratic culture in the SEE region. The rehabilitation projects helped in realizing the historic environment's potential to contribute to economic development, increase employment, stimulate prosperity, and enhance the quality of life. The leading idea is that heritage objects are assets, part of the solution to economic development rather than an obstacle to it.

Presenting the challenges facing cultural heritage in the SEE region, Barlett, W. et al. (2015) have proposed the methodology of measuring different economic and social benefits of investing in cultural heritage. The analysis of the national policy framework for investment in cultural heritage on the basis of the Heritage Assessment Reports was complemented with case studies, including interviews with key stakeholders, local community and visitor surveys.

According to Meijer (2013), the revitalization of fortifications implies the analysis of fortifications from historical, morfological and economic aspects. As part of cultural heritage, fortifications could have a significant role in the process of implementing the sustainable development concept. Considering the four pillars of sustainable development, the authors have analyzed the contribution of fortifications to all four dimensions of sustainability:

- *Economic sustainability*: economic effects are visible already in the process of conservation and restoration through the involvement of specialized experts. The inclusion of fortifications in tourism supply stimulates entrepreneurship and creativity, generates new employment and increases the incomes of included stakeholders and, through connections with other economic activities, multiplication effects could be created. Restoration with materials and techniques that are adjusted to original construction styles enables the preservation of traditional crafts and fosters the local economy;
- *Social sustainability*: the inclusion of local communities in the creation of revitalization projects, their implementation and management, results in strengthening the social capital of a community, contributes to social integration and social inclusion of different stakeholders;
- *Environmental sustainability*: the renovation and functional use of fortifications contribute to environmental sustainability if the process includes environmentally acceptable construction materials, environmentally acceptable lighting, energy-efficient renovation, sustainable waste management and recycling, and their fitting into the visual aspect of the environment, etc.;
- *Cultural sustainability*: fortifications, as part of the cultural and historical heritage, are influencing the cultural identity of a particular local community.

Also, their renewal with materials and techniques in harmony with the original construction styles contributes to preserving local cultural diversity.

Fortresses that have lost their primary, defensive function are often abandoned and excluded from the social life of a community because of a lack of basic infrastructural conditions, i.e. electricity, water, gas, roads, etc. The revitalization of fortresses in the context of sustainable development should be based on renewable energy (e.g. solar energy (photovoltaic systems), biomass, geothermal energy, etc.). However, the implementation of renewable energy, although technologically possible and financially effective, is often not possible due to conservation regulations which protect the visual integrity of fortresses and the cultural landscape.

The sustainable valorization of fortifications requests a coordinated, integrated and systematic approach that has to involve all relevant stakeholders. There are significant preconditions that should be considered and fulfilled in the process of defining new functions to fortified heritage: specificity of the natural environment, accessibility of heritage, the possibility of using renewable energy, specific architectural and restoration techniques, interests of the local community, potentials for the local economy, etc. The proper economic valorization of fortified heritage through organizing congresses and events, recreational activities, visitor centers, etc. brings incomes for its maintenance and long-term sustainable use.

Besides their historical, cultural and educational importance, well-preserved and revitalized fortifications can play an important role in the socio-economic development of local communities. Although such economic and social impacts could be achieved in the process of revitalization and renovation by including various local experts and investors, a far greater economic impact is achievable by designing and implementing models of sustainable use of fortifications. European models of best practice, e.g. the fortification complexes of Suomenlinna in Helsinki (Finland), Seaplane Harbour (Estonian Maritime Museum) in Tallinn (Estonia), the fortification system in Krakow (Poland), fortified cities such as Valletta (Malta), regenerated naval ports such as Portsmouth (UK), individual objects such as Citadel Spandau in Berlin (Germany), or examples from Croatia: Dubrovnik City Walls, St. Michael's and Barone Fortress in Šibenik, Fort George on Vis Island, Osijek Fortress, etc., all confirm this. Besides community development, revitalization, renovation and economic valorization of fortifications can contribute to the development of cultural tourism by converting fortresses into museums and exhibition spaces, venues for music and artistic manifestations, various entertainment, gastronomic and accommodation facilities, etc.

In this paper, the authors have combined the abovementioned approaches with their own research methodology, developed to determine the impacts of fortified heritage valorization through the sustainable four domain development approach. A hybrid participatory methodology, based on a combination of qualitative and quanti-

tative research, has been applied. The analysis was based on available statistical data, interviews with key stakeholders, i.e. experts from local authorities, relevant cultural and tourist institutions and NGOs, and the community survey.

3. ANALYSIS OF CURRENT PRACTICES OF FORTIFIED HERITAGE VALORIZATION IN CROATIA

Due to its important geopolitical position and turbulent history, Croatia is characterized by a rich diversity of cultural landscapes and abundance of military architecture from different historical periods. The cultural identity of Croatia is the result of its specific multicultural history and geographical position at the crossroads of European cultures. It is a mixture of the good traditions of the Mediterranean and Central Europe, as well as the Balkans cultural circles, and as such presents a unique mosaic of regional diversities. New European programmes and projects, focused on the common regional heritage of Central European and South-East European countries, present new opportunities for transnational cooperation in innovation, transportation, cultural and infrastructure projects for sustainable growth. At the same time, they valorize a common European culture and identity, based on similarities in historical, social and cultural characteristics and a common multicultural experience. This chapter presents the analysis of the current best practices in fortified heritage valorization in Croatia, i.e. the city of Dubrovnik and the city of Šibenik.

3.1. THE VALORIZATION OF FORTIFIED HERITAGE OF THE CITY OF DUBROVNIK

Dubrovnik is Croatia's most famous cultural brand and a leading tourist attraction. A historic walled city-state and maritime power that remained independent for hundreds of years, is today a symbol of Croatian history and culture. The monumental walls that encircle Dubrovnik, marked by towers and overlooking the sea, are undoubtedly the city's most famous feature. 'The pearl of the Adriatic' was inscribed in the UNESCO World Heritage List in 1979. The Society of Friends of Dubrovnik Antiques is a relevant stakeholder from the local community, directly involved in heritage management. It was founded in 1952, with the main goal to sensitize the broader public to the importance of preserving Dubrovnik's cultural and historical heritage, raising awareness and interest in them, appealing to the pride and appreciation of the public.

3.1.1. ECONOMIC SUSTAINABILITY

According to data obtained by the Society of Friends of Dubrovnik Antiques, the number of visitors to Dubrovnik City Walls is constantly growing. With an increas-

ing number of visitors (more than 1 million tourists in 2016) and with an increase in ticket prices in 2017 (from 16 to 20 EUR), Dubrovnik City Walls present a huge development potential with more than 20 million EUR a year (which is two times more than the budget of the Ministry of Culture for tangible heritage). The cultural heritage of the city, including its spectacular fortifications, presents the basis for high quality cultural tourism offer. The demand for Dubrovnik attractions often exceeds local infrastructural and suprastructural capacities, which raises the question of its future sustainability. Specific cultural tourism offer based on fortified heritage encourages the development of local cultural and tourism entrepreneurship.

3.1.2. SOCIAL SUSTAINABILITY

The local population is very much involved in the heritage management process. Besides the aforementioned activities of the Society of Friends of Dubrovnik Antiques, which takes care of the preservation of the city walls, there are a lot of NGOs and local enthusiasts involved in raising awareness and conducting information campaigns, appealing to the pride and appreciation of the public.

Although the unique management model of heritage preservation includes all interested stakeholders (mainly local citizens organized around the Society of Friends of Dubrovnik Antiques), there are sometimes disputes over the distribution of income from tickets or some restoration works.

3.1.3. ENVIRONMENTAL SUSTAINABILITY

There are different public discussions regarding the sustainability of tourism in Dubrovnik (cruising tourism, gentrification, etc.), as well as regarding the announced investments in the city surroundings.

3.1.4. CULTURAL SUSTAINABILITY

Besides its contribution to the conservation of a unique cultural heritage as a significant aspect of the cultural identity of a local community, as well as cultural diversity, the rich fortified heritage is also used as a unique stage for the most representative and prestigious cultural manifestations and festivals.

3.2. THE VALORIZATION OF FORTIFIED HERITAGE OF THE CITY OF ŠIBENIK

Some very good examples of a successful revitalisation of fortifications through involvement of the local community in Croatia are St. Michael's fortress and the Bar-

one fortress in Šibenik. St. Michael's fortress is a recognizable symbol of the city, and as such, together with the entire fortification system, it bears great cultural-historical and spatial-urban significance, and represents the significant architectural heritage of Dalmatia and Croatia. **In June 2014, the city of Šibenik began the process of the revitalization of the Barone Fortress. It was built in 1646 on Vidakuša, the 80-meter-high hill above the city. Along with the other three fortresses in Šibenik, it represents a unique defense system, which resisted the enemies for centuries.** The projects of their revitalization were financed by the European Regional Development Fund, IPA IIIC - BRI.

3.2.1. ECONOMIC SUSTAINABILITY

The revitalized fortifications are included in the Šibenik tourism offer, realizing significant income, as presented in Table 1.

Table 1.: Economic impacts of the revitalization of St. Michael's and Barone fortresses

Fortress	No of visitors	Income (in EUR)	
St. Michael	390 000 ¹	837.168,00 ³	635.652,00 ⁴
Barone	50 000 ²		

1 Number of visitors in the period from 07/06/2014 to 31/01/2017

2 Number of visitors in the period from 29/01/2016 to 31/01/2017

3 Income realized in St. Michael's fortress in the period from 07/06/2014 to 31/01/2016

4 Income realized in both fortresses by unified tickets in the period from 01/02/2016 to 01/02/2017

Source: Economic impacts of revitalization of fortifications, Department for management of objects of the fortification system. City of Šibenik, internal data, 2017.

In the Department of Management of Fortification System Facilities, later the Public Institution Fortress of Culture Šibenik, there are 25 employees. The specific objective of the revitalization project was to create a new tourist attraction at the very heart of the old town. The numerous artistic, cultural and music events, and large numbers of visitors confirm the successful realization of the stated goal. The fortresses contribute to the image of the Republic of Croatia, and especially to the city of Šibenik as a must-see destination of cultural tourism. The project has engaged various SMEs from the local community in the fields of construction, restoration, infrastructural works, creative industry, high-tech innovative services, etc.

3.2.2. SOCIAL SUSTAINABILITY

The revitalization of fortresses has enhanced the feeling of uniqueness and authenticity of the city of Šibenik. It was a result of the revitalization process itself, but also of various educational programmes, the equipment of a gastro-cultural centre,

children's playground, the presentation of the fortresses by an augmented-reality platform, etc. As previously mentioned, the Barone fortress is mostly used by citizens who are members of the Šibenik Fortresses Friends Club, with around five thousand members. The process of revitalization connected various stakeholders: public institutions, entrepreneurs from the Šibenik-Knin County, travel agencies and major hotel companies, tourist guides, and local inhabitants, which resulted in improved communications, collaboration, participation and social wellbeing.

3.2.3. ENVIRONMENTAL SUSTAINABILITY

The revitalization of fortifications was realized by using environmentally acceptable construction techniques and materials. The projects have contributed to the aesthetics of the local environment and the preservation of the old town of Šibenik. Besides, an exclusive ecological brand Barone has been developed during the project, intended to be used for presenting the traditional gastro-cultural products in the gastro-cultural centre on top of the fortress.

3.2.4. CULTURAL SUSTAINABILITY

The revitalized fortifications of Šibenik are significant agents of education, formally through visits organized by different educational institutions from Croatia and abroad, and informally through visitors learning from their own experience. All those activities contribute to individual knowledge and social cohesion. The fortresses are used as venues for many social and cultural events.

4. THE VALORISATION OF FORTIFIED HERITAGE OF THE CITY OF PULA

4.1. RESEARCH FRAMEWORK

As a city of three thousand years of historical continuity, with its urban identity formed in the key periods of the Roman, Venetian and Austro-Hungarian rule, Istria's largest city Pula is recognizable for the abundance of cultural heritage sites (with the amphitheatre Arena as the iconic symbol of the city), industrial and former-military heritage, developed cultural industries and festivals (one of the oldest film festivals in the region - the Pula Film Festival, Pula Book Fair in the ex-Marine Casino, and popular music festivals in the Austrian fortifications), and the nearby Brijuni Islands, a unique cultural landscape and a national park. The data collected through the primary research have shown that Pula has the potential to be considered a typical cultural tourism destination, with an emphasis on heritage tourism and

creative industries, multicultural history, alternative culture and the local way of life (Urošević, 2016).

The heritage of classical antiquity is what makes Pula a typical Mediterranean city. Not as much is known about the impressive heritage of the Austro-Hungarian Monarchy. After being selected as the main Austrian naval port in 1850, in only 50 years Pula was transformed from a deserted village with 900 inhabitants into a multicultural European *metropolis*, and its population increased as much as 50 times! The well preserved fortification system from this period, which was built from 1813 to 1918 to protect the main Austrian naval port, is still awaiting proper valorization (Krizmanić, 2009). This chapter analyzes the current practices in the fortified heritage valorization of the city of Pula.

The development potential of fortified heritage was elaborated during the pilot-project of its valorization - ADRIFORT (Adriatic Fortresses and Military Areas) from 2013 to 2015 as part of the IPA Adriatic CBC Programme 2007-2013. It included Austro-Hungarian fortifications on the northern part of the Pula harbor, in the suburban area of Štinjan (i.e. Punta Christo, Monte Grosso, Munide and Valmaggione). The partners in the project, which intended to establish a permanent partnership in managing the natural and cultural heritage on the Adriatic, were the city of Pula and the Juraj Dobrila University of Pula. Besides various scientific and cultural activities, an official bike route called Adrifort 313, of 10 km in length, 24 km of pedestrian paths organized in 5 trails, and a parking zone were all created during the project. The area was equipped with benches, picnic tables, information boards (in three languages) and trail signs.

The number of tourists and overnight stays in Pula from 2005 to 2015 are presented in Table 2. The increasing trends in the number of visitors in the observed period (36%) and the increase in overnight stays (45%) could be noticed. Traditionally, the most numerous are tourists from Germany, Italy, Austria, the United Kingdom and Slovenia. The tourists from eight selected Central European countries are grouped as CE tourists. Their share in the total number of tourists and overnight stays is more than a half. As it will be indicated in the paper, since the elements of the Central European heritage (fortified heritage, Austrian villas and parks, cultural routes and related narratives) are still not recognized, well presented, interpreted and included in the tourist offer of the city, there is still a very small number of tourists attracted by this heritage. On the other hand, the paper indicates a great cultural tourism development potential of this segment of a common multicultural heritage which, if valorized and interpreted in a proper way, could present a significant attractiveness factor.

Table 2.: The number of tourists and overnights in Pula from 2005 to 2015

Year	Tourists	CE Tourists*	Share (in %)	Overnights	CE Tourists*	Share (in %)
2005	222.462	130.957	58.86	1.118.287	700.017	62.62
2006	224.590	121.013	53.88	1.099.098	627.949	57.13
2007	245.168	127.348	51.94	1.142.118	652.398	54.89
2008	243.549	129.326	53.10	1.140.001	648.517	56.89
2009	231.882	129.651	55.91	1.161.814	710.497	61.15
2010	219.616	121.870	55.49	1.153.410	695.786	60.32
2011	237.435	129.878	54.71	1.273.117	771.963	60.64
2012	247.993	129.887	52.38	1.383.843	791.612	57.20
2013	259.159	133.230	51.41	1.414.526	793.259	56.08
2014	280.961	148.952	53.02	1.520.962	876.806	57.65
2015	303.012	163.567	53.98	1.617.529	943.781	58.35

*Tourists from: Austria, Czech R., Germany, Hungary, Poland, Italy, Slovakia and Slovenia.

Source: Tourism Office Pula, Statistical data 2017.

From the tourism offer perspective, there are only two agencies in the city of Pula offering organized visits to Austro-Hungarian fortifications, IstraAction Ltd Pula and Maremonti Istra Ltd Pula. Since their offer is still not recognized as a tourist product, they attract only a small specialist segment of visitors, interested in fortified architecture and military history. The Pula Fortification Tour, implemented by Maremonti Istra Ltd Pula, is a cycling excursion which includes a tour all over the town. Based on the agency's estimation, about one third of tourists choosing cycling excursions are interested in a fortification tour as well. They mostly come from Germany, France, the UK, USA and Canada. The agency estimates that their consumption is higher than the average tourism consumption in Pula, so this segment has the potential for growth.

