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Croatian Chamber of Economy



# Economic and Social Development

7<sup>th</sup> ITEM Conference - "Innovation, Technology, Education and Management" and  
67<sup>th</sup> International Scientific Conference on Economic and Social Development Development

## Book of Proceedings

Editors:

**Damira Djukec, Igor Klopota, Luka Burilovic**



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## **Economic and Social Development**

7<sup>th</sup> ITEM Conference - "Innovation, Technology, Education and Management" and  
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### **Book of Proceedings**

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## **CONTENTS**

<b>BULGARIAN PROSECUTOR'S OFFICE – PROTECTION ACTIVITIES TO THE PROSECUTOR GENERAL .....</b>	<b>1</b>
Venelin Terziev, Marin Georgiev, Stefan Bankov, Ivan Ivanov	
<b>WELL-BEING AND HEALTHCARE CONCERNS CHANGES DURING COVID-19 PANDEMIC .....</b>	<b>13</b>
Andreea Orindaru, Maria-Floriana Popescu	
<b>THE INFLUENCE OF ACCOMMODATION STRUCTURE AND AFFILIATION TO THE INTERNATIONAL HOTEL CHAINS ON PERFORMANCE OF TOURISM DESTINATIONS ON THE CASE OF CROATIAN COASTAL DESTINATIONS.....</b>	<b>24</b>
Branko Bogunovic	
<b>EXAMINING FACTORS INFLUENCE INDIVIDUAL BEHAVIOUR TO CONTINUE USE OF MOBILE SHOPPING APPS WITH THE INTEGRATION OF TECHNOLOGY ACCEPTANCE MODEL AND BRAND AWARENESS.....</b>	<b>35</b>
Samar Rahi, Mehwish Ishtiaq, Waqas Farooq, Feras Alnaser	
<b>EMPIRICAL ANALYSIS OF PUBLIC DEBT AND CREDIT ACTIVITY IMPACT ON ECONOMIC GROWTH IN THE REPUBLIC OF CROATIA .....</b>	<b>46</b>
Damira Dukec, Damira Kecek, Matej Lazic	
<b>THE MOROCCAN ECONOMIC DIPLOMACY AFTER COVID-19.....</b>	<b>53</b>
Nechad Abdelhamid, Bahha Meryeme	
<b>CAPITAL MARKET VS. REAL ESTATE MARKET – INVESTMENT ASPECT .....</b>	<b>60</b>
Dean Uckar, Manuel Benazic, Adam Vukelic	
<b>LIMITATIONS OF LIABILITY FOR DAMAGE CAUSED BY ACTS OF PUBLIC VIOLENCE.....</b>	<b>68</b>
Dejan Pilipovic	
<b>NASCENT CONSUMER BEHAVIORS IN THE PLATFORM ECONOMY DURING COVID-19 PANDEMIC .....</b>	<b>80</b>
Abulfaz Hasanbayli	
<b>DOMESTIC AND INTERNATIONAL CHALLENGES IN HIGHER EDUCATION ..</b>	<b>88</b>
Venelin Terziev, Marusya Lyubcheva, Marin Georgiev	
<b>PROCESSES OF GLOBALIZATION - NEGATION OF IDENTITY .....</b>	<b>98</b>
Marija Valcic, Ernest Vlacic, Martina Vukasina	
<b>CIRCULAR ECONOMY - A BUSINESS MODEL WHICH LEANS TOWARDS A COHERENT LOW-CARBON ECONOMY FOR BATTERY WASTE FROM ELECTRIC CARS.....</b>	<b>107</b>
Goran Sabol, Sebastijan Trstenjak	

<b>THE TRADE-OFF BETWEEN INTERNATIONAL ACCOUNTING CONVERGENCE AND IFRS IN-COUNTRY ADJUSTMENTS .....</b>	<b>117</b>
Alexandra Fontes, Ana Paula Silva, Humberto Ribeiro, Sandra Raquel Alves	
<b>DATING PLATFORM TINDER AT THE TIME OF THE COVID 19 PANDEMIC .</b>	<b>127</b>
Josko Lozic	
<b>DEVELOPMENT OF THE PUBLIC RELATIONS MODEL.....</b>	<b>137</b>
Kresimir Lackovic, Katarina Potnik Galic, Mirjana Radman-Funaric	
<b>THE PRINCIPLE OF GOOD FAITH AS LEGAL AND MORAL STANDARD.....</b>	<b>147</b>
Magdalena Zeko, Blazenska Novak, Martina Sobocan	
<b>ENERGY CRISIS MANAGEMENT IN THE 21ST CENTURY.....</b>	<b>156</b>
Maria-Floriana Popescu, Andreea Orindaru	
<b>IMPACT OF MACROENOMIC VARIABLES ON PRIVATE EQUITY INVESTMENTS IN CROATIA .....</b>	<b>164</b>
Marija Simic Saric, Ljubica Maric	
<b>ANALYSIS OF TOURISM MOTIVES AND PREFERENCES CHARACTERISTICS OF GENERATION Y .....</b>	<b>171</b>
Daniela Gracan, Marina Barkidija Sotosek, Nikolina Seric Honovic	
<b>A PROPOSAL OF SPECIALISED PORTFOLIO ALLOCATION MODELS AT THE VOLUNTARY PENSION FUNDS IN CROATIA.....</b>	<b>177</b>
Hrvoje Volarevic, Mario Varovic, Marko Peric	
<b>PARTICIPANTS' ATTITUDES ABOUT AUGMENTED REALITY AUGMENTATION OPPORTUNITIES IN ORIENTEERING.....</b>	<b>186</b>
Nevenka Breslauer, Tomislav Hublin, Nenad Breslauer, Ivana Zeljko	
<b>THE INTRODUCTION OF A CIRCULAR ECONOMY IN THE COMPANY AND THE SOLUTION OF LEGAL DILEMMAS.....</b>	<b>194</b>
Stefan Sumah, Jure Naglic, Tilen Sumah, Jure Pecnik	
<b>MODELLING TIME-SERIES COMPONENTS OF ENERGY CONSUMPTION.....</b>	<b>201</b>
Domagoj Sajter	
<b>BLENDED LEARNING ENVIRONMENT: WEAKNESSES AND OPPORTUNITIES .....</b>	<b>211</b>
Tina Smolkovic	
<b>INVESTIGATING THE EFFECTS OF CELEBRITY AND INFLUENCER ENDORSEMENT ON ATTITUDE TOWARD PERFUMES AND BUYING INTENTION.....</b>	<b>218</b>
Tural Aliyev	
<b>REGIONAL DEVELOPMENT THROUGH CREATIVE INDUSTRY – CREATIVE AND EDUCATIONAL CENTRE MURAI.....</b>	<b>228</b>
Filip Zivaljic, Mirjana Trstenjak	

## **BULGARIAN PROSECUTOR'S OFFICE – PROTECTION ACTIVITIES TO THE PROSECUTOR GENERAL**

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### **ABSTRACT**

*The Bulgarian Prosecutor's Office shall ensure that legality is observed by bringing charges against criminal suspects and supporting the charges in indictable cases; overseeing the enforcement of penalties and other measures of compulsion; taking action for the rescission of unlawful acts and for restoration in urgent cases of unwarrantedly exercised right, contested also by another; taking part in civil and administrative suits whenever required to do so by law. The present study is aimed at making a brief analysis of the protection activities to the Prosecutor General and at finding an answer to the new challenges facing the Bulgarian Prosecutor's Office.*

**Keywords:** *Activities, Bulgarian Prosecutor's Office, Implementation, Prosecutor General*

### **1. INTRODUCTION**

The Bulgarian Prosecutor's Office shall ensure that legality is observed by bringing charges against criminal suspects and supporting the charges in indictable cases; overseeing the enforcement of penalties and other measures of compulsion; taking action for the rescission of unlawful acts and for restoration in urgent cases of unwarrantedly exercised right, contested also by another, taking part in civil and administrative suits whenever required to do so by law. In the last few years, significant progress has been made by the Republic of Bulgaria in relation to combating crime and enforcing the rule of law. As a result of the excellent interaction between the judiciary presented by the Prosecutor's Office of Bulgaria on the one hand and on the other hand the executive presented by the bodies of the Ministry of Interior, State Agency for National Security, Commission for Combating Corruption and Forfeiture of Illegally Acquired Assets and other institutions, a number of actions have been taken to prosecute persons occupying high state positions for committed corruption crimes (Terziev, Georgiev, Bankov, 2020-a).

## **2. PROTECTION ACTIVITY**

### **2.1. Operational activity**

In 2019 the prosecutors from the Supreme Cassation Prosecutor's Office (SCPO) worked on a total of 30 528 (26 873; 24 123) case files, of which 17 405 (17 186; 14 948) were newly initiated. A total of 519 (745; 696) are the pending files from the previous period and 12 604 (8 908; 8 460) are the resolved files on which new materials were received during the reporting period. The closed files are 29 424 (26 437; 23 739), of which 1 461 (1 455; 1 284) – instance files. Of the closed files 29 251 (26 304; 23 574) are resolved within 1 month and 173 (133; 165) - over 1 month. A total of 105 (109; 121) pre-trial proceedings were under special supervision. The prosecutors from 03 Judicial Department participated in court hearings on 1 058 (1 095; 1 098) cases. As a result of the 3 complex planned inspections, carried out by the Inspectorate of the Supreme Judicial Council, in each of the six departments of the Supreme Cassation Prosecutor's Office, for the period 01.01.2017 - 31.12.2018 and concerning the initiation, movement and closure of prosecutorial files and cases, as well as the general organization of the administrative activity in the SCPO, no shortcomings were found, and only positive, good practices were reported in accordance with the functional competence. No recommendations were given (Terziev, Georgiev, Bankov, 2020-a; 2020b).

### **2.2. Judicial Supervision**

This supervision is carried out by the Judicial Department. In 2019 7 215 (7 004; 6 630) case files were reviewed, of which 3 003 (3 230; 2 930) newly initiated. The deadline for resolving the files is very good, there is a significant improvement of the files resolved within 3 days – 6 912, compared to 6 177 in 2018 and 5 475 in 2017 and 166 files were resolved within 1 month, compared to 754 in 2018 and 1 018 in 2017. In accordance with the instance control 72 (78; 71) files were checked, of them 68 (71; 65) acts of the appellate prosecutor's offices were confirmed and 4 (7; 6) were revoked. There were prepared 152 (152; 194) proposals for reopening of criminal cases. Out of a total of 87 (94; 141) proposals considered and resolved at the end of the reporting period, 77 (87; 127) were approved and 8 (8; 13) were not approved. Prosecutors from the Department have prepared draft opinions on 10 interpretative cases of the Supreme Court of Cassation (1 of the General Meeting of Criminal College and 9 of the General Meeting of Civil College and General Meeting of Commercial College.). There were prepared 417 (452; 423) written statements, presented on cases of the Supreme Court of Cassation, considered in closed sessions. Pursuant to Art. 354, para. 7 of the Criminal Procedure Code, a total of 290 (327) files were examined. There were issued 246 (148) orders, 225 (134) persons were detained, 21 persons were declared wanted (14). During the reporting period the prosecutors from the department participated in 242 (237; 225) court hearings in criminal, civil and commercial cases before the Supreme Court of Cassation, the court cases considered are 1 058 (1 095; 1 098). The judicial supervision activity is carried out in three directions (2020b).