Despite their great development potential, the Croatian Ministry of Culture has financially supported the preservation of fortifications with a very limited amount in the period from 2002 to 2016. According to an interview with the experts from the Conservation office of the Ministry of Culture of the Republic of Croatia, the investments in the preservation of fortifications in the city of Pula were insufficient, i.e. in the amount of only 150.000 EUR in the period from 2002 to 2016.

The authors have analyzed the economic, social, environmental and cultural impacts of the fortified heritage valorization of the city of Pula through four case-studies. The research was based on available statistical data and interviews with experts and the local population. Besides interviews with representatives of cultural institutions and NGOs, as well as with the local government and cultural heritage experts, consultations with key stakeholders included a community survey on a random sample of 250 local residents. The survey consisted of 13 questions of a predomi-

nantly open type, related to the main cultural heritage resources of the city of Pula, the models and possible socio-economic impacts of their sustainable valorization.

The results of the research indicated that cultural heritage is recognized as the most important element of the city brand. The vast majority (98%) of local residents consider cultural heritage to be one of the most important local development resources, mainly because of its abundance, attractiveness, diversity and uniqueness. As the main problems in the valorization of the former military and fortified heritage, our respondents mentioned insufficient funds, neglect, disrepair and devastation due to inadequate management, problems with ownership, infrastructure problems, and a lack of knowledge and coordination among all interested stakeholders.

Since the Venetian Castle, Aquarium Verudela, Brioni Minor (with Ulysses Theatre) and Štinjan Fortresses (which are used by local NGOs for music festivals) were highlighted by the community survey, as well as through the interviews with experts, as the local examples of good practice in the fortified heritage valorization, the authors have chosen them for further analysis. The conducted research has indicated some key issues regarding possible benefits of investing in heritage for sustainable socio-economic urban development and confirmed the results of the previous research related to models of valorization of some specific and unique elements of historic urban environment of Pula (Urošević, 2016).

4.2. THE CASTLE - THE HISTORICAL AND MARITIME MUSEUM

The Historical and Maritime Museum - Museo Storico dell'Istria is located in the adapted Venetian fortification on the town's central hill. It was built in the 17th century and designed by the French military architect Antoine de Ville. Built on the most important strategic place of Pula, on a hill where Histrians had previously located their ancient hillfort, Romans their castrum and feudal lords the medieval castrum, the Castle made part of the first defensive system of Pula in the 17th century, which included the fortress on the island of St. Andrew and two defensive belts - embankments (Krizmanić, 2009, 12). Nowadays, it carries out its activities as a County institution that keeps part of the cultural heritage, from the High Middle Ages until recent history, presented to the public by permanent or temporary exhibitions or publications. In the rich museum fundus, there are more than 75.000 artifacts of cultural, historical, political, military and ethnographic significance, divided in seventeen collections.

4.2.1. ECONOMIC SUSTAINABILITY

In the period from 2011 to 2015, it was visited by 261.632 visitors, i.e. approximately 52.364 per year. There are 11 full-time employees. In the period from 2011 to 2015, there were different investments related to the cultural heritage valorization

conducted by a local company specialized in restoration. The total value of investments was approximately 1.2 million Euros. The restoration of the old water reservoir and its conversion into a cultural and visitor centre was co-financed by the EU project HERA, Programme IPA Adriatic CBC 2007-2013. It was opened in November, 2015. It is intended for exhibitions, cultural tourism activities, educational activities, etc. The multimedia space is named after and dedicated to Herman Potočnik Noordung, a pioneer of astronautics who was born in Pula 120 years ago. The value of the HERA project Programme IPA Adriatic CBC 2007-2013 invested in the valorization of the Austro-Hungarian heritage of Pula was 560.112,41 EUR.

4.2.2. SOCIAL SUSTAINABILITY

Although the visits to and the use of the visitor centre are not chargeable, it could have a significant socio-cultural impact on the quality of life of different stakeholders. For local inhabitants, it can reinforce their feelings of attachment and belonging to the city and its unique history and heritage. For tourists, it can make them feel pride in visiting a place of historical importance.

4.2.3. CULTURAL SUSTAINABILITY

The visitor centre, intended for exhibitions, cultural tourism and educational activities, could improve interactions between different stakeholders. Within the framework of the HERA project, several workshops which involved students, tourist guides and the local community took place in the new multimedia space. During the workshops, the students presented their research and proposals for new cultural-tourism offer in the city, including new cultural routes around fortified architecture and Austro-Hungarian heritage. The need for such routes was discussed with stakeholders from the cultural and tourist sectors, as well as with experts from the local government at previous workshops.

In the context of fortified heritage in Pula, it is interesting to mention the underground galleries Zerostrasse, which is managed by the Historical and Maritime Museum. As part of a 10 km long system of the former Austro-Hungarian underground shelters, Zerostrasse is located below the Castle; it is about 400 meters long and has a central hall. It is used for different cultural manifestations, exhibitions and concerts. The number of visitors in the period from 2011 to 2015 was 88.071, i.e. approx. 17.600 per year. The galleries create significant social benefits by achieving a sense of place and educating local inhabitants and tourists.

4.3. FORT VERUDELA - THE PULA AQUARIUM

The Pula Aquarium, located in the 130 years old Fort Verudela, in a tourist zone in the southern periphery of the city, is the biggest and best equipped aquarium in Croatia. It was built and equipped in the period between 1881 and 1886, together with the nearby San Giovanni Battery, with which it comprises a single defensive complex. The defensive complex of Fort Verudela and the San Giovanni Battery has been degraded by interventions in some of the facilities and in the immediate environment. Though used for different purposes in the past, Fort Verudela itself did not suffer any damage, and is today well preserved. Fort Verudela hosts the Aquarium from 2002, and the Marine Educational Centre and the only Sea Turtle Rescue Centre in Croatia from 2005.

4.3.1. ECONOMIC SUSTAINABILITY

The aquarium is managed by a private company. This unique project, which combines protection of endangered marine species with educational and scientific activities, as well as the preservation and valorization of fortified heritage, started in 2002 as an initiative of an enthusiast oceanographer, and in 15 years has become a local attraction and an example of good practice of sustainable reuse of cultural heritage, employing 15 experts and engaging thousands of young students in innovative projects of protecting natural and cultural heritage with multiple benefits for the local community. The number of visitors and the number of employees are presented in the following table.

Table 3.: The number of visitors, employees and incomes in the period 2012 - 2016

Year	Visitors	Number of employees	Incomes (in EUR)
2012	47300	9	323.421
2013	53.100	9	457.772
2014	60.500	10	480.476
2015	77.130	12	651.516
2016	97.000	16	914.171

Source: Aquarium Pula Ltd, Pula, internal data 2017.

4.3.2. SOCIAL SUSTAINABILITY

Acquiring an increased sense of uniqueness and authenticity of the Adriatic Sea; reinforcing the feelings of attachment and belonging to the Mediterranean region.

4.3.3. ENVIRONMENTAL SUSTAINABILITY

The reconstruction and revitalization of the fortress have contributed to its preservation and its environmental sustainability. The core business of the company is to host more than one hundred fish species from the North and South Adriatic and more than 50 fish species from tropical seas and fresh waters, as well as fish from Croatian rivers and lakes. Through their activities, they contribute to the environmental awareness of different stakeholders.

4.3.4. CULTURAL SUSTAINABILITY

The aquarium is a significant agent of education. Formally, it is realized through a special educational program called "Blue School", which involves more than 5 thousand young enthusiasts a year. It presents a specific educational format for children from elementary and secondary schools as well as students, contributing to their acquaintance with the specific flora and fauna of the Adriatic Sea.

4.4. FORT BRIONI MINOR - THE ULYSSES THEATRE

The Fortress Minor is located on the Brioni Minor Island in the Brijuni National Park. Fort Brioni Minor was built in the period from 1895 to 1902 as part of the second defensive belt of the Pula naval port. The basic purpose of this impressive fort, capable of putting up a defense of its own, was to control the sea roads that led to Pula from the north and through the Fažana Channel. The Ulysses Theatre, an artistic project initiated by a group of actors, theatre directors and writers, engages more than 300 artists and cultural workers from around the world every summer season. Inaugurated in 2001, it transforms the biggest fortress of the local fortification system into a unique open-air stage under the stars, in the beautiful nature of the national park.

4.4.1. ECONOMIC SUSTAINABILITY

Various cultural programmes realized through the Ulysses Theatre result with entrance fees (10-30 EUR). The number of spectators and artists is shown in the following table. There are no full-time employees, but five persons are engaged with the project throughout the whole year. After 15 successful artistic seasons, this unique artistic project already created a specific cultural tourism offer which contributes a lot to the image of the Brijuni Islands as a destination of sustainable cultural tourism.

Table 4.: The number of spectators and artists in the Ulysses Theatre program in the period from 2012 to 2016

Year	Spectators	Number of participants
2012	13.000	478
2013	14.000	486
2014	8.500	528
2015	8.000	618
2016	7.000	526

Source: Ulysses Theatre, Pula, internal data 2017.

Among the visitors and artists, many of them are coming from abroad, so the theatre has a significant impact on the promotion of Pula and Croatia.

4.4.2. SOCIAL SUSTAINABILITY

Besides its own theatre production, this unique international artistic colony organizes different creative workshops in theatre, movie and music production, where internationally known artists work with different groups of students, including children with special needs (music therapy).

4.4.3. ENVIRONMENTAL SUSTAINABILITY

All activities of the Ulysses Theatre and the international Summer Workshop are located on the island which is part of the Brijuni National park, so all activities are harmonized with the proper regulations.

4.4.4. CULTURAL SUSTAINABILITY

The international workshop on architecture has been organized since 2001. Each year, 30 experts and students from various Central-European countries participate in it. During the ten-day workshop in the Brijuni National Park, the students led by their university professors, work on the research, analysis, documentation, and valorization of the fortifications and their conversion proposals.

4.5. FORT PUNTA CHRISTO - MUSIC FESTIVALS

The fortress belongs to the city of Pula, but it is managed by the Association of Friends of Fort Punta Christo and the Association for the Promotion of Music Culture, Arts and Freedom of Expressions - Seasplash. The Association of Friends of Fort Punta Christo was involved in the process of revitalization from 2002 until

2009. In 2010, they made a partnership with the Association for the Promotion of Music Culture, Arts and Freedom of Expressions - Seasplash. Those associations have been authorized to manage the fortress until 2018.

The fortress Punta Christo is in a good state, thanks to its geographical isolation from the urban centre and the effort and enthusiasm of the aforementioned associations that have cleaned the exteriors and interiors of the fortress. The members of the associations have performed various other activities in order to enable its use (Belić Raunić, 2011: 26).

During summer there are different music manifestations: the Seasplash Festival, festivals of electronic music Outlook and Dimensions, and others. The Outlook Festival started in Croatia in 2008 with 1,500 participants, while in 2016 there were 13,500 visitors, i.e. nine times more. It attracts a population between 18 and 25 years of age. The structure of visitors was: 65% from the UK, 30% from various European countries, and 5% from the USA, UAE, and Costa Rica, Australia, Japan, Egypt, Canada, Argentina and other countries. The Dimensions Festival began in 2012 with 4,000 visitors. It attracts a population between 24 and 30 years of age. In 2016, there were about 8,000 visitors. The structure of visitors was: 40% from the UK, while the remaining 60% was from various European countries.

4.5.1. ECONOMIC SUSTAINABILITY

The festivals reached about 22,000 visitors in 2016, mostly young ones, in the age group from 18-35, out of which 10% were from Croatia, 10% from the SEE region and 80% from other countries, mostly the UK. As indicated in the following table, the estimated total number of visitors is much bigger.

Table 5.: Estimation of all visitors (including passers-by) in the summer period

Year	Number of visitors
2012	36.000
2013	40.000
2014	47.000
2015	49.000
2016	54.000

Source: Pozitivan ritam Ltd., internal data.

Each year, more than four hundred people are directly engaged in organizing both festivals, and an additional thousand people are engaged in different related activities. If we consider all programmes and activities on the fort during the whole year, more than 3000 people are engaged in different departments (organization, hospitality, concessions, etc.). According to the organizers, the biggest challenges

are related to inadequate infrastructure (electricity, water, toilets, heating), which complicates the realization of programmes and precludes its use in the colder season.

The only available data on financial impacts of the observed festivals, offered by the Seasplash Association, is the estimation of economic impacts realized by the company NSV Promotions, a British partner of the festival, in collaboration with different involved stakeholders. The study differentiates short-term impacts, i.e. tourists' consumption and employment, and long-term impacts, i.e. "economic development of the economy of Pula that will result in an increase of the life-standard of the local population" (NVS Promotions, 2012). The study, citing the mayor's office, estimates the value of visitor consumption during the Outlook Festival at more than 5.3 million EUR from the year 2011 onwards. The costs of organizing the festivals are shown in Table 6. In the structure of total costs, approximately 85% are related to the Outlook Festival, while 15% are related to Dimensions.

Table 6.: The costs of organizing the Outlook and Dimensions festivals

Item:	Cost (in EUR)
Local employees	56.139,00
Transport of performers, transfers of performers and employees	367.540,00
Accommodation of performers and employees	292.476,00
Rent (tents, fences, electricity, mobile toilets)	288.961,00
Compensation to the city of Pula	212.350,00
Cleaning of the fortress (including costs from 2010 to 2012)	66.866,00
Various expenses (office materials, other different materials)	228.116,00
Total costs	1.512.448,00

Source: NVS Promotions et al., Economic Impacts Report: Outlook & Dimensions Festivals, Pula, Croatia 2012, pp. 8-10.

Besides new jobs with an increased diversity of skills, the study points out the two festivals' contribution to developing entrepreneurial skills necessary for organization and event management, as well as to stimulating local inhabitants toward entrepreneurial activities.

The anonymous questionnaire distributed to a sample of 2.000 visitors showed that the average consumption (without entrance tickets, costs of travel and accommodation) of visitors to the Outlook Festival was estimated at 437 Euros, while for those visiting the Dimensions Festival, the estimation was at 500 Euros. It is estimated that, on average, tourists stay for 7 days at the Outlook Festival, and 5 days at the Dimensions Festival. The average price of accommodation (without camping) was 20 Euros for visitors of the Outlook Festival, and for those visiting the Dimensions Festival 25 Euros per night.

Table 2 shows the estimation of economic impacts of the Outlook and Dimensions Festivals for 2012, and estimations for 2016.

Table 7.: Estimation of economic impacts of Outlook and Dimensions festivals for 2012 and 2016 (in EUR)

Type of consumption	2012		2016.*	
	Outlook Festival	Dimensions Festival	Outlook Festival	Dimensions Festival
Accommodation	1.702.250,00	4.924.487,00	1.764.000,00	984.974,00
Other expenses (without accommodation, tickets and air transport)	5.629.993,00	1.979.605,00	5.846.531,00	3.595.210,00
Consumption of organizers	1.366.378,00	232.396,00	1.418.931,00	464.792,00
Total consumption	8.698.621,00	2.704.487,00	9.029.462,00	5.044.976,00
Total consumption during both festivals		11.403.108,00		14.074.438,00

*Authors' estimations

Source: NVS Promotions et al., Economic Impacts Report: Outlook&Dimensions Festivals, Pula, Croatia 2012, pp. 8-12.

From the perspective of the local community, the festivals contribute in different ways: the visitors are accommodated in many apartments in the local community, different shops in the town increase their incomes, and transport services increase their business activity. There is a potential that those guests will come back in the future, attracted by different motives.

4.5.2. SOCIAL SUSTAINABILITY

The festivals create different social impacts: the traffic regulations are adjusted in accordance with the interests of local population; they are enriching the cultural scene with quality performers, inclusion of Croatian performers in the festivals' programmes, and the possibility of volunteer work.

4.5.3. ENVIRONMENTAL SUSTAINABILITY

The study points out different investments in the cleaning and preservation of the fortress Punta Christo and its surrounding in the period from 2010 to 2012, estimated at 66.865,00 Euros. Different up-to-date methods of waste management and recycling are implemented.

4.5.4. CULTURAL SUSTAINABILITY

The Seasplash Club - Punta Christo organizes different cultural and educational programmes aimed at the cultural heritage revitalization in order to contribute to the cultural and social capital of the city and the development of cultural tourism. They are especially focused on young people, trying to stimulate them towards active participation and creation of their own projects.