### **2.3. Criminal Judicial Supervision**

During the reporting period in this direction a total of 2 303 (2 415; 2 182) files and cases were examined and 2 295 were resolved by a prosecutor. 366 (492; 355) files were initiated concerning annulment of enforced judicial decisions, pursuant to the re-opening provision (under Art. 422, para 1, items 4–6 of the CPC). Of these, 180 (227; 163) files were initiated on signals submitted by the prosecutor's office and 186 (265; 192) were on requests of convicted or injured parties. There were 102 (104; 115) proposals for reopening of criminal cases submitted to the Supreme Court of Cassation and the Courts of Appeal, and 62 of the 70 proposals, considered by the court, were approved.



The most common breaches are (2020b):

- Breaches of the substantive law (Art.348, para 1, item 1 CPC) constitute 79.4% (70.2; 67%) of the total number of proposals for re-opening - incorrect qualification of the criminal acts when there are available or there are not available the signs of "dangerous recidivism" or reiteration, imposition of a penalty of legally incapable drivers under Art. 343d Criminal Code, incorrect application of Art.66 of the Criminal Code, incorrect determination of penalties;
- Substantial breach of procedural rules (Art.348, para 1, p. 2 CPC) constitute 12.7% (29.8%; 30%) of the total number of proposals – they refer to the procedural activity of the courts in establishing, verifying and assessing the relevant facts, that have led to incorrect factual and legal conclusions, leading to acquittals, procedural violations in approving agreements, incorrect assessment of the application of Art. 369, para. 4 CPC;
- Obviously unfair punishment (Art.348, para 1, item 3 CPC) as a self-standing prerequisite for re-opening – 3.9% (in 2018 and 2017 no proposals for reopening of criminal cases were filled on this basis.)
- A total of 51 cases were under special supervision in 2019.
- Prosecutors from this division participated in 180 (180; 180) open court hearings in criminal cases of the Supreme Court of Cassation (Proceedings under Chapter Twenty three and Chapter Thirty three of CPC. The cases considered with the participation of a prosecutor were 965 (1 006; 1 039).

#### **2.4. Civil Judicial Supervision**

A total of 2 590 (2,569; 2,503) files were observed, 682 (728; 751) of which were newly initiated. A total of 2 546 (2,554; 2,523) files were resolved, which is 98.3% of the files observed during the reporting period, compared to 99.42% for 2018 and 96.93% for 2017. The prosecutors have ruled on 2 500 cases within 3 days, and on the remaining 46 - within one month. In 2019, 559 (560; 566) claims were registered under Art. 2 and Art. 2b of the State and Municipalities Liability for Damages Act (SMLDA) and 496 (422; 421) execution requests were received on the basis of final court judgements. Prosecutors prepared opinions on the merits of all requests. The prosecutors participated in 62 (57; 45) court hearings before the civil and commercial colleges of the Supreme Court of Cassation, in which hearings 93 (89; 59) cases were heard. The proceedings under SMLDA have the largest share. Prosecutors have issued resolutions on 17 (12; 25) complaints, petitions and signals of citizens on civil matters. With the amendment of the SMLDA (promulgated, SG No. 94/2019) the scope of application of the law has been expanded, introducing another ground for engaging the state liability - for damages caused by a sufficiently significant violation of EU law, which will undoubtedly lead to an increase in number of filed claims under the SMLDA (2020b).

#### **2.5. Execution of penalties and other coercive measures**

In 2019, a total of 2 322 (2,020; 1,845) files were examined by the prosecutors in this division, of which 925 (993; 949) files were newly initiated. At the end of the reporting period, a total of 2 237 files were resolved, of which 2 183 files were resolved within three days and 54 files - within 1 month. There were reviewed 1 333 files initiated and resolved during the previous period, on which new materials were received during the reporting period. The prosecutors prepared written statements on 45 files related to the execution of sentences and other coercive measures and on 39 files regarding the application of the substantive and procedural law. Detailed written instructions were given and sent to the competent prosecutor's office on 15 files (14 received from prosecutor's offices and prisons and 1 - from citizens), concerning determination of a general punishment under Art. 306 of the CPC. The resolved case files concerning unjustified detention of persons after the expired term of imprisonment are 28 (34;

26). Two files were reviewed under Art. 155 of the Health Law and 69 (9; 15) files related to the international cooperation in criminal matters. The prosecutors from the sector got acquainted with 56 orders issued in connection with the application of Art. 179, para. 2 of the Execution of Sentences and Detention Order Act and carried out an inspection regarding the existence of initiated proceedings under the SMLDA on claims of the same convicted persons. A total of 105 (127; 184) signals were received with a request for reopening of criminal cases, and 50 (48; 79) requests were submitted for consideration in the Supreme Court of Cassation and in the appellate courts. Of the submitted requests, 17 (24; 53) were considered, 15 (18; 45) were approved and 2 (4; 4) were not approved. There are no requests on which the initiation of criminal proceedings has been refused due to non-fulfillment of the procedure under Art. 424, para. 3 CPC. A total of 441 applications, complaints and claims were received from citizens, detainees and convicted persons on issues related to the execution of sentences. A total of 441 applications, complaints and applications were received from citizens, detainees and convicted persons on issues related to the execution of sentences. Of these, 320 were examined on the merits by the prosecutors, and the remaining 121 were sent under the competence of the territorial Prosecutor's offices. 494 files on requests for suspension of the execution of the sentence of imprisonment and probation, 2 files for postponement of the execution of the sentence, 15 files with subject of parole, 96 files, initiated in connection under Art. 59 of the Penal Code, 24 files with subject of repayment of the imposed punishment, due to expired executive statute of limitations. By the order of the instance control 44 decrees were confirmed and 2 decrees were revoked. 74 court decisions have been received, of which 37 have been enforced. 2 (5; 5) decrees of the Vice President of the Republic of Bulgaria for pardon of persons deprived of liberty have been implemented. In 2019, prosecutorial supervision was exercised in the places of imprisonment and with regard to the implementation of probation measures, in strict compliance with the provisions of the law on the execution of sentences and detention in custody (LESD). Priority is given to the activity of urgent implementation of the entered into force judicial acts, in respect of which an organization for permanent monitoring has been established (2020b).

## **2.6. International legal assistance and cooperation**

This activity is carried out by Department 04 "International" at the Supreme Cassation Prosecutor's Office, in the main areas - international legal assistance, transfer of criminal proceedings and information exchange, extradition, European arrest warrants. In the reporting year 2019, the prosecutors from the department worked on a total of 4,059 (4,315; 4,546) files, of which 2,519 (2,770; 2,951) were newly initiated. The total number of the resolved cases is 4,025 (4,299; 4,530). Within 3 days 3 852 (4 174; 4 435) files were solved, and within 1 month - 173 (125; 95) files. At the end of the reporting period, 34 (16; 16) files remained unsolved. An important specificity in the work of prosecutors from the department is their expert participation in the legislative process, especially in the transposition of acts of EU law into national law. During the reporting period, in accordance with the conciliation procedure, the International Department at the Supreme Prosecution Office repeatedly submitted opinions on the draft Law on Recognition, Enforcement and Sending of Judicial Acts for Imposing a Penalty of Imprisonment or Measures Including Imprisonment with Council Framework Decision 2008/909 / JHA has been introduced. With regard to the interdepartmental acts of the methodological guide, the practice of the CJEU on defining the term "issuing judicial body" under the Framework Decision on the EAW and reconciliation the status of the Bulgarian prosecutor with this term has been studied and an annotation has been prepared for its interpretation. The main act of the methodological guide - Instruction on the issuance of an EAW in the Republic of Bulgaria and implementation of the EAW, issued by another Member State of the European Union, has been amended and further developed.

Work continues on the proper implementation of the European Investigation Order Act (EPAA), as the adoption of the new instrument by the competent prosecutor's offices is supported by leading methodological participation and training activities in which prosecutors from the department participate both in the internal training program of the Prosecutor's Office of the Republic of Bulgaria and through the National Institute of Justice (NIJ). In order to facilitate contacts and improve daily cooperation with other bodies and institutions in the field of international legal cooperation and exchange of experience and good practices (including within the European Judicial Training Network (EJTN) prosecutors from the department have held a number of meetings with traditional partners, institutions, foreign diplomatic missions, etc. Along with the performance of their direct official duties, the majority of the prosecutors in the department perform the functions of representatives of the country in various European and regional structures, in their capacity of contact points (2020b).

## **2.7. Division "International Legal Assistance and Organization of Activities"**

In 2019, prosecutors worked on 607 (573,707) incoming and outgoing applications for legal aid, of which 409 (287; 311) were outgoing, directed to non-EU countries, and 198 (286; 396) were incoming, from of which 27 (111; 202) came from EU Member States and 171 (175; 194) from non - EU countries. A total of 67 European investigation orders have been received and redirected to the competent authority under Art. 9 of the European investigation order (EIO). Agreements have been concluded for the establishment of 2 (7) Joint Investigation Teams (JITs), as well as 7 annexes for the extension of the period of work of 7 (8) existing JITs, including those established in the previous reporting period (2020b).

## **2.8. Division "Transfer of criminal proceedings"**

During the reporting period, the prosecutors from the department worked on 66 (62; 34) files with regard to transfers of criminal proceedings. The requests for incoming transfer of criminal proceedings in 2019 received through the Supreme Cassation Prosecutor's Office and submitted for consideration are 47 (55; 28). A final decision was reached on 34 of them as 22 of the requested incoming transfers were accepted and 12 were denied. The files of the Supreme Cassation Prosecutor's Office on the subject of outgoing transfer of Bulgarian pre-trial proceedings to another state on the proposal of the respective prosecutor's office are 19 (7; 6). Another aspect of this direction is the correspondence from and abroad in the cases of exchange of information about criminal proceedings initiated in our country against foreign citizens, during an investigation against Bulgarian citizens in a foreign country, respectively (2020b).

## **2.9. Division "Extradition and European Arrest Warrant"**

During the reporting period, the prosecutors worked on a total of 420 (650; 543) files on the subject of execution of the EAW. Of these, 244 are registered under newly issued in 2019 EAW. A total of 373 (535; 417) files were processed, of which 191 (236; 181) requests for accused, defendants and convicted persons in Bulgarian criminal proceedings were accepted (62 instituted in 2019 and 129 issued in previous years). The total number of handed over / received, in implementation of incoming and outgoing EAW, requested persons is 336 (444; 362). A total of 145 (208; 181) requested persons were handed over to incoming EAWs to other Member States (of which 112 EAWs were issued during the reporting year and 33 from previous years). The worrying trend in EU Member States to make the implementation of EAWs issued by the competent Bulgarian authorities conditional on special checks and guarantees on the conditions in Bulgarian prisons has not been fully overcome, and in some, albeit more rare cases, even if non-compliance with ECHR standards for the humane treatment of detainees is denied. During this reporting period, there are cases in which, despite the guarantees given, Bulgarian citizens handed over to the EAW are not returned to Bulgaria, but it is insisted that the persons be

readmitted in the procedure of transfer of a convict and at the expense of the Bulgarian state. Particular and insurmountable difficulties arise in cases when the persons have been temporarily transferred or this has happened before they have served the sentence of imprisonment imposed on them in the Republic of Bulgaria, and the execution of the judicial act for their transfer under the EAW has caused suspension of the sentence. To overcome this problem, we rely on the Council Framework Decision 2008/909 / JHA of 27 November 2008, transposed into our national legislation, with the entry into force of Law on the Recognition, Enforcement and Sending of Judicial Acts Imposing a Penalty of Imprisonment or of Measures Including Imprisonment, to which the current version of Art.41, para.3 of the Extradition and European Arrest Warrant Act (EEAW). The newly initiated extradition files for 2019 are 51 (59; 25). Of these, 44 (52) are on requests for extradition of persons from the Republic of Bulgaria, as 26 of the extradition proceedings were completed with the admission of extradition and the persons were handed over to the requesting state. There were also 2 extradition proceedings, based on files instituted in the previous years. According to Bulgarian requests for extradition of accused or convicted persons in 2019, 6 (7) files were initiated and 11 ongoing files were initiated in the previous years. The files processed in the department related to the declaring a person on the international wanted list (in connection with future extradition proceedings) are 49 (53; 26), of which 20 are newly initiated. During the reporting year, 69 (83; 55) proceedings were instituted for the transfer of convicted persons (64 for incoming transfer of convicted Bulgarian citizens abroad and 5 for transfer of convicted foreign citizens in Bulgaria. 44 (52; 57) incoming transfers were made, of which 22 in files initiated in 2019 (2020b).