However, apart from the aforementioned study, no other relevant research has been done to analyze the attitudes of local inhabitants regarding the quality of life in the two-week period when these festivals take place. Besides traffic jams, local inhabitants usually point out their disappointment regarding the levels of noise, which causes constant stress to a part of the town's inhabitants. Besides, the approach to the beaches and the sea is *de facto* blocked, although it is a public maritime property. Often, these types of festivals are related with consuming various types of drugs, which implies a much more severe level of control and monitoring.

All of the above-mentioned economic, social and environmental impacts indicate great importance of those festivals. However, improving dialogue and the inclusion of different groups of stakeholders will contribute to further improvements of relations within the local community.

5. CONCLUSION

Bearing in mind current challenges facing the European Union, as well as the main policy documents and strategic recommendations, the authors presented the most interesting local models of reuse of the former military and fortified architecture for innovative civil purposes, cultural, scientific and educational activities, as well as music festivals and a very attractive cultural tourism offer. The authors applied the methodology proposed by experts as well as local experiences, combining quantitative and qualitative analysis, involving key stakeholders and available cultural statistics.

The conducted research on the current practices of fortified heritage valorization through the sustainable four domain development approach in Croatia indicates possible models of valorization of some specific elements of the common European heritage with a huge development potential. The analysis of current best practice (Dubrovnik as the most successful participatory heritage management model, and Šibenik as the most ambitious recent EU funded project of revitalization of fortified heritage) indicates exceptional socio-economic benefits of investing in cultural heritage.

Exploring the impacts and models of the proper fortified heritage valorization was not so easy in Pula, the city with the most representative specimens of the com-

mon European heritage, including the fortified heritage of the former main Austro-Hungarian naval port. Although exceptionally valuable, this former military architecture is neglected, often devastated and still not recognized as the potential catalyst of the local social and economic development. On the other hand, there are still no available systematized data and cultural statistics, since there is no official institution that would deal with such issues. Several elaborated examples of good practice (Historical and Maritime Museum in the Venetian Castle; Aquarium and the Sea Turtle Rescue Centre in Fort Verudela; Ulysses Theatre in the Brioni Minor Fortress; music festivals in the Fort Punta Christo) are mainly the result of efforts of local enthusiasts and NGOs. The results of this research indicate the great development potential of the former military and fortified heritage, which should be implemented in strategic planning documents, and realized through projects similar to those in Šibenik and Dubrovnik.

The conducted research has shown that the assessment of economic, social, cultural and environmental values of fortified heritage is still not recognized as a distinguished research topic in Croatia, and that necessary cultural statistics and assessment studies are still missing. At the same time, the demand for studying the impacts of some specific categories of cultural heritage has increased, as well as the demand for obtaining the appropriate data regarding multiple benefits of investing in it. Croatia's accession to the European Union presented an opportunity to join the EU projects, which also allowed networking, the transfer of knowledge, the use of methodology and examples of good practice from the more experienced partners. Such projects could offer models and a common methodology for measuring the impacts of a proper valorization of our shared heritage.

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ANALYZING CSR RELATED ISSUES IN THE HOTEL INDUSTRY – A SUPPLY CHAIN APPROACH

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ABSTRACT

This paper aims to give a deeper understanding of CSR in the supply chain of the hotel industry. The analysis will start by discussing a recent focus of the CSR debate on the supply chain of multinational corporations, and evaluate the hotel industry in the light of these increasing social and environmental demands beyond the legal boundaries of corporations into the network of their suppliers. The focus is first on how globalization triggered a debate in which NGOs and consumers confront corporations with new responsibilities. Second, the consequences for two types of hotel businesses - small, privately owned hotels and international hotel chains will be discussed. Third, the author will evaluate the changing social and environmental responsibilities for hoteliers by analyzing well managed and poorly managed CSR issues. Finally, based on these findings, the gaps will be elaborated from scientific perspective, where the industry has to deepen its CSR engagement.

Keywords: Corporate Social Responsibility; Hotel Industry; Supply Chain; Deepening Engagement

JEL Codes: Z31

1. INTRODUCTION: CSR, RESPONSIBILITY, HOTEL INDUSTRY AND SUPPLY CHAIN

Highly heterogeneous CSR literature originating from environmental studies, organizational behavior, human resources management, organizational theory, psychology, strategy, business management, and tourism among others provides a basis for looking at CSR from different perspectives, different dimensions and with an interdisciplinary approach. Aguinis and Glavas (2012) addressed explicitly and for the first time the need for a multilevel approach, then developed a bridging view of micro-macro management and an integrated model that incorporates mediators and moderators to enable future research to clarify the various possible roles for key constructs and improve our understanding of underlying processes (i.e., mediating effects) and conditions under which (i.e., moderating effect) CSR leads to specific outcomes.

The new form of responsibility in tourism is considered as directing attention to behaviors and actions by individuals and organizations that are influenced by ethical principles, and is taken into the agenda of responsible tourism (Blackstock et al., Leslie, 2007) at the International Conference on Responsible Tourism in Destinations in Café Town, South Africa in 2002 as guiding principles (ICRTD, 2002). The overarching theme of the seven principles is one of individuals and organizations actively making choices to maximize the positive impacts and minimize the negative impacts of tourism, linking theories regarding the impacts of tourism with recommendations for changing the practices of tourists, providers and host communities. Hospitality can be treated as the main provider in this set of stakeholders.

The number of accommodations is continuously growing and, along with it, investments as well (WTTC, 2017). The whole debate is triggered by globalization, and the approach to analyze this discussion and its influences is, from a global perspective, increasing impact in worldwide travel and tourism, while inevitably confronting corporations with new responsibilities.

Under this backdrop, the remainder of this paper will examine how the progress in CSR is developing within the hotel industry at the same time. This specifically selected supply chain approach to various hotel types such as multinational hotel chains like Accor and Marriott International will be conducted by a comparison with small, privately owned hotels. Members of the International Tourism Partnership (2017), under which leading hotel chains like Carlson Rezidor, Hilton, Four Seasons, Hyatt, InterContinental Hotels Group, Soneira, Hongkong and Shanghai Hotels, Whitbread, TAJ Hotels, Resorts & Palaces, Marriott International, NH Hotel Group, Wyndham Hotel Group are committing themselves to work on CSR in following areas and agreeing on searching for solutions for human trafficking, Carbon Emissions, Fair Labour Standards, Youth Unemployment, Water Conservation and Sustainable

Supply Chains, which shows general future orientation. Ernest & Young (2015) state that today's emerging travellers, millennials are cost-conscious and experienced, and therefore have different demands like local products, and expect socio-economic innovations.

Within the last two decades, the gradual increase in the amount of academic literature linking social issues with economic performance and the sustainability of firms (Carter and Rogers 2008; Krause et al. 2009) is undeniable. Most of the previous studies are focusing on the dimensions of sustainability such as environmental aspects, including environment management and green practices (Rahman et al. 2012), or social aspects. The majority of hospitality studies have focused on sustainability efforts of hotels and restaurants. Despite the heterogeneous definitions and interpretations of CSR, Sarkar and Searcy (2016) find six dimensional definitions such as (1) economic, (2) social, (3) ethical, (4) stakeholders, (5) sustainability and (6) voluntary. Carroll's definition (1979) of CSR as "the social responsibility of business which encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time" is basically still unchanged and fits into the previous dimensional view.

Assuming that true sustainability can only be achieved through long-term collaboration among all stakeholders involved in hospitality supply chains (HSC), the supply chain with various suppliers, retailers of all hospitality goods and services (Xu and Gursoy, 2015), starting from projecting and infrastructure of a hotel up to the final consumption process, has to be analyzed. Hsu et al. (2013) see a need for more studies on green supply chain initiatives in emerging economies, which is considered to be an "under-researched area". In the light of globalization and internationalization of businesses, the impact that companies can have, whether constructive or destructive, on the communities where they operate is powerful (Jamali and Keshishian, 2009).

Levy and Park (2011) analyzed CSR activities in the lodging industry. The link to sustainable supply chain management (SSCM) is defined as the "management of material, information, information and capital flows as well as cooperation among the companies along the supply chain while taking the three dimensions of sustainable development, economic, environmental and social, which derived from customers' and stakeholders' requirements" (Seuring and Müller, 2008). The CSR integration into the supply chain context as per Schneider and Schwerk (2010) has to be done with a widened particular focus from ecological to social issues.

Lashley and Morrison (2000) define hospitality in the following way: "the provision of food, drink and accommodation represents an act of friendship; it creates symbolic ties between people which establish bonds between those involved in sharing hospitality". Then Lashley (2000) concludes more generally that, "hospitality is essentially a relationship based on hosts and guests" which is "providing accom-

modation and/or food, and/or drink through a voluntary human exchange, which is contemporaneous in nature and undertaken to enhance the mutual well being of the parties concerned” (Lashley and Morrison, 2000).

2. LITERATURE REVIEW

Publications data from the “Science Direct” databases were collected for the subsequent table, with the search based on the following terms: CSR, supply chain management, CSR supply chain, CSR hotel supply chain, and sustainable hotel supply chain.

Table 1.: The 5 main search terms with frequencies

Year	CSR	Supply Chain Management	CSR Supply Chain	CSR hotel supply chain	Sustainable hotel supply chain
2017*	1.801	12.142	361	21	468
2016	1.667	10.580	364	29	404
2015	1.615	9.720	321	27	372
2014	1.414	9.026	263	14	305
2013	1.298	7.713	205	11	251
2012	1.053	6.739	173	13	234
2011	848	5.779	84	7	193
2010	856	4.952	85	12	189

*2017 figures are taken until October, 2017

Source: Author. Raw data retrieved from ScienceDirect.

The above Table 1. shows a constant increase of interest in CSR issues between 2010 and 2017; however, figures for 2017 are not complete yet and are already, by the end of October 2017, higher than in the previous year. The increase in academic papers published in journals from 2010 to 2017 is by 210% for the search term in general, 245% for the term ‘supply chain management’ in general, 425% for ‘CSR supply chain’, 175% for ‘CSR hotel supply chain’ and 248% for ‘sustainable hotel supply chain’. When comparing the results between ‘sustainable hotel supply chain’ and ‘CSR in the hotel supply chain’, the higher numbers in ‘sustainable hotel supply chain’ are salient. Relatively high numbers in ‘supply chain management’ can be observed compared to ‘CSR supply chain’ issues. The share of ‘CSR supply chain’ issue from supply chain developed continuously in percentage from 1,7% in 2010 to 3% in 2017, with 7,9% exceptionally high in 2016. The highest number of publications on ‘CSR supply chain’ is under International Journal of Production Research and Journal of Operations Management (Hassini et al., 2012).

2.1. GENERAL DEBATES ON CSR

The discussion on CSR issues is globalization-triggered, since the number of accommodation is growing massively worldwide, and the number of tourists and business travellers will almost double from 2016 by 2025 (WTTC, 2016). Assuming the impact tourism can have on environmental, social and economic developments for each country, new discussions are arising on how to act responsibly. These circumstances are confronting corporations with new challenges. To have a view from different angles and get an insight, the author will start this discussion by looking at it from the point of view of actors such as NGOs as the drivers of change, consumers with the consumer power and high requirements, hoteliers with future-oriented views, and stakeholders responsible to society and environment, for whom economic prosperity is the initial reason for their businesses.

2.2. NGOs’ PERSPECTIVE

NGOs are considered to be increasingly powerful agents of change in the context of CSR (Guay et al., 2004), seeking to promote more ethical and socially responsible practices. Just to name some NGOs in the context of CSR in the tourism industry, there are ILO, VISIT, CST, Parkbus, Planeterra, MARTI (Meso American Reef Initiative), Travel Foundation, Blue Ventures, T.O. (Transportation Options), Friends are everywhere!, etc.

Table 2.: Main ingredients for Successful partnerships

Requirements	Description
Resource dependency	Recognition for common achievements
Commitment symmetry	Equal commitment (time, resources)
Common goal symmetry	Individual goals possible in the overall objectives
Intensive communication	Regularly, different channels and means
Alignment of cooperation working capability	Sharing knowledge, ensuring convergence in learning skills and speed
Converging working cultures	Joint development of a set of working practices
Individual excellence	Both partners are strong, positive relationship, same motives to pursue future opportunities
Importance	Long-term goals, relationship fits in major strategic objectives
Interdependence	Partners need each other, complementary assets and skills
Investment	Investing in each other, e.g. equity swaps
Information	Openness, sharing information including trouble areas or changes
Integration	Developing linkages and shared ways for smooth operations

Requirements	Description
Institutionalization	Formal status of relationship, clear responsibilities, decision-making processes
Integrity	Behaving in honorable ways, mutual trust

Source: Jamali, D., Keschishian, T. (2009).

Due to the need of alleviating the social, economic and environmental aspects, interests in partnerships in the realm of CSR are emerging, which can be attributed to the realization of a strategic partnering to promote effective results for all concerned, namely businesses, NGOs and especially the society/community. The question “under which conditions a partnership with a win-win situation can be created and how promotion of synergetic combination of strength, resources and expertise can be fulfilled” derives from this urge for cooperation (Jamali and Keshishian, 2009).

In addition to this list above (Table 2), with summarized recommendations for the cooperation of NGOs and hotelier, there are plenty of examples where NGOs actively supported changes, such as animal wildlife protection or charity for locals in the case of the Oberoi Hotels in India and the Taj Group with trainings for housewives to prepare them for several work positions in hotels (Guliani and Rizwan, 2016). Another NGO, Global Exchange, an international human rights organization, addresses the purchasing power of consumers to endorse Fair Trade (Global Exchange, 2017). The CSR times Daneshwar (2014) published a list of claims with 10 main subjects stating, for example, that NGOs have to bring in for a vital role in CSR implementation, numbers of years in business, reputation, certification and registration, documentation, experience in relevant areas, key promoters, financial capabilities, credentials and technical skills.

2.3. SUPPLIERS’ AND HOTELIERS’ PERSPECTIVE

Since 2005, the eco-friendly agriculture increased from 6,8 million acres to 11,5 acres, whereas in 2013 the number nearly doubled and the number of organic farmers rose from 187.780 to 334.870 (IFOAM, 2015). Within the EU, 5,5 % of the farming land is farmed sustainably. The global growth is yearly between 56 and 60 billion, 43% in Europe and 47% in North America. The European Organic-Consumption reached 24 billion Euro in 2013, with the highest shares in Austria, Denmark and Switzerland (IFOAM, 2015). Suppliers and producers are actively and proactively involved in the supply chain until the last tier, products are consumed by the guests in the hotels. Hoteliers are influencing the suppliers with their own expectations, and are being influenced by the demands of their guests.

In an analysis of Levy and Park (2011) about the benefits of implementing CSR activities to hotels, the main benefits were found as expected hotel cost savings, ho-

tel reputation among guests, hotel image among guests, competitive advantage of the marketplace, guest loyalty, employee motivation, employee retention, reducing hotel exposure to public scrutiny, employee recruitment, reducing threat to hotel of governmental issues.

In the Green Hotelier newsletter, one of the leading CSR demanding newsletters for the hotel industry, there is a poll about “what’s the most effective way for hotels to be responsible businesses?” (www.greenhotelier.org, 2017). Readers can decide on “which of the following subjects are thriving for sustainability in the hospitality industry?”: (1) To give back to the local community, (2) To provide employability opportunities for young people, (3) To ensure fair and equal pay and contracts for all employees, (4) To reduce waste, carbon footprint and water consumption as much as possible. The reader can choose one, two, three, or all of the four options. Seals and Organizations as the following (Table 3) can give guidance to hoteliers and suppliers to rely on in the hospitality industry as a development accelerator for the implementation of CSR.