## **2.10. Activity of the Supreme Cassation Prosecutor's Office in cases of crimes of special public interest**

This activity is carried out by the "Specialized" department in the Supreme Cassation Prosecutor's Office, whose functional obligations in files and cases are in the following areas – "Corruption crimes", "Organized crime", "Crimes against the financial system and financial interests of the EU and against creditors", "Crimes related to human trafficking", "Crimes against the political rights of citizens and against intellectual property". In 2019, the prosecutors of the department worked on 8,848 (5,179; 3,661) files and cases, of which 4,590 (2,741; 1,399) were newly initiated. A total of 8,272 (5,082; 3,619) files were solved, of which 2,261 (3,041; 1,855) within 3 days, 5,915 (2,041; 1,764) within 1 month and within 6 months - 96. Six (6) proposals were made for the preparation of a request for granting permission to initiate criminal proceedings against MPs, under Art. 70, paragraph 1 from the Constitution of Republic of Bulgaria (CRB), in conjunction with Art. 138, para. 3 of the Rules of Procedure of the National Assembly. 6 proposals for requests for disclosure of bank secrecy and tax and social security information have been prepared, 58 inspections have been assigned, the prosecutors from the department have ruled: 240 prosecutorial acts for resolution of conflicts of jurisdiction, 34 acts on received recusals / self-recusals (art. 47 PPC), 317 instance acts, of which under Art. 213 PPC - 237 confirmed and 26 revoked, and under Art. 243 PPC - 33 confirmed and 21 revoked. A total of 75 proposals have been made to change the area in which the investigation is to take place. With regard to the inspection, ordered by the Prosecutor General (with subject "construction / modernization of tourist sites - residential buildings (guest houses) of all projects submitted under measure 311 "Diversification into non-agricultural activities", the department has initiated and has worked on 892 files. During the reporting year, the prosecutors from the Specialized Department assigned inspections to the bodies of the Ministry of Interior and carried out personal inspections on signals related to the acquisition of real estate by persons holding senior public positions, as well as for those held by such persons, personally or through related or proxy persons, bank accounts and real estate and / or other property of significant

value abroad, undeclared in the respective order. The interaction in the exchange of information with representatives of the European Anti-Fraud Office (OLAF), the AFCOS Directorate of the Ministry of Interior and the State Fund "Agriculture", as well as with representatives of executive bodies and EU structures is active. Pursuant to the commitments of the Prosecutor's Office of the Republic of Bulgaria (PORB) under an agreement with PFIA, the prosecutors of the department have worked on files initiated on reports of financial inspections carried out by the Public Financial Inspection Agency (PFIA). With a view to the functional competence of the department, methodological assistance was provided in files and cases initiated for crimes against intellectual property, for corruption crimes, as well as for crimes against the tax and social security systems. The supervision of the cases for crimes committed by organized criminal group (OCG) is ongoing (2020b).

### **2.11. Activity of the Supreme Prosecution Office on files and pre-trial proceedings**

The functional obligations of the Pre-Trial Department in the Supreme Administrative Court are carried out in files and cases that are outside the competence of the Specialized Department in the Supreme Administrative Court. In 2019, the prosecutors of the department worked on 4,028 (3,474; 2,478) files, of which 2,014 (2,655; 1,868) newly initiated files, 106 - remaining from the previous period and 1,908 filed in previous periods, under which new materials were provided. 3,935 (3,313; 2,406) files were resolved. Within 60 days, 3,606 (2,918; 1,924) files were resolved, within 1 month - 275 (327; 424), over 1 month - 51 (68; 58) files. Of the resolved files 1 072 (1 103; 965) are instance files. Of these, 503 (584; 556) files on refusals to initiate pre-trial proceedings, 380 (326; 219) on conflicts of jurisdiction, 66 (62; 54) on recusals / self-recusals, on control of decrees for termination of pretrial proceedings - 74 (78; 51) and others - 49 (53; 85). A total of 27 (37; 41) pre-trial proceedings were taken under special supervision. 242 (277; 70) proposals for issuing acts under Art. 195, para. 4 of the PPC were presented to the Prosecutor General; 29 proposals under Art. 194, para. 2 of the PPC and 36 proposals under Art. 243, para. 10, sentence 2nd of the PPC. 240 (306; 239) statements of objections, signals against issued acts of prosecutors in the department with requests for inspection by the Deputy Prosecutor General at the Supreme Prosecution Office were presented; 2 (3; 6) opinions on draft laws and other normative acts; 2 (7; 11) statements on orders, instructions, orders, etc (2020b).

### **2.12. Staffing, administrative-control and audit activity under JSA**

This activity is carried out by the "Administrative" department at the Supreme Prosecution Office. In 2019, the prosecutors from the department worked on 5,428 (6,078; 5,791) files, of which 4,606 (5,167; 4,991) were newly initiated. 5 379 (6 051; 5 728) files were resolved, of which within 25 days - 5 258, up to 1 month - 103 and up to 3 months - 18 files. 49 (27; 63) files remained unresolved at the end of the reporting period. The distribution of files in divisions at the department is as follows: "Staffing" - 861 files, "Inspectorate" - 856 files, "Complaints, signals and reception of citizens" - 2 570 files and administrative files - 1 141 (2020b).

### **2.13. Staffing activity**

During the current reporting period, the efforts for staff strengthening and provision of the Prosecution are ongoing. The actions taken by the management of the PORB are aimed at overcoming the staffing and unevenness in the workload of the regional prosecutor's offices, which is achieved through their structural optimization. Specific data on the staffing are presented in Section V "Administrative and control-audit activity". Control was exercised over 1,300 orders received from administrative heads of prosecutor's offices on organizational issues and secondment of magistrates. 293 draft orders of the Prosecutor General and the relevant Deputy Prosecutor General on personnel, organizational and administrative issues were

prepared, of which: 77 - for secondment of magistrates, 196 - for secondment of prosecutors for participation in court hearings, 7 organizational orders, concerning the activity of the Supreme Cassation Prosecutor's Office and Supreme Administrative Office and 2 - for carrying out on-the-spot inspections. During the reporting period were also prepared: 7 draft instructions, orders on administrative management and organizational activities, 4 opinions on draft methodological instructions, orders and draft laws and 89 reports, analyzes, statistical tables, summaries of data and reports (2020b).

#### **2.14. Activity in the division of "Inspectorate"**

In 2019, the prosecutors in the department worked on 856 files, of which 488 were newly initiated, 23 remained from the previous period and 345 files were initiated in previous years, on which new materials were provided. Actions have been taken to carry out 154 inspections of files initiated on signals, complaints and requests from citizens, state bodies and organizations as well officials, in view of data on disciplinary violations of prosecutors, investigators, administrative heads of prosecutor's offices and their deputies. 55 files were terminated due to signals and complaints against magistrates received by the Supreme Administrative Court - with inquiries (without inspection), due to established previous ruling on the complaints and allegations set forth in newly initiated complaints or signals or due to lack of grounds for engagement the competence of the department were terminated 16 files, 2 files were terminated on more than one ground. Upon termination of the files without verification, the complaints/alerts were sent to the competent authorities, except in cases where they were addressed to them. During the reporting period, the Judicial and Prosecutorial College of the SJC received 227 inquiries for inspections against magistrates, to which answers were sent. 72 complex audits, 31 thematic audits and 476 inspections were carried out in accordance with the priorities in the activity of the Prosecution. In 2019, the Administrative Department received 20 reports on inspections carried out by the Inspectorate of the SJC, which were subjected to analysis, control was exercised on the implementation of the recommendations made in them, and specific measures and actions were proposed to be implemented and undertaken by the management of the Prosecution (2020b).

#### **2.15. Activity in the field of "Complaints, signals and reception of citizens"**

According to the functional obligations of the prosecutors of the department during the reporting period, a total of 52,357 registered documents were distributed (57,594; 51,346). Prosecutors in this area worked also on 2,570 (3,059; 2,772) files, of which 2,332 were newly formed. All files were resolved within 7 days of their assignment, and from the received complaints and signals, a total of 3,495 were sent under the competence of other prosecutor's offices. The prosecutors from the department, assisted by the prosecutorial assistants and employees from the Registry and Records Service at the Administration of the Prosecutor General (APG), received 323 (359; 339) citizens, of which 253 (243; 279) by prior request and 70 (116; 60) without request. A total of 138 (131; 153) complaints were filed by the citizens who visited the reception (2020b).

#### **2.16. Methodical and analytical activity. Interdepartmental training program**

This activity is provided by the Analytical Department in the Supreme Prosecution Office and the Administrative and Legal Directorate in the APG, assisting the Prosecutor General in exercising his powers.

#### **2.17. Methodical guide**

The amendments and supplements in 2019 to the Criminal Procedure Code, introduced by the Law on Amendments and Supplements of the Penal Code (LASPC)(promulgated SG, issue 7

of 22 January 2019), require changes in the Instruction on the new normative provisions in the LASPC. The Instruction ensures the accurate and uniform application of the new normative provisions and unification of the prosecutorial practice. In connection with legislative changes, the Instruction for organization of the information activity in the PORB has been amended. In order to effectively counteract the crimes against the political rights of citizens related to the electoral process, during the reporting year the Guidelines on the organization of work and control of legality by the PORB during elections and referendums were amended. In order to optimize the current organization in investigation of particularly serious accidents, the Instruction for the organization of the interaction between the bodies of the pre-trial proceedings with general and special competence in case of particularly serious accidents has been amended. The instruction established an organization both for effective interaction between the bodies of the pre-trial proceedings and for ensuring effective coordination and interaction between the Prosecutor's Office and the relevant state investigation bodies, as well as with the disaster protection bodies in connection with the safety of citizens in such accidents. In order to increase the efficiency of the work of the Prosecutor's Office in files and cases for crimes against intellectual property under Chapter Three, Section VII of the Penal Code, as well as in connection with the widespread use of information technology in violation of this type of rights, work on files and cases for crimes against intellectual property. The Instruction on the Obligations of the Prosecutor's Offices in Exercising the Powers of the National Bureau for Control of Special Intelligence Means (NBCSIM) has also been amended. In connection with the mandatory interpretation of the term "issuing judicial authority" issued by the Judgment of the Court of Justice of the European Union (CJEU), the Prosecutor General supplemented the Instruction on the issuance of an EAW in the Republic of Bulgaria and the implementation of the EAW, issued by another Member State of the European Union, according to which when exercising the powers to issue a European Arrest Warrant (EAW) it is explicitly clarified that prosecutors in the Republic of Bulgaria fully meet the standards of independence of the issuing judiciary, introduced by mandatory interpretation of the Court of Justice of the European Union (CJEU). A Letter of instruction was also prepared and sent to the prosecutor's offices by the Prosecutor General regarding the current case law of the Court of Justice of the European Union, presented through the decisions in joined cases C-508/2018 and C-82/2019 and case C-509 / 2018. In order to establish a regulation in case of experience for unregulated access or unregulated access to the classified information processed and stored in the Prosecutor's Office, by order of the Prosecutor General an Instruction for actions for unregulated access to classified information was approved in the organizational unit "Administration of the Prosecutor General, Supreme Cassation Prosecutor's Office and Supreme Administrative Prosecutor's Office". In connection with the amendment of the Personal Data Protection Act (promulgated SG, issue 17/2019), by order of the Prosecutor General, the Rules on Measures and Means for Personal Data Protection, processed by the Prosecutor's Office of the Republic of Bulgaria, have been amended and supplemented. In 2019, the Rules for media communication in the system of the Prosecutor's Office of the Republic of Bulgaria were amended and supplemented, as well as the Rules for reception of citizens in the Prosecutor's Office of the Republic of Bulgaria. In order to regulate the work with electronic documents, the exchange of electronic documents, as well as in connection with the implementation of electronic services in the Prosecutor's Office of the Republic of Bulgaria, Rules for introduction of electronic document turnover and implementation of electronic services in the Prosecutor's Office of the Republic of Bulgaria have been approved. The Prosecutor General also approved the Rules of work in the PORB with automated information funds (AIF) of the Ministry of Interior, which regulate the conditions, the order and the use of the data from these funds. In order to ensure the organizational provision of the closed 11 regional prosecutor's offices and the establishment of respective territorial departments, a mechanism for constant monitoring of the activity of the