Table 3.: CSR Accelerators for Hotels and Suppliers

Name of the Organization	Core fields of interest
Carbon Trust	Business, public sector support to address climate change, harness the economic benefits of low-carbon economy.
Global Sustainable Tourism Council - GSTC Sustainable Travel International	Solutions for hotels to understand, monitor, report on, and improve performance across key sustainability indicators. Solutions include fully customized sustainability management systems designed for single and multi-site operations. Carbon management program helps hotels and their guests to offset carbon emissions by supporting innovative destination stewardship projects.
The Travel Foundation	Provides comprehensive advice for accommodation providers who plan to green their property.
Rainforest Alliance	Works with major local + international tour operators to promote ecologically + socially responsible best practices for tourism businesses in Latin America. Toolkits in English + Spanish for Tour Operators, Hotels, Restaurants, Transportation, and other businesses.
Association of Green Property Owners and Managers (AGPOM)	For real estate, multifamily + hospitality properties. Focus on raising awareness of connection between “green” practices and reduced business/property risks. Offers educational resources to increase sustainability efforts while reducing business risk and expenses.
Tourism for Tomorrow Awards of WTTC	Aims at recognizing best practice in sustainable tourism within industry globally, based upon the principles of environmentally friendly operations; supports protection of cultural + natural heritage; and direct benefits to the social and economic well-being of local people in travel destinations. Among the highest accolades in the industry, represents the gold standard in sustainable tourism.
STR - STRGlobal	Tracks supply and demand data for the hotel industry. Provides valuable market share analysis for international, regional hotel chains, independent hotels. One standardized worldwide platform, consistent methodology, and transparency and quality service around the world.

Name of the Organization	Core fields of interest
Considerate Hoteliers	Association run by hoteliers for hoteliers, encouraging them to adopt economically, socially and environmentally sustainable policies and practices. Intends to increase the viability of each hotel's businesses, as well as enhance guest experiences.
Eco Green Hotels	Independent, privately held company dedicated to supporting lodging and food service facilities to address energy and environmental solutions. Their recommended solutions are geared to assist facilities to take advantage of incentives, rebates and grants. When providing these services, EcoGreenHotel maintains a vendor-neutral position, ensuring that client's interest is always foremost in the consideration of recommendations.
The Institute of Hospitality	Celebrates its unique heritage as the only international professional body for managers and aspiring managers in the hospitality, leisure and tourism industries. Members in 100 countries across the world, supporting their members' professional development for 75 years. Benefits of membership include extensive high-quality online information resources and advice, events and networking through branch structure, professional recognition, etc.

Source: Greenhotelier 2017, www.greenhotelier.org.

The Greenhotelier site provides members such as authors with Manuals and Standard Operating Procedures like Environmental management of hotels with the following chapters: - (1) Policy and management, (2) Energy, (3) Water, (4) Waste, (5) Air, (6) Food Safety & Environmental Health, (7) Purchasing & Supply Chains, (8) Hazardous Materials, (9) Refurbishment & Landscaping, (10) Wider Responsibilities for Communities and Human Rights. Another distinguished manual that is the first of its kind with an open access to every subscribed person to the Greenhotelier site is "Sustainable Siting Construction and Design", covering the following chapters: (1) Project Inception, (2) Pre-Design, (3) Creating the Design Brief, (4) Architectural & Physical Design, (5) Operational Design, (6) Construction & Refurbishment, (7) Commissioning and Operation, (8) Interior Design, (9) Monitoring Performance, which should be used from the development of an idea of planning a hotel.

Taking chapter 6 as an example, it starts with an overview of key criteria for sustain-able development of construction, goes over construction policy to recruitment, safety and training, to how to minimize social impacts and environmental impact on-site up to refurbishment with procurement, commissioning, noise and waste disposal, management of contractors and selection of systems and fittings, taking the whole value chain into systematic usage.

The investigations of Bohdanowicz (2006) shed light on the environmental awareness of hotels in Europe and the differences analyzing energy and water conservation, responsible waste management and other initiatives like supply chain management or eco-education between Sweden and Poland. According to her, hoteliers are willing to make changes to pro-ecological programmes, especially in or-

der to reduce costs. Hotels in Sweden have by far more activities that go further than energy and waste, e.g. supply chain activities and involvement of the entire supply chain of Scandic in Sweden or Accor with worldwide eco-training and having relevant policies.

2.4. CONSUMERS' PERSPECTIVE

Palazzo et al. (2017) put the power of consumers into the focus as active stakeholders, making them responsible for the CSR supply chain; their decision power, their investigation power, their communication and networking power, and consider them to be key actor besides governments and corporations to change consumers' behavior by (1) activating intrinsic values such as community feeling and justice, (2) providing opportunities for new practices such as sustainable bags instead of plastic and (3) contributing to a larger human rights movement with self-transcending values such as respect and solidarity, e.g. slow food movement.

The biggest survey for hotel customers was applied by booking.com (2016) with the assistance of a panel provider. The research was conducted in January and February 2016 across 20 countries with 5,761 partners (Booking.com, 2016). Although the number of guests seeking sustainable hotels has almost doubled over the past year, the report also suggests hotels need to do more to communicate what the guests' actions impact is, and that it constitutes genuinely sustainable travel. One of the main findings was that customers are willing to pay more for sustainable behaviors as part of their travel. This Sustainable Travel Report states that 65% of global travellers expressed their intention to stay in eco-friendly accommodation, versus 34% who stayed in one or more last year. The results show that 68% confirm they are more likely to consider choosing an accommodation knowing that it was eco-friendly and 36% would choose an eco-friendly accommodation because it provides a more locally relevant experience. Whereas 46% of global travellers already consider themselves a sustainable traveler, 38% perceive the buying of locally made products and supporting local artisans as sustainable travel. Chinese (93%), Brazilian (83%) and Spanish (80%) travellers were the most likely to look for sustainable accommodation. Interestingly, 79% of those surveyed say sustainable considerations also impact their mode of transport when travelling, with 43% taking public transport whenever possible, 42% trying to walk, bike or hike as much as possible, and nearly one fifth (18%) flying less to reduce their carbon footprint.

Hotels should note that guests are also open to make luxury adjustments in order to stay somewhere eco-friendly. The vast majority of global travellers would be happy to accept this, with 94% willing to stay in a property with energy saving light bulbs, 89% in one with HVAC (Heating, Ventilating, Air Conditioning) units that only run while you're in the room, and 80% would be happy with low flow showerheads. Addi-

tionally, 79% are happy with less frequent toiletry replacement, 75% have linen and towel changes less frequently and 64% accept higher cost for food that is all locally produced. The research shows that over half (56%) consider staying in eco-friendly accommodation as part of sustainable travel. For many, sustainable travel is also synonymous with a more authentic, local experience; 36% would choose an eco-friendly accommodation because it provides a more local-relevant experience.

In another research by Goldstein et al. (2008), hotel guests followed descriptive normative appeals like "Join the men and women who are helping to save the environment" in their rooms, helping the environment by reusing their towels. The findings of Hall (2013) are supporting this framed behavioral approach to enhance sustainability in tourism, called nudging. According to Verplanken (2006), these interventions which downstream the behavior are short-lived, they are just habits not turned into long-lasting behaviors yet, and state governance policies could support behavioral changes.

3. METHODOLOGY

The terrain of CSR in the hotel industry and the CSR in the hotel supply chain was primarily explored in terms of the number (how many) of publications in (where to find) a range of academic journals from ScienceDirect (Table 1) between 2010 and 2017, in a short qualitative analysis.

Then, an in-depth literature review content analysis is applied in the sense of "an observational research method that is used to systematically evaluate the symbolic content of all forms of recorded communications" (Kolbe & Burnett, 1991). The author conducted a manual review without using identifiers or any software for it.

Publication data from the ScienceDirect database (with most free access journals) - ProQuest, Emerald, SpringerLink were mainly used - the author limited the content analysis to 80 academic papers with regard to manual search, which were reviewed fully with a claim to actuality. The publications of articles were retrieved from highly cited journals like Journal of Sustainable Tourism, Journal of Hospitality and Tourism Management, Annals of Tourism Research, Tourism Management, Journal of Business Ethics, Journal of Purchasing and Supply Management, Journal of Cleaner Production, Journal of Management and Procedia-Social and Behavioral Sciences.

Additionally, some edited thesis and primary research of books was followed through. The search was based on the following strings and terms: Business Ethic in hospitality, CSR hospitality, CSR supply chain, CSR hotel supply chain, risk management hotel supply chain, sustainable supply chain management (SSCM), sustainable hotel supply chain (SHSC), green supply chain management (GSCM). All articles were considered to be relevant; those that are considered to be non-representative

have been identified while analyzing the title, keywords and abstract. This manual scan and thematic analysis of all abstracts involved a detailed review of the content of each researched article and is cross-sectional in the parts of CSR, a CSR supply chain, sustainable supply chain. When the topic presented a significant sub-theme, the article was included (Egels-Zandén and Wahlquist, 2007). In this paper, the hospitality and hotel industry are used synonymously.

The primary exploratory approach starts with the literature review in Chapter 2 as a descriptive analysis. What follows is a general debate on CSR in the hotel industry in Chapter 2.1 to highlight the most important discussion, the NGOs' perspective and a cooperation tool in 2.2 and Table 2. Then, Greenhotelier's recommendations and accelerators for hoteliers and suppliers in Chapter 2.3 and Table 3 show what is already available as instruments in the CSR supply chain. The consumers' perspective with a broad example of Booking.com under Chapter 2.4 highlights the state of science from the guests' point of view, with future CSR hospitality subject required.

The systematic comparison of multinational chain hotels (MNC) or international corporations and small and medium-sized enterprises (SME) or private hotels start with a table of the biggest corporations in the world (Table 4). Two of these ten listed chains, Accor and Marriott, are analyzed deeper in the comparison of the main CSR issues and performances (Table 6). Before the author compares these two chains with each other and with an SME hotel, three figures with the supply chain are shown; embedding the hospitality in the wider tourism and travel context (Figure 1), then showing a classic hotels' supply chain (Figure 2) and, finally, demonstrating the complexity in the end-to-end supply chain with 6 tiers (Figure 3).

Marriott and Accor appeared most frequently in the development of CSR, while using the search term CSR hotel supply chain, CSR hospitality in Google search and academic literature search through ScienceDirect, ProQuest, Emerald, Springer-Link, and are therefore analyzed. The author would like to point out that the Google search results are dependent on the optimization of the search engine, which does not necessarily give results of the quality of their work in CSR, but are considered within the hotel industry to be the most developed ones. The comparison is not only limited to these two MNC chains; there will be the best case of a private hotel, Boutiquehotel Stadthalle, compared with them as well (Table 6). With results in Chapter 4.1 on the CSR supply chain in international hotels, the author revises Accor's survey and main findings contribute with detailed performances of the hotel chain to this article.

During this research, while mapping the intellectual terrain, the author found some articles about risk management in the context of CSR supply chain of hotels and gave special attention to it in Chapter 4.4 due to discovering an "under-researched" area. The main findings of the state of research, with new gaps for future aspects are shown in the results in Chapter 4.5, as well as in a qualitative analysis and a table of

findings with relevant gaps in main areas (what) and the main contribution in theory and possible extension of findings (why), and finally proposing methodologies and research design (how).

4. RESEARCH RESULTS

The following table, with data on the ten biggest hotel chains in the world with growing numbers and planned objects, gives an overview of their activities in the whole world. Two of them, the biggest European hotel chain Accor Hotels, and the biggest hotel chain in the world, Marriott & Starwood, will be taken for deepening the analysis in their CSR supply chain engagements and commitments.

Table 4.: The biggest hotel chains in the world, ranked from the 10th to the 1st

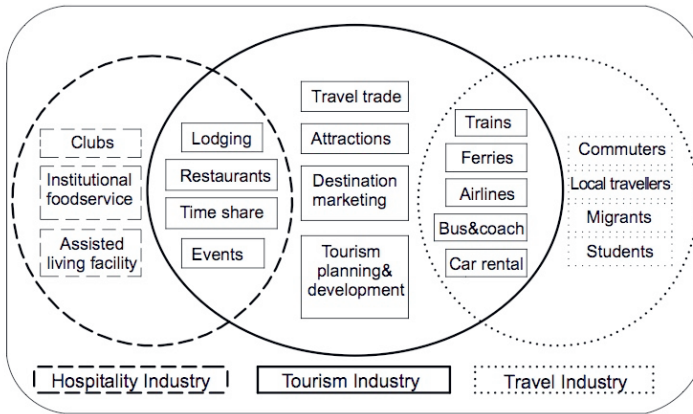
Hotel Chain	Number of hotels	Brands	Countries
10. Carlson Rezidor	1.400	Radisson, Country Inns and Suites, Park Inn, Carlson Rezidor	115
9. Homeinns Hotel Group	2.609		355 Chinese Cities
8. Best Western Hotels & Resorts	4.195 hotels 300.000 rooms	7 brands	100
7. Accor Hotels	4.000 hotels	17 different brands *	92 *
6. Choice Hotels	500.000 rooms, 638 hotels in pipeline		40
5. Jin Jiang International	3.090 locations		Chinese cities
4. Wyndham Hotel Group	8.000 hotels	16 brands	73
3. Hilton Worldwide Holdings	788.864 rooms 4.820 hotels	13 diverse brands	104
2. InterContinental Hotels Group	5.099 hotels + 1.461 in pipeline	11 brands	Worldwide
1. Marriott International / Starwood Hotels & Resorts	5.456 hotels + 2.101 in pipeline	30 brands in total, Sheraton, Westin, W, St. Regis, ...	Worldwide 79 countries Marriott

* Accor Hotels from socio-economic-footprint, 2016

Source: Llenrock Group, Katie Polyk, Hospitality Top 10 List, 2016.

Embedding hotels in a wider context by showing the main actors of the whole tourism and travel industry, the author shows the importance and connectivity to surrounding businesses. There is a dependency and relation between the hospitality actors, the travel industry and the tourism industry as a whole, and thus a supply chain relation.

Figure 1.: The relationship between the tourism, hospitality and travel industries



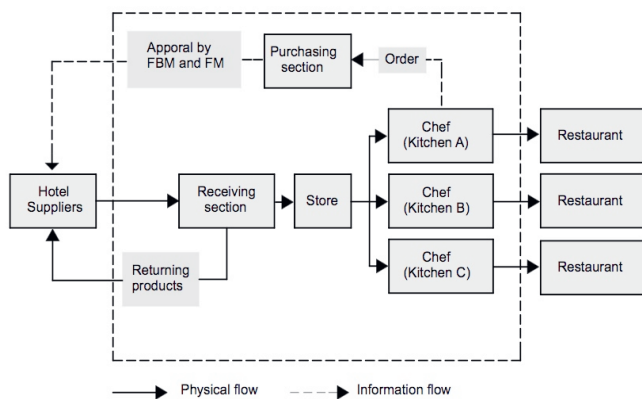
Source: Piboonrunroj, P. and Disney, S.M. 2009. Tourism Supply Chains: A Conceptual Framework.

According to results from Akkarangoon (2010), the characteristics of an organization have a great impact on strategic sourcing practices. Group hotels employed a *centralized-sourcing strategy* to manage their strategic sourcing activities. A *flexible centralized-sourcing strategy* was also found in various degrees among group hotels. Small group hotels and independent hotels relied on head chef, a *chef-centered sourcing strategy*. The framework for a sustainable supply chain is described as a circle from sourcing to transformation, over delivery to value proposition, to customer and product use, and finally to reuse, recycle and return (Hassini et al., 2012).

4.1. SUPPLY CHAIN OF INTERNATIONAL HOTEL CHAINS

The following supply chain (Figure 2.) shows only suppliers as one undifferentiated group, and the internal supply chain of a hotel that has different restaurants and has a central purchasing department. This flow chart shows neither heterogeneity of suppliers nor heterogeneity of decision-makers in the hotel chain.

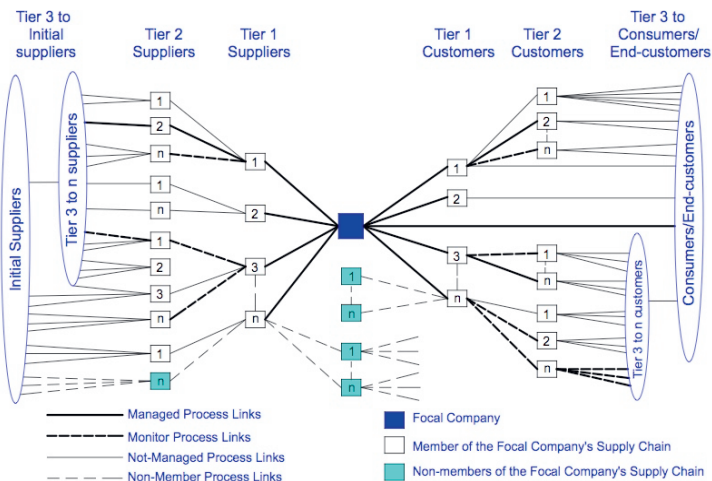
Figure 2.: Supply Chain Costs of Hotels



Source: Piboonrungraj, P. and Disney, S.M. 2009. Tourism Supply Chains: A Conceptual Framework.