consolidated prosecutor's offices was introduced by order of the Prosecutor General. The formed permanent working group (of prosecutors from the Supreme Prosecution Office and employees) provides methodological and organizational assistance, and if is necessary, makes proposals to the management of the Prosecutor's Office of the Republic of Bulgaria to resolve identified problems. The lack of difficulties in implementing the first stage of the restructuring of regional prosecutor's offices and the gradual overcoming of the disproportions in the workload of the prosecutor's offices, the long-term solution of the personnel problems (regardless of the different approach of administration and distribution of activities by the administrative heads) as a ground on 14 May 2019 for the Prosecutor General to submit a proposal to the Prosecutorial college of the SJC for consolidation of another 29 regional prosecutor's offices (2020b).

## **2.18. Ensuring interaction with other authorities**

In 2019, an Agreement on Interaction and Cooperation was signed between the Prosecutor's Office of the Republic of Bulgaria and the Ministry of Interior in counteracting offenses affecting the financial interests of the EU (ref. № 580 / 24.06.2019). An agreement between the Prosecutor's Office of the Republic of Bulgaria and the National Audit Office established an organization for cooperation and interaction between these two institutions in preventing, detecting and investigating crimes related to public funds, assets and activities, awarding and executing public contracts, as well as in the fight against corruption. To increase the specialized knowledge of the pre-trial proceeding authorities on issues related to banking, high technology and the dangers associated with them, in particular, when using electronic banking, electronic payment instruments, as well as when conducting commercial activities via the Internet, a Memorandum of Cooperation was concluded between the Prosecutor's Office and the Association of Banks in Bulgaria during the reporting year. A mechanism for interaction between the Prosecutor's Office of the Republic of Bulgaria and the Commission for Combating Corruption and Confiscation of Illegally Acquired Property has been approved, in accordance with the amendments in the Criminal Procedure Code in the application of activities for management, safekeeping and storage of property, subject to seizure and confiscation, in respect of which in the pre-trial proceedings precautionary measures have been imposed by the court, under Art. 72 of PPC. An organization has been set up to collect and exchange information in electronic form (register) for the types of secured property. In the line of international cooperation with similar authorities in foreign countries and with international organizations, in 2019, 3 memoranda were signed - with the European Investment Bank, with the Directorate for Investigation of Organized Crime and Terrorism at the Prosecutor's Office of the Supreme Court of Cassation of Romania and The Prosecutor's Office at the Supreme Court of Cassation of Romania (2020b).

## **2.19. Information provision and analysis**

In accordance with the requirements of Art. 138, item 11 and Art. 138a JSA, during the reporting year were prepared the relevant reports and summarized information on the formation, movement of files and cases in the Prosecution's Office, at national level, as well as the preparation of an annual report on law enforcement and the activities of the Prosecution's Office and investigative authorities, published on the website of the Prosecutor's Office of the Republic of Bulgaria. In order to provide complete, objective and up-to-date information on the activity of the Prosecution's Office, on the basis of collected, processed and systematized statistical data, in 2019 summary analytical reports on criminal proceedings with high public interest and those monitored by the EC were prepared. The tendency about the urgency and efficiency of the work of the prosecutor's offices in priority directions are also studied.



The developed Open Data Management Portal of the Prosecutor's Office of the Republic of Bulgaria provides public access to the open data sets provided by the Prosecutor's Office of the Republic of Bulgaria, related to the annual reports and any other reporting, as the generated data sets in the Portal are for 2017 and 2018.

## **2.20. Interdepartmental training**

In pursuance of the training calendar approved by the Prosecutor General for the interdepartmental training program, a total of 20 trainings were organized and conducted, in which 301 prosecutors, 80 investigators and 16 prosecutorial assistants participated. Activity in connection with the implementing powers by the Prosecutor General under Art. 149 of the Constitution. Coordination of draft laws. 3 opinions on constitutional cases were presented by the Prosecutor General to the Constitutional Court. In order to the coordination procedure, in 2019, the Prosecutor's Office of the Republic of Bulgaria prepared and submitted to the Parliament or another state institution opinions on 16 bills and drafts of other normative acts (Terziev, Georgiev, Bankov, 2020c-d).