Considering that a hotel is the focal company (Figure 3.), there can be 6 tiers in the end-to-end supply chain which is firstly important to know; secondly, not all hoteliers are aware of it; thirdly, the author of this paper believes that it is challenging to enhance with CSR activities through all tiers because of different actors with different knowledge, interests and the power balance of the actors (Lampert et al., 1998).

Figure 3.: Types of inter-company business link



Source: Lambert, Cooper and Pagh, 1998.

Under the condition of unlimited resources and availability of CSR implemented products and services, and the big sphere of influence of the hoteliers, CSR can be transcribed through each tier of the above supply chain. But according to Akkarangon (2010), there is an absence of characteristics to SCM among hotels with a whole chain end-to-end perspective, making the collaboration difficult as well, which underlines the observation of the author.

In a survey of Accor that was designed and followed through with the consulting of EY - Ernest & Young (AccorHotels, 2015), a comparison of the years 2012 and 2015, studying the links between business and CSR performance for Accor's strategic and key B2B accounts, contains issues such as the importance given by Accor Hotel's B2B clients to CSR, the weight of CSR performance in the selection process of hospitality suppliers, and the link between environmental certification of hotels and business performance. Herein the importance of the CSR performance for the B2B clients in suppliers' selection process has increased by 6 points of percentage from 2012 to 2015, so as to reach 86% (Survey, 2015), which is a high increase perceived within three years. Another attention is given to a 33% increase of clients wishing to eliminate a supplier because of its lack of CSR performance.

The percentage of accounts for which CSR contributed a direct turnover growth has increased as well, from 9% in 2012 to 11% in 2015 (Survey, 2015). But at the same time, regarding the ranking of main reasons for the suppliers' choice, the first reason is still the price, the second is quality, the third is location. The link between low ranking, which means poor importance of the mitigation of environmental and CSR risks issues at Accor, might be in answering the following question: "For what reason is your B2B client concerned by sustainable development in the selection of its hospitality suppliers?". Only 4% fully agreed with the reason of conviction, whereas 31% fully agreed with improvement of its reputation (by a proactive choice of suppliers achieving better sustainable development performance) as a selection reason for the suppliers (Survey, 2015). One of the questions was, "Which standards / labels were considered for certification by this client?", which was answered by 60% with a request for ISO 14001 certification, making ISO 14001 the leading CSR standard within the industry.

Bohdanowicz's (2005) findings corroborate the results of the previous survey, stating that chain hotels dispose over more environmental knowledge and make greater efforts towards developing and enforcing environmental policies and programmes than privately owned hotels.

4.2. SUPPLY CHAIN OF A SMALL PRIVATELY OWNED HOTEL - BEST PRACTICE

In the supply chain of this hotel (Boutique Hotel, 2012), the relationship with suppliers is close and the upstream supply chain management and cooperation is

working very well. In general, the supply chain in both, the international hotel chains or small private hotels, has the same amount of tiers to face. Mostly the telephone and email are used to place the order in SMEs because of a close contact and an opportunity to ask for special offers and seasonal products. All relations are individual and, in the kitchen, the chef and the food & beverage manager will decide over the chosen suppliers without procurement policies (Akkarangoon, 2010 and Boutique Hotel, 2017).

One of the main productions in the hotel chain is the food supply chain that has a high perception and is a key factor to customer satisfaction. Table 6 shows the results of the Boutiquehotels' performance, where matching with the scope of agro-ecologically based systems is obvious (Table 5). This means that the food and beverage supply, as the main part of supply for a hotel, is implemented according to the highest standards of CSR supply chain. The hotelier contacts suppliers along the whole supply chain in order to get the best results for the hotel (Boutiquehotel, 2017).

Table 5.: Comparison of Conventional and Agro-Ecological Food Systems

CONVENTIONALAGRI-FOOD SYSTEMS	AGRO-ECOLOGICALLY BASED AGRI-FOOD SYSTEMS
Domestic + export-oriented production of raw materials (feed, fibers, commodities) Long supply chains Feeding the agri-food industries with cheap raw materials Large-scale mono-cropping or short crop rotation High dependency on external inputs (hybrid seeds, fertilizer, energy) Top-down extension schemes Industries are innovators Segregation of agriculture from landscape, biodiversity, single functional Segregation of the producer from their social background Narrow single field perspective, one-size-fits-all blueprint approach	Local, regional, national food production + consumption Short supply chains Nourishing household and suppliers with healthy food Small-scale diversified food systems with long crop rotations and temporary grassland/fallow lands Lower dependency on external inputs (farm-saved seeds and own breeding, manure and composts to feed the soil) Participation, farmer field schools, stable schools, innovation platforms Farmers lead innovations Integration of the social relationships (farmer to farmer, farmer to consumer or buyer - interlink) Integration of landscape and biodiversity into agriculture, multifunctional System view, holistic approach including methods and technologies based on farmers' knowledge, traditions, benchmarks

Source: Fernandez et al., 2012, abridged by the author.

The Boutiquehotel was the first hotel receiving the Austrian Ecolabel in Vienna, Austria. It is a member of Greenhotelier and shown as a unique passive hotel within hotels and the first Eco-certified hotel in the world already in 2007 (greenhotelier.

org. 2017). It can be concluded that the small private-owned hotel has gained certain autonomy and taken response to its supply chain (Table 6). Support for this view is provided by studies of the impact of regulation upon the behavior of SMEs, which suggest that “regulation does not result in behavior that goes beyond compliance in the form of modernization and cultural change” (Williamson et al., 2006), where individual ethical behavior is the underlying motive.

4.3. COMPARISON OF THE MAIN FINDINGS IN HOSPITALITY

In the following table, two globally acting, multinational hotel chains and the private-owned small hotel are compared in terms of their main CSR activities and strategies.

Table 6.: Main CSR Issues and Performances of Hotels

North American Hotel Chain - Marriott worldwide	European Hotel Chain - Accor worldwide	Private small hotel - Boutique Hotel Stadthalle Vienna, Austria
Business Model & Sustainability Strategy	Model of Changes in 7 areas and measurement of impacts on energy, water, Co2, eutrophication, biodiversity	Zero-energy balance
Inclusion	Infrastructure: Temperature control and cooling system	Passive house hotel
Encouraging women to own hotels	Construction and Renovation Room Items: Towels, paper products, bath products, TV	Solar panels and photovoltaic panels
Enlarging Diversity of Suppliers Local sourcing	Hotel energy consumption	Wind energy - three windmills
5 Core Values Creating & Pursuing: We Put People First We Pursue Excellence We Embrace Change We Act with Integrity We Serve Our World	Hotel water consumption	Organic products in food and beverage Local sourcing
Sourcing down for humane verified products, like feathers	Hotel Management: Cleaning Products, pesticides	Waste reduction
Reducing & Recycling Packaging Chemical Reduction	Office management: Printers, paper products, IT hardware, telephones	LED lights
Suppliers with sustainability policies	Employee travel	Eco-cleaning liquids
Sustainability, MindClick for Purchase (long-lasting)	Laundry	Dispensers instead of small amenities in rooms
	Food and Beverage	Towels are wrapped in linen, not in paper
	Waste processing	

North American Hotel Chain - Marriott worldwide	European Hotel Chain - Accor worldwide	Private small hotel - Boutique Hotel Stadthalle Vienna, Austria
Welfare for animals Third-party certification Environmental Performance Indicators: Energy, Water GHG intensity Energy, Water, Emission reduction yearly Supporting Juma Amazon Rainforest Banning shark-fin from restaurants Contribution to Youth Inclusion and Diversity Human Rights Campaign Anti-Trafficking Campaign	Customer Travel (not yet assessed) Survey done by an independent organization /EY in 2012 and 2015 CEO: Corporate Responsibility followed by socio-economic footprint	Only recycled paper used Containers for eco-cleaning products to be collected and returned Up-cycling of furniture by TerraCycle Community: Supporting Clini-Clowns, Balance against Barriers, Caritas Cooperation and creating innovation with students from three universities Guests support WWF, Wiener Tafel (homeless) Supporting homeless

Source: Author's.

Dubey et al. (2015) have classified the green supply chain enablers as Total Quality Management, Supplier Relationship Management, Green Technology Adoption, Institutional Pressures, Top Management Commitment, Reduction in Carbon Emissions, Customer Relationship Management, Increase in Market Share and Profitability. The initiatives to be taken especially in the supply chain management are measures such as regular training by organizations to their suppliers of how to become "cleaner" or more responsible, collaborating with suppliers, especially inter-organizational collaboration contributes to manufacturing performance, because downstream of supply chain (with customers) collaboration brings mixed outcomes, so-called product-based performance and upstream collaboration practices are more closely related to process-based performance; and supplier relationship management has a mediation effect on environmental performance (Dubey et al., 2015). All issues for sustainable supply chain management developed in a transition by Hassini et al. (2012) could be adapted to MNC and MSE in hospitality.

An additional long-term tying effect of trust and commitment between actors along the supply chain, for which supporting findings are contributed by Schrempf-Stirling and Palazzo (2013) to enlarge the sphere of influence along the corporate supply chains and enable solution by full producer upstream CSR.

4.4. CSR AND SUPPLY CHAIN FROM A RISK PERSPECTIVE OF HOSPITALITY

The identification, analysis, control, and avoidance, minimization, or elimination of unacceptable future events can be named 'risk'. An organization must use risk assumption, risk avoidance, risk retention, risk transfer, or any other strategy (or a combination of strategies) in proper management of future events (Business Directory, 2017).

The role of perceived risk in virtual environments was analyzed by Curras-Perez et al. (2017), as well as the moderating effect of perceived risk on the relationship between satisfaction and trust in tourism services. The main findings were that consumers are very demanding when perceived risk is high, and will only trust providers when they have a good reputation and have been capable of satisfying them. A study from the procurement perspective indicated that in most cases, CSR was treated as a qualifier for tendering to supply, rather than being treated as a decision variable alongside the classical value-for-money variables (Harwood and Humby, 2008). This approach would tend to result in fairly low standards being set that are designed more to protect buyers from reputational risks associated with unethical supplier behavior than to actively encourage positive, socially responsible behavior. "If suppliers work to the standards set, we may see the ceiling effect in action, whereby mandating CSR criteria into the supply chain results in a lowering of the overall standards of CSR" says Michael (2006). Other risks are predominant in publications such as Cyber Security, where credit card number (guests' privacy), phone number, address and guest conduct such as property damage, and suing a hotel are the considered threats and risks. The risk of outsourcing with its effects on the performance is analyzed by Yildiz et al. (2014). The main findings from the risk perspective are that Organizational Culture of supplier and hotel do not match and that suppliers employ people which are not qualified. The expectations from outsourcing are to reduce investment risks, cost and labor costs.

At Scandic Hotels the Executive Committee carries out risk mapping, where risks are identified and measured based on the probability that they will occur, as well as the consequences of their occurrence on the Group's operations and financial position. These results are classified as low, medium or high, and combined with the internal controls and the control environment; evaluated where a high level of control can reduce risks both in terms of probability and consequences. There is a special assessment for sustainability risks such as environment, human rights, labor rights and anti-corruption (Scandic Hotels Group, 2017).

Since the hospitality industry is a service industry with high human capital, Bowling (2016) streamlined HR issues such as (1) bringing employment contracts up to date to avoid legal risks and comparing with the industry standards; (2) ensur-

ing Work Health and Safety (WHS) policies are current in a legally compliant manner and the physical safety and mental health of workers is in place and minimizing health and safety risks arising from the work of organization, (3) reviewing or implementing social media policy, avoiding cyber-stalking, sending unprofessional emails, viewing of pornography, highlighting the risks connected with reckless online activities; (4) looking out for important industry updates, not falling behind on state and industry requirements in areas such as WorkCover, awards, penalty rates and accreditation through implementation of an HR system offering automatic alerts to legislation changes in the hospitality industry and updates to affected employment contracts, policies and procedures; (5) considering systematizing HR: HR software can streamline company's HR process and reduce the pressure of managing HR issues, ensure all legal requirements are up to date. Good systems will provide everything from employment contracts to workplace policies, job descriptions and all employee rights (Lehrer, B. 2016). According to Patterson (2015), an experienced hotel practitioner who publishes the 4 highest risks that the hotel industry is facing, are compiled as (1) Data privacy, (2) Guest behavior, (3) Staff, and (4) Branding.

Uncertainty inherent in purchasing service products can cause customers to look for CSR actions to reduce their risk because such actions foster trust in the firm (Nicolau, 2008). Companies with higher reputation are perceived as less risky than those with lower reputation, even when their financial performances are equivalent (Helm, 2007). In this regard, CSR activities strengthening brand image and reputation can lower the already-high risks related to operating restaurant companies. Gupta (2002) found that CSR activities positively impacted corporate reputation providing a means of differentiation for firms resulting in a competitive advantage. In a monopolistically competitive industry such as the restaurant industry - where numerous firms compete with little product differentiation and with low barriers to entry - a differentiation strategy based on non-price factors, such as CSR, can be critical for companies to outperform competitors in the long term (Rhou et al., 2016).

AGPOM (2017) states that corporations operating in complex supply chains in a globally connected economy, effective risk management can be the difference between success and failure for them. Based on this key assumption, there is a great value hidden between sustainability and risk. As an example, the elimination of fire hazard as a risk can be pursued through energy-efficient lightning solutions, e.g. by fluorescent lights (Mills, 2014).

In 2015, draft legislation was discussed in France, aiming to strengthen the due diligence required from parent companies and buyer companies as regards the suppliers in their value chain. This proposal stipulates the setting up of due diligence such as risk mapping consultation, measurement, warning and audit procedures, along with the possible incurring of public liability by companies. This strengthening of the legislative framework comes in the wake of a series of dramatic events high-

lighting weaknesses in the relationship between buyers and suppliers (Accorhotels Footprint, 2016).

Risk management (legal risk, reputational risk, protecting its “licence to operate”) means to ensure that the business conducted with partners of the Group complies fully with the ethical and CSR commitments shared by AccorHotels. Such risk management in particular includes setting up processes to audit commercial relationships, both in advance and afterwards (Accorhotels Footprint, 2015). Huarng and Mas-Tur (2015) propose a risk mapping as a social innovation in the manufacturing sector as a key strategic decision for the effective implementation of psychosocial safety. For health issues or political insecurity and terror are high risks but with a low probability of occurrence, where middle and low risk areas are not spotted at all.

In a study by Nguyens at al. (2017) about determining weak spots in the adoption of hotel related disaster resiliency initiatives, actions and stakeholders’ attitudes toward collaboration, disaster management, hotels in earthquake endangered regions, the authors highlight the pivot role of the responsible hoteliers that should contribute positively to the risk evaluation and communication within a region. The rationale for collaboration with the accommodation sector stems from their potential to contribute to disaster risk reduction and improve destination resiliency (UNESCO, 2012). Hotels have been identified as a key stakeholder in coastal tourism disaster management (UNEP, 2007).

The risk management at InterContinental Hotels Group consider risk management as an essential part of responsible business, an exemplary risk management system developed together with its shareholders (IHC Annual Report, 2013), and foresees protection of particular business objectives: (1) brands, business model and reputation across key stakeholders, (2) the delivery of strategy, commercial targets and plans for change, and (3) safeguarding of physical assets, people, system and processes. Risk management is divided into strategic, tactical and operational perspectives. Especially as a strategic risk, the risk can be arising from the IHC’s relationship with external environment, where one of the operational risks is considered to be the wider supply chain.

Another aspect is to minimize financial risk, but at the same time hotels are increasing operational risk because they do loose influence on the quality of staff they are cooperating with (Arli et al, 2017).

4.5. MEASUREMENT, COMMUNICATION, REPORTING

One of the strongest countries in the world in terms of export income from tourism is Spain; at the same time, it is the second listed country immediately after the United States in the GRI (Global Reporting Initiative). In 2012, the law started supporting the monitoring and communication of sustainability, with a commit-

ment that all businesses over 1000 employees have to produce an annual CSR report (Reverte, 2014) and it is expected that the GRI G3 standards enhance innovations and motivate SMEs as followers. The report serves three key functions: (1) it provides a balanced review of activities throughout the reporting period, (2) it presents key financial information at year's end (fiscal year June 2016), and (3) it details material sustainability disclosures and the impacts on stakeholders. Moreover, it acts as a compass for traversing the future, framing up ambitions in the light of global opportunities and challenges facing GRI in the dynamic landscape of sustainability disclosure and measuring impact of CSR policies (Martinez-Ferrero and Frias-Aceituno, 2015). The most used ones apart from GRI are Account Ability's AA100 Series, the United Nations (UN) Global Compact's Communication Progress (COP), the (OECD) Organization for Economic Cooperation and Development guidelines, International Labour Organization (ILO) conventions and International Organization for Standardization (ISO) standards.

When the hospitality responsible persons look for solutions in measurement tools, they will find plenty of systems, services and products to increase and measure their CSR index, and some of them are subsequently explained. Trucost, part of Standard & Poor Dow Jones Indices, assesses and prices sustainability risks to inform resilience and identify the transformative solutions of tomorrow. S&P DJI is the first index provider to publicly display carbon metrics as standard alongside financial data on its indices on a monthly basis. The initiative is part of S&P DJI's commitment to support ESG (Environmental Social Governance) transparency enabling market participants to understand, measure, and manage carbon risk. Three metrics are used for the indices: (1) Carbon Footprint - The metric tons of CO₂e (carbon dioxide equivalent) per \$1M invested against the index, (2) Carbon Efficiency - The metric tons of CO₂e per \$1M of a company's revenues against the index, (3) Fossil Fuel Reserves - The greenhouse gas emissions that could be generated if the proven and probably fossil fuel reserves owned by constituents were burned, per \$1M invested (www.spdji.com). Another one, Sustainalytics (2017) is an organization that can support companies to improve their sustainability performance through the provision of the allowing products and services. It offers supply chain services to map sustainability risks within the companies' supply chain, receiving timely alerts and learning how to prioritize sustainability investments. Asset4, another provider of ESG performance measurement, has developed an instrument to integrate ESG variables into the valuation models and for companies to better understand their own practices in relation to their industry peers. They provide full disclosure on a set of extra-financial variables measuring critical areas of ESG performance. It can play an important role in promoting and facilitating the continued development of sustainability reporting by combining a standard set of quantifiable and material ESG performance metrics and 250 KPIs with best-practice industry examples of transparency and disclosure.

In the global CSR hospitality communication and reporting practice is researched by Grosbois (2012), who divided them into corporate level and individual property, showing that 109 of the largest 150 hotel companies report major themes of CSR, whereas only few report detailed initiatives to given goals. Those reports on the individual level contain a huge variety of information but are limited, e.g. commitment only on website to detail about the implementation and achievement of goals and performances.

Table 7.: Interdisciplinary research agenda to close gaps in hospitality supply chain

What? Gap to close, Areas to explore	Why? Theory, Possible extension	How? Research design, Methodology
<p>Upstream full producer responsibility in the whole supply chain</p> <p>Cross-sectoral and cross-cultural interactions</p> <p>Knowledge use of customers-hotel guests, repeaters with rich experiences and brand-knowledge</p> <p>Understanding of different standardizations and seals, choosing the right one, comparability on local and global level</p> <p>Inter-connectivity of risk analysis and management through CSR management within the supply chain</p> <p>Transmitting Person-at-home behaviors to Person-on-holiday behaviors; Bridging for eco-social friendliness at home to other places</p>	<p>End-to-End-SCM, Enabling all producers to take responsibility</p> <p>Discourse, Learning, Knowledge transfer</p> <p>Guests can provide insights about usability of actions taken by a hotel</p> <p>Harmonization, Sensemaking, Learning</p> <p>Reducing risks through CSR</p> <p>Transaction of "good" behavior</p>	<p>Ethnographic and geological research, Analysis of alternatives</p> <p>Meta-analysis, Data-access, B2B Analysis</p> <p>Living Lab (open innovation ecosystem) use with co-creation, Nudging methods, Longitudinal design</p> <p>Accessibility through open source data, Easy adoption</p> <p>Systemic approach, Complexity management tools, Model development</p> <p>Action research, Nudging</p>

Source: Author's.

The above suggestions by the author are built on the knowledge that is gained through the analysis of existing literature, similar to the approach taken by Quarshie et al. (2015), and highlights what is needed to understand the gaps in the CSR supply chains of hospitality in particular.

5. CONCLUSION

CSR engagement has to be strengthened and deepened in the following areas: within the hospitality context, companies may enhance stakeholders' identification with the organization through several approaches such as the inclusion of CSR images in corporate communications, by affiliating stakeholders to the company by shared concerns toward a specific social or environmental cause, or by fostering stakeholders' interactions around CSR activities. The launch of GRI Sustainability Reporting Standard shall reduce the risks and, by comparing actors in the same field, the general level will be increased (Antolin-Lopez et al., 2016), whereas the evolution of CSR reporting to that of financial reporting researched by Tschopp and Huefner (2015) shows that CSR reporting is in its infancy and if CSR is used to bring market-based changes, then comparability and consistency are necessary qualities for CSR reporting.

Table 7 shows the urgency and the need for developing the CSR supply chain of a hotel is an incremental contribution that helps to close the gaps such as more upstream responsibility in the end-to-end supply chain, or the use of cultural intelligence or cross-sectoral benefits, knowledge use of sleeping potentials such as guests, the comparability of reporting and inter-connectivity of risks and reduction of those through better CSR implementation. Finally, the transaction of "good-behavior" in general can be transferred to hospitality, where hedonic interests stand in the foreground and can be hindering development. The author recommends valuable methodologies such as Living Lab use, an open, innovative ecosystem for life-time use of hotels, or making use of more nudges to start with successful appeals to quickly change habits in hotels, or the application of a complexity management tool.

Given that CSR has stronger effect on customer satisfaction, hospitality companies should assign their resources to improve these areas. Hospitality companies should invest more in CSR initiatives in their supply chain, since it has been demonstrated that one of the reasons making the consumer feel satisfied with the company is the knowledge and perception of its social responsibility, which can be positively influenced by the corporate communication of its CSR program. In this sense, any communication that makes CSR programs more credible, authentic and distinct from competitors will considerably improve the company's attractiveness. Nevertheless, any communication attempting to connect companies to a socially responsible identity must consider the extent to which that CSR-based identity is valued by customers, and what aspects can be leveraged to enhance perceptions of self-importance associated with that identity (Martinez and Bosque, 2013).

This research also showed that it is easier for small hotels to follow through eco-agrifood standards or act responsible without being under threat as much as MNCs. Palazzo and Basu (2007) already stated that branding which has a high value for the

corporation, has shifted from benefit-driven to value-driven branding after backlashes from benefit-driven branding. Slowly, MNCs are acting accordingly, but there is still a long way to go.

6. LIMITATIONS AND FUTURE RESEARCH

Managing social issues in supply chains is slowly gaining attention and need to be intensified in order to understand the complexity of managing social issues in the supply chain (Yawar and Seuring, 2015).

The major limitation of the research derives from the lack of possibility to read all the existing literature dealing with this subject in books, journals and other publications in the hospitality industry worldwide. The author can read and understand four languages alone and has concentrated on English published journals. Another limitation is the search as such, based on a selection of keywords like CSR, Hotel Supply Chain, Sustainability, etc., since the supply chain starts from the growth of every element that contributes to the hotels' supply chain.

In further research, a combination of a supply chain map and risk map for hospitality should be created. Such research would need to conduct analysis with a representative number of hotels in different categories, and with different markets and strategies taken into account. Additionally, other stakeholders such as communities, suppliers, and NGOs have to be involved in this complex process model. A complexity management process could be applied, evaluating dynamics, interdependencies, transparency, the number and variety of involved or effected elements and the social context (Dörner, 2003). Based on such survey, a catalogue of identified risks can be mapped in the context of CSR supply chain and the quality of management of the relevant issues. Those can be identified and shown in an interwoven model. Hotels have to deepen their engagement in the analysis of their risk management interlocking with their CSR supply chain management. There are existing models for the effective appliance of nudging (Ly et al. 2013).

Academics agree on the fact that environmental issues are more considered in the CSR and the CSR supply chain debate, whereas social and local/community issues are sometimes not even on the agenda of CSR. A new question arises on how strong the impact of CSR is in its concentration on social issues in human resources, people's treatment at work, work sustainability for locals, or in education and wealth of communities, thus going beyond charitable donations.

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MARKETING AND MANAGEMENT TRACK

MEASURING AND MANAGING EMPLOYEE ENGAGEMENT – THE PATH TO 2050

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ABSTRACT

The purpose of the research is to raise awareness about the crucial role of adequate engagement policies and practices in reaching high performance. The lack of employee engagement is the top issue currently facing HR and business leaders worldwide, and many empirical studies indicate that improving engagement correlates with improving performance. The paper gives a thorough insight into the current methodologies of measuring employee engagement and its key theoretical assumptions. Managers often underestimate the role of engagement because they are not aware of the significant hidden costs of employee turnover, absenteeism, sabotage, shrinkage and negative effects on other employees. To properly address the problem of employee engagement the managers should understand the determinants of engagement, i.e. the drivers of engagement and the barriers to engagement. Managing employee engagement is a challenging work and requires an all-organizational approach, as well as engaging managers at all organizational levels, motivated and good equipped to co-create and implement engagement strategies. The paper uses a comparative approach in presenting the current measurement methodologies and issues, and gives a critical analysis of current business practice of managing/improving employee engagement. The author concludes by giving a set of recommendations to business practitioners, government and academics that are in search for best models and practices in measuring and managing employee engagement. The working environment and the work itself should be designed to enable the highest employee engagement levels, and through that the high performance. The implemented engagement policies and programs should be in that process constantly revised to enable long-term success.

Keywords: Employee engagement; Engagement strategies; Engagement policies; Measurement; Performance

JEL Codes: M54

1. INTRODUCTION

The lack of employee engagement is the top issue currently facing HR and business leaders worldwide. It represents a vast amount of unused potential that affects the productivity levels, profitability levels and other performance indicators. The relevance of the research topic becomes even more critical in the modern working environment where managers are expected to balance the expectations of older generations with the expectations of Millennials who are searching for purpose, not only money, in their work/job. The new work environment trends such as high levels of collaboration, information sharing and focus on outcomes, also highlight the critical role of engaged employees whose engagement level significantly affects the engagement level of other employees/their colleagues.

The purpose of this conceptual paper is to raise awareness about the crucial role of adequate engagement policies and practices in reaching high performance. The paper begins with the analysis of the concept and value of employee engagement. There is still no consensus yet on the definition of the concept. Several key perspectives are therefore given, as well as an attempt to unify those different perspectives. Many empirical studies (thoroughly discussed in chapter II) indicate that improving engagement correlates with improving performance. This empirical data combined with the estimation of the cost of disengagement show the significant value of employee engagement in shaping business/organization success.

To properly address the problem of employee engagement the managers should understand the determinants of engagement, i.e. the drivers of engagement and the barriers to engagement on both organizational and individual level, which are listed and commented in the chapter III.

The chapter IV deals with the measurement methodologies and issues, and the following chapter V presents the crucial activities in managing engagement and the role of HR. Managing employee engagement is a challenging work and requires an all-organizational approach, as well as engaging managers at all organizational levels, motivated and good equipped to co-create and implement engagement strategies. The methodologies which could be applied to measure the success of employee engagement programs and policies are also included in the research.

The paper uses a comparative approach in presenting the theoretical perspectives on the concept of employee engagement and its measurement methodologies and challenges, and gives a critical analysis of contemporary business practice of managing/improving employee engagement.

Concluding remarks and comments on the paper subject are followed by a set of recommendations connected to the results' implication.

2. THE CONCEPT AND VALUE OF EMPLOYEE ENGAGEMENT

Before presenting the value of engagement to organizations in modern work environment we begin with explaining the complexity of the concept.

2.1. THE CONCEPT OF EMPLOYEE ENGAGEMENT

The complexity of the concept of employee engagement is reflected in the lack of consensus on its definition. There is still debate going on over how it should be defined. Does it imply attitudes, behaviors or outcomes in terms of engagement? Is it more a motivational state or a form of performance? The following list of definitions give insight into different perspectives and approaches to the concept. The most often cited definition is from Kahn: „Employee engagement is employees’ willingness to fully invest themselves physically, cognitively, and emotionally into their work roles” (Kahn, 1990, cited in Barrick et al., 2015:1). Employee engagement could be also defined as „the extent to which employees are motivated to contribute to organizational success, and are willing to apply discretionary effort to accomplishing tasks important to the achievement of organizational goals” (Wiley, Kowske, and Herman, 2010, cited in Wiley and Kowske, 2012:15).

Dharmasiri (2010), cited in Iddagoda, Y. A. et al. (2015), stated that employee engagement captures the essence of employees’ head, hands and heart involvement in work. It refers to employee’s psychological state (e.g. one’s identification with the organization), his/her disposition (e.g. one’s positive feeling towards the organization) and performance (e.g. one’s level of discretionary effort). In brief, it captures affective (feeling), cognitive (thinking) and behavioral (acting) dimensions of an employee.

Some authors see engagement as the opposite of burnout (Maslach and Leiter, 1997, Maslach et al., 2001; Schaufeli et al., 2002, cited in Byrne, 2015). According to Maslach and Leiter (1997, cited in Byrne, 2015) engagement is therefore a concept composed of three elements - energy, involvement, and efficacy, each being the direct opposite of one of three burnout dimensions: emotional exhaustion, depersonalization, and lack of efficacy.

Macey and Schneider (2008, cited in Byrne, 2015) state that engagement represents a process, whereby trait engagement (a predisposition to view life and work with enthusiasm) determines state engagement (feelings of energy and absorption), which subsequently leads to behavioral engagement (discretionary effort), the ultimate goal (Byrne, 2015:14).

We found the definition from Byrne as the most unifying definition, i.e. the definition which mostly succeeded in including different perspectives: „Employee engagement is a moment-to-moment state of motivation, wherein one is psycholog-

ically present (i.e., in the moment) and psycho-physiologically aroused, is focused on and aligned with the goals of the job and organization, and channels his or her emotional and cognitive self to transform work into meaningful and purposeful accomplishment" (Byrne, 2015:15).

Although engagement may result in outcomes that appear similar to engagement such as organizational citizenship behavior, organizational commitment, job involvement, and job satisfaction, what it is, what triggers it, and how it is defined as a state of motivation appear different (Byrne, 2015:22). None of these concepts embraces or conveys the investment of oneself emotionally, cognitively, or physically into one's work performance, regardless of its form (Byrne, 2015:39).

As IES say, engaged employees experience a blend of job satisfaction, organizational commitment, job involvement and feelings of empowerment. (Robinson, 2008, cited in MacLeod and Clarke, 2009:9). It is a concept that is greater than the sum of its parts. Employee satisfaction and engagement differ also in their predictive power over outcomes. Measuring satisfaction or morale per se does not tell you how employees are behaving - measuring engagement can go a long way towards doing so (MacLeod and Clarke, 2009:9).

In order to clarify what does employee engagement look like in organizations we should observe the characteristic of engaged, or how the author Byrne has clearly stated: „You cannot see engagement, but you can infer from people's emotional expressions, their talking about their work, and their behavior on the job whether they are likely engaged" (Byrne, 2015:23).

Employee engagement looks in organizations like high quality/high quantity job performance, discretionary effort, high energy, enthusiasm, commitment to the organizational mission, and expression of passion, initiative and collaboration. Engaged are employees loving their jobs who look for what is missing or out of place and fix it without being asked and without expecting to be rewarded or recognized. They transform nonmeaningful work into something meaningful (Byrne, 2015:21). Descriptions of engaged employees include also the following characteristics: they deliver improved business performance (CIPD, 2009); they are aware of business issues, go the extra mile, believe in the organization, and respect others (Robinson et al., 2004), and they have higher productivity, innovation, stay longer, have higher quality discretionary efforts, are energetic, enthusiastic, and solve more problems than disengaged employees (Scarlett, 2009, cited in Byrne, 2015:21).

The current definitions of engagement (e.g., Kahn, 1990; Macey and Schneider, 2008; Schaufeli, Salanova et al., 2002) suggest that engaged employees (a) feel vigorous, demonstrating high levels of energy and persistence at work; (b) are dedicated, experiencing enthusiasm, pride, and significant in their work; (c) are absorbed in their work, to the point that they are intensely concentrating, lose track of time, and display an inability to stop working (like „good" workaholics); (d) are mindful and

present in their work roles; (e) are expressive emotionally, physically, and authentically; (f) are either stable in their levels of engagement (Schaufeli, Salanova, et al., 2002) or fluctuate in their engagement levels from moment to moment (Kahn, 1990); and (g) experience their engagement in a process whereby their individual characteristics (e.g., personality) lead them to feel engaged, which translates into performance behaviors on the job (Byrne, 2015:193).

When analyzing the concept of employee engagement, the several approaches to the definition of various levels/categories/communities of engagement should be mentioned. Gallup (Gallup, Inc., 2013) has for example made a distinction between engaged, not engaged, and actively disengaged workers. Tosti and Nickols (2011) have proposed the following somewhat broader categorization: players, spectators, cynics, and deadwood. ORC International (ORC International, 2015) differentiates following categories: highly engaged, engaged, fence sitters, critical stayers, and disengaged, while Sibson Consulting (Sibson Consulting, 2010) differentiates engaged employees from disengaged employees, enthusiasts and renegades.

To conclude the discussion on engagement the real-life patterns of behavior should be observed. And the practice shows that it is wrong to expect that an employee is always on the same level of engagement. Many if not most employees arrive to the job on day one fully engaged. The challenge facing employers is not how to engage employees. It is how to keep the fires of passion burning once the honeymoon period is over (Chester, 2015:20), or how to lead the employees through their engagement lifecycle. Some authors (Walker, 2012) report that there seems to be a two year "itch", i.e. after two years the engagement of new recruits starts to fade. These findings are in line with other research work (e.g. Cattermole, 2014). It would be therefore rewarding for the organization to sample recruits every few months to identify the tipping point when enthusiasm fades (Walker, 2012:18).

In this paper, we are focusing on the individual-level concept of employee engagement. Some authors have been rationalizing the need for the introduction of collective (organizational-level) employee engagement, which reflects the employees' perception of collective/organizational engagement (e.g. Barrick et al., 2015), and the need to discuss management policies for improving this collective engagement. Other authors have also argued that engagement must be created, measured, and monitored at the organization, team, and individual levels (Brown et al., 2016).

There is still to be found a consensus on the definition of engagement. On the other side, there are already some authors who have proposed a new paradigm - employee enlightenment as a new broadest possible concept including variables of organizational commitment, organizational citizenship behavior and engagement (Sulphrey and Basheer, 2008). Employee enlightenment is defined by them "as that which helps one to do what is right".

When discussing the concept of employee engagement there is a need for separating the antecedent and consequence constructs from the definition of engagement. The consequence constructs are outcomes of engagement measured in the terms of productivity, profitability, retention, customer satisfaction etc., which are addressed in the following subchapter 2.2. The antecedent constructs are usually analyzed as predictors of engagement or determinants of engagement which are thoroughly discussed in the chapter III.

2.2. THE VALUE OF EMPLOYEE ENGAGEMENT

Empirical data on employee engagement and organization performance show a strong correlation between them. There are many academic and non-academic research studies which prove the significant value of employee engagement in reaching high performance. Organizational performance is in this paper analyzed as a concept that reflects its four main elements: effectiveness, efficiency, relevance, and financial viability (Lusthaus et al., 2002:109). It could be therefore defined as a set of financial and nonfinancial indicators which offer information on the degree of achievement of objectives and results (Lebans and Euske 2006 after Kaplan and Norton, 1992, cited in Gavrea et al., 2011).

When searching through the vast amount of empirical studies several key characteristics related to the concept of employee engagement and its relation to the organization performance could be singled out:

- employee engagement is measurable, but the measurement methodology differs from study to study, due to the different theoretical concepts of the construct on which the study is based (many studies also analyze only some elements/dimensions of employee engagement);
- improving engagement correlates with improving performance (several performance indicators were used in different studies, such as productivity, profitability, earnings per share growth, customer ratings, turnover, absenteeism ...);
- employee engagement varies from low to high levels (significant regional, industry but also unit-level differences are evident);
- the cost of disengagement is very high and managers are often not aware of it;
- employers can affect the level of employee engagement by using the adequate strategies, approaches, and policies;
- measuring and managing employee engagement is a tool for improving organization success.

The value of employee engagement is best shown through data on its correlation with performance indicators, through the actual data on the levels of engagement, and through the estimations of the cost of disengagement. The valuable input for de-

fining its value are also the opinions of HR and business leaders on the importance of employee engagement for organizations success, and there's self-evaluation of its current programs for measuring, driving and improving engagement. The value of managing employee engagement gains its significance in the contemporary work environment characterized by high levels of collaboration and information sharing, and by the expectations of new generations of workers, i.e. Millennials who are searching for purposeful work and organizations. More than 70 % of Millennials expect their employers to focus on societal or mission-driven problems; 70 percent want to be creative at work; and more than two-thirds believe it is management's job to provide them with accelerated development opportunities for them to stay (Bersin, 2015).

In the following sections, a representative set of the above-mentioned research data are presented.

According to the study from Deloitte titled *Global Human Capital Trends 2015: Leading in the New World of Work*, lack of employee engagement is the top issue currently facing a whopping 87 percent of HR and business leaders, up from an already startling 79 percent last year (Bersin et al., cited in Chester, 2015). The data for 2016 are close to 2015 data - 85 percent (Schwartz et al., 2016:6). The February 2015 survey of more than 3,300 HR and business leaders in 106 countries also revealed the following: The number of HR and business leaders who cited engagement as being "very important" priority for their companies doubled from 26 percent last year to 50 percent this year (a slight decrease is reported in 2016 - to 48 percent). Some 60 percent of HR and business leaders surveyed said they do not have an adequate program to measure and improve engagement. A mere 7 percent of those surveyed rated themselves as excellent at measuring, driving, and improving engagement and retention. (Bersin et al., cited in Chester, 2015:18-19). A 66 % of HR respondents report they are updating their engagement and retention strategies. Nearly one in five executives of those surveyed in 2016 (18 percent) reported that their companies do not formally measure employee engagement at all. Another 54 percent report they are not fully ready to adopt an always-on approach. And only 8 percent of the executives surveyed state that they measure employee engagement on a monthly or more frequent basis (Brown et al., 2016).

The issues of „retention and engagement“ have risen to No. 2 in the minds of business leaders, second only to the challenge of building global leadership (Schwartz et al., cited in Bersin, 2015). These concerns are grounded in the following data:

Gallup's research shows that only 13 % of all employees are engaged in their jobs, 63 % are not engaged, and 24 % are actively disengaged (this is the average for 142 countries included in the research, Gallup, Inc., 2013). However, there are significant regional, industry, and unit-level differences.

The 2014 Towers Watson Global Workforce Study (cited in Mends, 2016) found

that 24% of employees are disengaged and another 36% can be described as either unsupported or detached. A full 60% of employees lack the elements required to be highly engaged. The “2015 Trends in Global Employee Engagement Report” by Aon Hewitt confirms this trend by noting that the average employee’s work experience is down 28% versus 2013. The Aon Hewitt report also tries to get at the root of the problem by zeroing in on the core challenge areas — enablement, autonomy and sense of accomplishment. Only about half of employees feel enabled and both autonomy (choice) and sense of accomplishment have decreased by 1% since 2013 (Mends, 2016:37).

The impact of the engagement deficit is significant. Disengaged workers are reportedly costing the British economy between roughly 58.8 to 61.5 billion USD per year (Flade, 2003, cited in Byrne, 2015:11). The Gallup’s more recent estimation show even greater costs of active disengagement: 450-550 billion USD per year for the U.S.A, 151-186 billion USD per year for Germany, and 83-112 billion USD per year in the United Kingdom (Gallup, Inc., 2013). The methodology of Gallup’s estimation is described in MacLeod and Clarke, 2009:17.

The correlation studies show following results:

- Operating income for organizations with high employee engagement improved 19 % while it declined 33 % over the year for companies with low employee engagement (Towers Perrin, 2008, cited in Vogelsang et al., 2012).
- Engaged organizations grew profits as much as 3 times faster than their competitors. They have the potential to reduce staff turnover by 87 %, and to improve performance by 20 % (Corporate Leadership Council, 2008, cited in MacLeod and Clarke, 2009:37).
- Median differences between top-quartile and bottom-quartile units were 22 % in profitability, 21 % in productivity, 37 % in absenteeism (Gallup, Inc., 2013).
- In a Fortune 100 manufacturing company turnover in low engagement teams averaged 14.5 % (absenteeism 8 %), compared with 4.8 % in high engagement teams (absenteeism 4.1 %). DDI, 2005, cited in MacLeod and Clarke, 2009:38.
- The research conducted among manufacturing companies has shown that people management practices were a better predictor of company performance than strategy, technology, R&D (Institute of Work Psychology, Sheffield University, 2001, cited in MacLeod and Clarke, 2009:37).
- The IES/Work Foundation Report People and the Bottom Line (2008) found that if organizations increased investment in a range of good workplace practices which relate to engagement by just 10 %, they would increase profits by 1800 USD per employee per year (MacLeod and Clarke, 2009:17). Workplace Research Foundation reported that increasing employee engagement invest-

ments by 10 % can increase profits by 2400 USD per employee per year.

- Companies with employee engagement programs achieve 26 % greater year-over-year increase in annual company revenue, compared to those who do not have formal programs (Aberdeen, 2015).

The critical information in explaining, understanding and comparing the results of the research is to consider the theoretical presumptions about the concept of employee engagement on which the research is based. This problem was discussed in the previous subchapter 2.1.

3. THE DETERMINANTS OF EMPLOYEE ENGAGEMENT

While 90 % of executives understand the importance of employee engagement, fewer than 50 % understand how to address the issue (Conference Board, cited in Bersin, 2015). To successfully address the issue of engagement the managers should be aware of the determinants of engagement, i.e. the drivers of and barriers to engagement.

3.1. THE DRIVERS OF ENGAGEMENT

Drivers of engagement are those factors which enable high levels of engagement. They represent one of the crucial knowledge areas for modern management.

The empirical research has indicated a several critical enablers/predictors of engagement. According to Towers Perrin (cited in MacLeod and Clarke, 2009:74) the most important driver of engagement is the extent to which employees believed that their senior management had a sincere interest in their well-being. The second important is the extent to which employees believed that they have improved their skills and capabilities over the previous year.

Gallup's research (Gallup, Inc., 2013) shows the critical influence of direct supervisors. Its research data stressed the productive work environment, shaped mostly by the managers, as a key predictor of engagement levels. The elements of productive work environment are measured by its Q12 questionnaires explained in Table 1. As Gallup's metrics is suggesting, the influence of other employees is not to be neglected. In that context, we could talk about engagement contagion, a process in which engaged employees create engagement in those around them, emotional contagion, cognitive contagion, and behavioral contagion (Byrne, 2015). However, the problem with the contagion is that some may not catch engagement from others, out of different motivational, situational or dispositional factors (e.g. personality trait - avoiding strong connections with others), and managers should be aware of that too. The research results show that the engagement contagion effect is strongest for employees working in similar occupations and units (Byrne, 2015).

Other enablers-related empirical research is in line with the above-mentioned studies.

Leadership providing a strong strategic narrative (organizational purpose); engaging managers who offer clarity, appreciation, positive feedback and coaching, at the heart of organizational culture; an effective and empowered employee voice; and integrity (behavior throughout the organization consistent with stated values, leading to trust and a sense of integrity) are listed as crucial (MacLeod and Clarke, 2009:75). The role of organizational social capital in fostering employee engagement is therefore to be more thoroughly analyzed and tested in the future research work.

As some authors have stressed, employees who get what they want from their organizations are more engaged than their unfulfilled counterparts. Wiley and Kowske found that employees whose RESPECT needs (recognition, exciting work, security, pay, education, conditions, truth) are fulfilled also have a very high EEI score (The Kenexa Employee Engagement Index): 76 percent. They outscore their unfulfilled counterparts by an incredible thirty-one percentage points (Wiley and Kowske, 2012:15-16). To reach high levels of engagement modern organizations should strive to become the irresistible organization characterized by: meaningful work, hands-on management, positive work environment, growth opportunity, and trust in leadership (Bersin, 2015). Some authors have also stressed the Work Life Balance as one of the critical drivers of engagement (Bedarkar and Pandita, 2014).

Robinson (2004) and Penna (2007), cited in Morgan (2017), both espouse a model of engagement which incorporates job satisfaction, feeling valued at work, communication, and training and development as key influences on staff engagement. Crabb (2011) stresses focusing strengths, managing emotions and aligning purpose as individual level drivers of engagement, which can be understood and applied practically through coaching interventions.

In one research project (Byrne, 2015) when employees were asked what promotes their engagement, they responded with a variety of drivers that may be grouped into seven categories: meaningfulness (work and organization), alignment (P-O fit), relationships, communication, job itself, personal (developmental opportunities, voice ...), and good leadership.

This and other research work (e.g. Garg, 2014) pointed out that individual factors also affect employee engagement and should not be neglected. Keating and Heslin (2015) bring insight into the potential role of mindsets in unleashing employee engagement, specifically through enthusiasm for development, construal of effort, focus of attention, interpretation of setbacks, and interpersonal interactions.

To conclude we agree with Byrne (2015:200) that the employee engagement is the result of the interaction between personal environment, work environment, and person, i.e. individual characteristics. So, what are those factors in all those environments which prevent employee engagement? This is discussed in the following subsection.

3.2. THE BARRIERS TO ENGAGEMENT

As for the enablers of employee engagement we can also distinguish the organizational and individual inhibitors to effective engagement. But before listing the barriers to engagement we will discuss what is disengagement. Kahn (1990), cited in Byrne (2015:77), defined personal disengagement as the „uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances; they become passive in their roles. He linked disengagement to robotic or automatic behaviors, or displaying effortless performance. He further suggested that people who are disengaged hide their identity, thoughts, and feelings while at work. They may push their tasks onto others or, when in a managerial role, may excessively delegate to their employees. They withdraw from challenging or questioning others and do as they are told. Ideas are kept to the self and creativity is diminished (Byrne, 2015:77).

Employees' opinion on the characteristic of disengaged are similar. Hiding, counterproductive, negative emotions, withdrawal and time factor are the key characteristics of disengaged in their opinion (Byrne, 2015:79-80).

If we start to think about the barriers as the opposite to enablers of employee engagement a similar set of critical factors arise. On the individual level inhibitors to engagement are: significance, fit, non-work related (family problems and needs), communication (relational issues), stress (Byrne, 2015:83). On the organizational level, there are following group of factors which prevent engagement: resources, interpersonal, leadership, other such as mundane work (Byrne, 2015:82).

The list of key inhibitors also points out the managers, their approaches and behaviors as critical factors of disengagement. The lack of engagement strategies and policies, the lack of support for implementation of engagement strategies or the wrong choice of engagement practices could significantly lower the level of employee engagement.

Some leaders are not aware of the role of engagement. Others do not believe that it is worth considering, or do not fully understand the concept and the benefits it could have for their organization. Others who are interested in the topic do not know how to address the issue. Even when leaders place great emphasis on the idea of engagement, managers may not share the belief, or may be ill-equipped to implement engagement strategies. As a result, the organizational culture is unable to deliver engagement. Among those leaders who are concerned with engagement, there is great variability in their views and commitment to it. Often the potential of engagement is underestimated. For some, engagement is an annual staff survey whose results may be acted on; for others, a survey is no more than one tool in an overall approach that

places engagement at the core of the organization's strategy (MacLeod and Clarke, 2009:66).

Disengaging practices which were found to act as barriers are (Kingston Business School, cited in MacLeod and Clarke, 2009:68):

- reactive decision-making that fails to address problems in time
- inconsistent management style, based on the attitudes of individual managers which leads to perceptions of unfairness
- lack of fluidity in communications and knowledge sharing, due to rigid communication channels or cultural norms
- low perceptions of senior management visibility and quality of downward communication
- poor work-life balance due to long hours culture.

If we want to address the issue of engagement we should be aware about the actual levels of engagement among the employees. To diagnose that we need measures. It is a first step towards successful engaging practices.

4. MEASURING EMPLOYEE ENGAGEMENT - METHODOLOGIES, APPROACHES AND CHALLENGES

Measuring engagement accurately is critical for successful interventions (Byrne, 2015:99). However, it should be said that measurement of engagement is not an exact science, due to different approaches to the concept of engagement. For example, some surveys look at the preconditions for engagement, and/or the outcomes of engagement, while others emphasize employee attitudes (MacLeod and Clarke, 2009:10).

There are several academic and nonacademic measures available to organizations. Each one has its advantages and disadvantages, and it is up to the individual organization to choose/combine metrics which mostly suits their needs. To help them the comparison of most frequently used measures of employee engagement, its authors, its key dimensions, and its theoretical base is given in the table 1.

Table 1.: The Comparison of Most Frequently Used Measures of Employee Engagement

Measure	Authors	Key dimensions and theoretical base
Utrecht Work Engagement Scale (UWES)	Schaufeli, Salanova, Gonzalez-Roma, Bakker (2002)	vigor, dedication, absorption; based on definition of engagement being opposite of burnout
Engagement Scale	May, Gilson, Harter (2004)	physical, cognitive, and emotional engagement; based on Kahn's definition (1990)
Job Engagement Scale (JES)	Rich, LePine, Crawford (2010)	physical, cognitive, and affective self; based on Kahn (1990)
Job Engagement and Organizational Engagement	Saks (2006)	engagement in the job and engagement towards the organization; 2 independent scales
Self-engagement	Britt (1999)	engagement, job involvement, self-efficacy/job involvement, and commitment; based on Kahn (1990), Kanungo (1982), Lodahl and Kejner (1965)
Q 12	Gallup, Inc. (1990)	12 workplace elements; employee's primary needs, relation to the direct manager, connection to the team and the organization, growth possibilities
Kenexa Employee Engagement Index (EEI)	Kenexa	pride, satisfaction, advocacy, and commitment
Global Employee Engagement Index	Effortory International (2014)	engagement and commitment; 86 different factors at work; aim - to uncover what employees want from work
Aon Hewitt Model of Engagement	Aon Hewitt	6 items composed of 3 observable facets "say, stay, and strive" - advocacy, commitment to the organization, motivation for discretionary effort

Source: Aon Hewitt, 2015, Byrne, 2015, Gallup, Inc., 2013, Penhale Smith, 2016, Wiley and Kowske, 2012.

Vance (2006), cited in Wefald and Downey (2009), reviewed a variety of job engagement programs and summarized industry's approach to engagement by listing 10 common themes in measures of engagement. These included:

- Pride in employer.
- Satisfaction with employer.
- Job satisfaction.
- Opportunity to perform well at challenging work.

- Recognition and positive feedback for one's contributions.
- Personal support from one's supervisor.
- Effort above and beyond the minimum.
- Understanding the link between one's job and the organization's mission.
- Prospects for future growth with one's employer; and
- Intention to stay with one's employer.

Witemeyer et al. (2013) validated a conceptualization of employee engagement and a self-report scale to measure it. Their study provides a benchmark for firms evaluating approaches to measuring engagement.

Next to the self-perceived engagement (the most used approach in the above listed scales) a valuable input for organizations would be to analyze the following (Fuller, 2014):

- The amount of work that occurs outside of normal working hours (e.g., evenings and weekends). This is a good indicator of discretionary effort.
- The number of network connections and time spent with people outside of immediate team or region. Building of broad networks beyond core team is a sign of high engagement.
- The percentage of participation in ad-hoc meetings and initiatives vs. recurring meetings and processes. Participation in only highly structured events can be an indicator of low engagement.
- Time spent collaborating directly with customers outside of normal scope of work. This and other measures like it can indicate people are highly engaged enough to help their colleagues even though they might not get credit for it.

These metrics are created to measure actual engagement. Additional metrics related to the drivers of engagement that could be of value to organizations are (Fuller, 2014):

- Time spent in one-on-ones with their manager per week. Engagement typically increases as an individual gets more time with his or her boss.
- Time spent in presence of skip-level leadership. Engagement can increase as people get more exposure to colleagues up the ladder.
- Network quality and breadth of their manager. Engagement often increases in people who have well-connected direct managers.
- The percent of a manager's time spent with team. A number that's too low or too high typically decreases engagement.
- The ratio of highly engaged employees vs. low on a current team.
- The ratio of highly engaged employees vs. low with a person's most frequent collaborators.
- The number of strong tie connections, defined as strong relationships characterized by frequent and relatively intimate interactions. Engagement typically increases as people have more, and stronger, relationships.

- The number of weak tie connections, which are infrequent interactions with people outside of an individual's core working team. Engagement typically increases as people are exposed to ideas from beyond their core relationships.
- Variability of network over time, or the extent to which an individual's core network fluctuates month over month. Very high volatility can indicate a rapid change in role and be unsettling for employees, while very low variability can indicate someone stagnating.
- Hours per week spent in meetings with more than 20 attendees. Not surprisingly, engagement typically decreases the more time people spend in very large group settings where it is hard to be much more than an audience member.
- Calendar fragmentation, which is when people don't have enough meaningful time — about a two-hour break — to work between meetings and other events. Engagement typically decreases when people are overly fragmented.

The most frequently used sources of data on engagement are: questionnaires, staff focus groups, and people analytics systems, which help to identify and predict factors that create low engagement and retention problems.

The personal balanced scorecard (PBSC) was found useful for self-examination (Rampersad, 2006).

Every measure related to complex concepts, such as engagement, has its challenges.

The main disadvantage of all the available scales is following: they all assume engagement is the same for every organization and engagement is a single construct definition. In practice, it may be that some industry characteristics require a different kind of assessment of employee engagement, and perhaps even a different definition of engagement. To design specific interventions that address concerns within the organization that are preventing employees from becoming engaged may require a custom measure that effectively assesses employee engagement in that organization (Byrne, 2015:121).

The organizations could benefit from combining different scales when measuring engagement. Some aspects of the practitioner (nonacademic) scales could be added into a scholarly scale, or vice versa. This implies a closer collaboration between academics and practitioners, and the readiness of practitioners to make the methodology of its scales public.

Several companies offer engagement software (often worth investing in bigger organizations), e.g. Willis Towers Watson (Willis Towers Watson, 2017), or 15Five, Officevibe, and Culture Amp (West, 2016).

A key question for HR professionals is also how often should employees be surveyed? The answer is heavily dependent on the amount of information being sought. In general terms, the more questions there are, the longer the gap should be between surveys. Conversely, more frequent surveying - often referred to as "pulse surveys"

or "temperature checks" - can be conducted when fewer questions are asked (Stone-man, 2013).

When measuring and presenting engagement levels the managers who read that information should be aware of the dynamic of engagement, i.e. the engagement lifecycle typical for every employee. During time, fluctuating levels should be expected and their causes analyzed and adequately addressed.

Measurement per se without adequate interventions which will follow is of not great value for organizations. There can be an over-emphasis on measurement at the expense of change. Indeed, to carry out a survey and then not follow it through by implementing changes based on that survey's results, is more likely to disengage staff than not doing a survey in the first place (MacLeod and Clarke, 2009:71).

The role of managing and managers in improving engagement is therefore discussed in the following chapter V.

5. MANAGING EMPLOYEE ENGAGEMENT - CRUCIAL ACTIVITIES AND THE ROLE OF HR

To successfully manage employee engagement the managers should engage in the following activities: collecting data (diagnosing the engagement level), analysis of data (people analytics), proposing strategies and policies, oversight of policy implementation, leading people through their engagement lifecycle to greater engagement levels, and measuring the success of engagement programs and policies (ROI methodology could be implemented, Pulliam Phillips et al., 2016).

As the analysis of determinants of employee engagement has shown the managers are the key element to improve engagement. More and more organizations become aware of that and have that in mind when hiring new managers. Some of them when hiring is in search for engaging managers. To help them in that process Gallup has developed the Engagement Creation Index (ECI), a tool designed to identify and measure the talent for engaging others (Gallup, Inc., 2013).

Due to the significance of engagement in reaching high performance, as discussed earlier in the paper, executive training and coaching should have more focus on engaging employees (soft skills). Management needs to have the right capabilities to enhance employee engagement. These competencies include respectful, responsible, proactive, participative, sociable and empathetic behavior towards employees (Jha and Kumar, 2016:24). The most engaging managers in the organization should be observed and analyzed as the role models, and used to coach others how to foster engagement among employees.

Arnstein's Ladder of Participation (1969), cited in Banyard et al. (2008) can prove a useful, if simplistic, tool for mapping current practices in employee engagement and depth of participation. The rungs on the ladder can be summarized as follows:

- Manipulation and Therapy
- Informing, Consultation and Placation
- Partnership
- Delegated Power
- Citizen Control.

Organizations should create an organizational culture for engagement by using resources, managing work stressors, developing trust, finding and creating meaning, making stronger congruence between person and organization or job, etc. By developing organizational social capital organizations build an employee-friendly work environment.

Managers should be aware of all the individual and organizational drivers and inhibitors to engagement, and should have a trustful relation to its subordinates. They should know its employees, their level of engagement at a time, and their individual drivers of engagement to lead them to greater engagement. By knowing employees, they can create and implement a customizable approach to each of them. The role of direct supervisors/managers stays crucial. They should set clear expectations, empower its employees, focus on their strengths, and give constructive feedback at a regular basis.

It is recommendable that managers conduct "stay interviews" to gain/expand knowledge about the drivers of engagement, i.e. to learn what it would take an employee to stay at a company (Brown et al, 2016).

Some corporations according to Pollock offer "retention bonuses" to managers who have low attrition rates (Hein, 2014).

In the modern work environment, Human Resources are of great value to the management. In close collaboration with HR management will change its approaches to hiring and leading engaging employees. The mission of the HR leader is evolving from that of "chief talent executive" to "chief employee experience officer." HR is being asked to simplify its processes, help employees manage the flood of information at work, and build a culture of collaboration, empowerment, and innovation. This means that HR is redesigning almost everything it does—from recruiting to performance management to onboarding to rewards systems. To do this, research suggests that HR must upgrade its skills to include the areas of design thinking, people analytics, and behavioral economics (Bersin et al., 2016). Following that conclusion there are to be seen new roles in HR, such as Chief Learning Officer, and Chief Employee Listening Officer.

Fluctuations and changes in engagement levels are to be expected as the dynamics of the engagement lifecycle. These fluctuations are also productive and necessary for both employees and their organizations. George (2010), cited in Byrne (2015), proposed that although engagement has been defined as a positive affective state, negative affect may be just as important to experience during moments of engage-

ment. She suggested negative affect signals a problem exists that must be solved, mobilizing the mind and body to work on changing behavior or changing the situation (Damasio, 1999; Frijda, 1988; George, 2009, cited in Byrne, 2015:187). Also, conscious engagement can be dysfunctional in decision-making, creative work, and complex problem solving (when an employee is in a state of high engagement, problem solving is limited because conscious thinking cannot access as much information as the nonconscious mind; thinking and processing of information is more structured, restricted, constrained). Therefore, too much engagement can be detrimental to an organization (George, 2010, cited in Byrne, 2015:186-187).

Some authors have discussed the paradox of engagement, i.e. that engagement taken to an extreme becomes negative and transforms itself into over commitment to work, leading to burnout and work-life conflict (George, 2010, Macey and Schneider, 2008, Sonnentag, 2003, cited in Byrne, 2015:183). However, we are more supportive of the other group of researchers who argue that rather than employee engagement leading to such negative outcomes, when employees work obsessively and to their own detriment, they are no longer demonstrating engagement, but rather they are demonstrating workaholism (Schaufeli, Taris, et al., 2006, cited in Byrne, 2015:184) or obsessive passion toward work (in contrast to harmonious passion). Harmonious passion is defined as willing involvement in a task without the compelling need to do the task at all the times (Vallerand, 2008, cited in Byrne, 2015:185). Obsessive passion, in contrast, refers to „rigid persistence toward the activity“ (Vallerand, 2008, cited in Byrne, 2015:185), describing an individual who becomes dependent on the activity such that his or her normal functioning is impaired by the obsessive need for continuous involvement in the activity.

Engaged employees choose to be engaged, and are reinforced both internally and externally for their engagement, which results in more engagement. Thus, the model is cyclical, reflecting to some degree the idea of an engagement process - a self-sustaining model of engagement. The model additionally incorporates the passage of time and the idea that engagement in one moment affects engagement in the next moment, but still recognizes that engagement may come in chunks as opposed to a single continuous stream of focus, energy, and thought (Byrne, 2015:201).

Due to industry- and organization-specifics there is no „one size fits all“ model of engagement. Different organizations will vary in their needs and their approach to define, measure, and manage employee engagement, e.g. the public-sector organizations (Lavigna, 2013), or higher education institutions (Tamayo, 2016). The differences are also seen between family and non-family firms (Azoury, et al., 2013). However, a unifying definition based on key dimensions of the concept is to be agreed to.

Cross-cultural research is necessary to determine if engagement is a unique and relevant construct across the globe, or only unique to one or more cultures (Byrne, 2015:203). The valuable contribution to the measurement issues in cross-cultural

context is given in Truss, et al. (ed.), 2014, and Sanchez and McCauley (2006) have listed differences in national drivers of employee engagement between U.S.A., U.K., and China based on the Mercer's What's Working studies.

The problem of reversed causality was due to the limitations of the length of the paper not addressed but should be mentioned here. We have seen that a healthy work environment enables engagement, but the direction of influence could be also analyzed in reverse: how engaged employees create a healthy organization? This is a topic for some future research.

6. CONCLUSION

The purpose of the research was to raise awareness about the crucial role of adequate engagement policies and practices in reaching high performance. The top managers are often aware of the problem of the lack of engagement but at the same time not aware of the costs of disengagement (hidden and direct costs related to organizational performance). Some of the managers have not adequate knowledge on how to address this problem, and some others do not recognize the value of investing in engagement policies or practices for organizations' success. This paper presents the arguments and sources for both groups of managers.

The paper provides the summary of engagement-relevant theoretical base, and the synthesis of mostly used engagement measures and recommendable engagement practices. The paper has stressed the need for an agreed definition on the concept of employee engagement, which could enable better comparability of the empirical engagement-related research results. The author summarizes different theoretical approaches to the complex concept of employee engagement, and gives a thorough list of empirical research showing correlation between employee engagement and several organizational performance indicators. The value of investing in engagement policies and practices is also shown through the presentation of the estimated costs of disengagement. Engagement practices described in the paper are related to the key determinants of engagement, i.e. the drivers of and barriers to engagement, which are explained on both organizational and individual level.

Due to industry-, culture- and organization-specifics there is no "one size fits all" model of engagement. The practitioners could combine and customize several measures to differentiate the levels of employee engagement in its organizations. Several companies offer engagement software which is often worth investing in bigger organizations. The frequency of surveying is related to the amount of information being collected.

When managing engagement managers should be aware of the dynamic of engagement, i.e. the engagement lifecycle typical for every employee. During time, fluctuating levels should be expected and their causes analyzed and adequately addressed.

The implemented engagement policies should be constantly revised (by following its effects and through benchmarking, both external and internal).

An easy access to best engagement practice/measures is of critical value. This paper's review of the engagement-relevant theoretical and empirical results, as well as the synthesis of engagement practices and measures represents a contribution to the publicly available resources.

Limitations of the research are related to the secondary data analysis, but the research has also given a valuable input for future primary data research, e.g. the problem of reversed causality, the relation between organizational-level and individual-level engagement.

7. RESULTS' IMPLICATION AND RECOMMENDATIONS

The results of the research are of value for both individuals and organizations (in academic world and practice). Both the private and public sectors could benefit from understanding and implementing a customized approach to measuring and managing employee engagement to reach higher performance.

More and more leaders in all sectors of the economy are becoming aware of the problem of disengagement. However, many of them do not know how to address the issue or the importance of addressing the issue for future organizations' success. The critical analysis of the available measures and recommendations regarding managing engagement presented in this paper could help them in that process.

Government and higher education institutions should use its power to foster and organize debates on the definition and comparable measures of employee engagement. The concept of engagement and benefits of investing in engagement practices should be promoted through conferences, events, seminars, workshops and research papers. And further research should be funded to create and share the knowledge about the impact of employee engagement on organizations' success.

An easy access to best practice of measuring and managing employee engagement will enable the implementation of benchmarking methods to reach best practice.

To develop clear and comparable measures of engagement, and to reach consensus on the definition of the concept more open collaboration between practitioners and academics is needed.

The valuable tool would be also the data base of drivers and inhibitors to engagement (grouped by industries and other characteristics) which could be constantly updated, as well as reports on the success of engagement programs and policies.

Future research should give a clearer insight into the relation between organizational-level and individual-level engagement.

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