## **3. CONCLUSION**

The written above gives ground to draw the following conclusions (Terziev, Georgiev, Bankov, 2020e-h):

- The cases of established significant procedural violations in the pre-trial phase of the trial are permanently limited, which determine the return of the case to the prosecutor and/or the issuance of acquittal, and which are due to subjective preconditions.
- The applied methodological instructions, the rendered effective assistance, along with the control functions performed by the administrative heads, ensure a consistently high level of the urgency of investigation and resolution of the files and cases.
- The mechanism of special supervision is effectively applied for rendering timely methodological assistance to the investigative authorities and the supervising prosecutors in cases of factual and legal complexity, predominantly in the field of counteraction to corruption crimes and organized crime.
- The standards for effective investigation are permanently established, in accordance with the requirements of the ECHR, the quality of interaction with the European and other international partners in the fight against crime is increased.
- The necessary monitoring is carried out on the workload of the prosecutors and the investigative authorities and the activity of the prosecutor's offices, in order to support the ongoing process of consolidation of the regional prosecutor's offices.

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## WELL-BEING AND HEALTHCARE CONCERNS CHANGES DURING COVID-19 PANDEMIC

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### ABSTRACT

*COVID-19 has brought massive changes in the way people communicate and interact with each other and, especially how they get in touch with relevant well-being and healthcare information and tools. Therefore, well-being and healthcare providers have become increasingly important in the COVID-19 crisis, as people turned their attention to taking care of their health on all levels. Given this context, a content analysis was conducted to unravel the critical points in trends related to well-being and healthcare during the COVID-19 pandemic. Significant findings show a more comprehensive coverage of changing behaviors related to emotional and physical well-being. These results show an increased focus on elements related to well-being, wellness, exercise, and veganism, because of the particular context created by the COVID-19 outbreak. These findings prove that well-being providers can now ride the wave of change by making sure to model these new behaviors into positive long-term behaviors.*

**Keywords:** *communication, COVID-19, online platforms, wellness*

### 1. INTRODUCTION

People's behavior patterns are slow to change in time since the more we repeat the same action, the more likely our behavior becomes a part of our limbic brain. Willingness to change the taught behavior usually appears when some inner or outer crisis emerges. The context of the COVID-19 pandemic outbreak created the perfect context for people to start questioning many of their habits, especially when it comes to wellness and healthy habits. This window of opportunity might be the perfect moment in which marketing communication can generate a long-lasting change of behaviors, on the one hand, and a long-term relationship between wellness and health providers and their customers, on the other hand.

### 2. LITERATURE REVIEW

World Health Organization declared on March 11, 2020, that Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2), commonly known as COVID-19, is a pandemic (Egan, 2020). Even though the critical situation across the world was already visible, this announcement marked the beginning of significant uncertain times. This uncertainty has created the premise of significant concern for people's mental health and how it is affected by the pandemic and preventive decisions taken to mitigate the pandemic risks (Brodeur *et al.*, 2021). Brooks *et al.* (2020) point out that the quarantine's psychological effect is wide-ranging, and it is probably long-lasting. The same warning is also mentioned by Schwab and Malleret (2020), who argue that it is likely that the pandemic has generated mental issues to a broader share of the world's population, touching even those who otherwise would have been spared of such problems, at least in the nearby future. Even though the pandemic requires quick action and reaction to mitigate its short-term impact, we cannot overlook the fact that COVID-19 might have a more profound, longer-term impact, especially within groups where mental health and well-being shortages were pre-existing issues (Egan, 2020).

As a result, even during the pandemic, we have faced an increasing interest in concepts and tools related to wellness and health, which is correlated with also the industries that seem to be the most likely to thrive in a post-pandemic world: big tech, health, and wellness (Schwab and Malleret, 2020). Proof of our changing concerns is also related to quitting unhealthy habits: Yang and Ma (2021) showed that smokers significantly reduced the number of cigarettes during the national lockdown. Besides just quitting or reducing smoking, smokers even reported increased satisfaction with their physical health and better emotional well-being due to their changing habits (Yang and Ma, 2021). These results are consistent with the discoveries made by Schwab and Malleret (2020), who argued that in the post-pandemic world, we would be more aware of the salience of our mental and physical health. This awareness will help build people's well-being. This concept is connected to both neurobiological and economic factors (Chouchou *et al.*, 2021). Therefore, it needs to be addressed holistically (Schwab and Malleret, 2020). The well-being state is the 'sine-qua-non' premise for coping with normal levels of stress, being productive, and bringing our contribution to our community. Simultaneously, a downfall in mental health can cause increased stress, depression, anxiety, and even suicidal ideation (Paredes *et al.*, 2021). Furthermore, well-being is also associated with mental health, which during COVID-19 lockdown was impacted by limited freedom, physical inactivity, stress, and sleep disturbances (Chouchou *et al.*, 2021). Based on the arguments of Deniz (2021), who stated that there is a significant correlation between well-being and self-compassion, fear of COVID-19, intolerance of uncertainty, it is much clearer that information and communication are the keys to tackling difficult times. In this age of concern, uncertainty, and social unrest, information is vital, and for this purpose, we need effective and rapid communication (Brooks *et al.*, 2020). Moreover, the COVID-19 pandemic has brought about a rapidly changing health care interest that led to a changed communication between providers and users (Wittenberg *et al.*, 2021). White *et al.* (2021) even argue that influence went both ways: communication-related to healthcare issues 'impacts and was impacted by the pandemic'. However, even though the pandemic enhanced the power of telehealth, technology can also be an obstacle in establishing and developing human connections (Wittenberg *et al.*, 2021). Given the widespread of social media usage (as an interactive method to create value and engage through an invitation for contributions (Rather, 2021)), social media is becoming more and more a salient pillar of communication in times of disaster and health crisis (Yu *et al.*, 2020). For example, previous research shows that in the early days of the pandemic, the usage of video chat, instant messaging, and social media entered a growing trend (Nguyen, Hargittai, and Marler, 2021). However, even through social media, people increasingly become more connected and engaged with those they love. Social media is also a powerful tool for misinformation and sensationalism related to COVID-19 based on a substantial emotional impact (Naeem, 2021), thus confirming Whitman's (2020) theory that defined communication technologies as 'two-edged swords'. Liu *et al.* (2021) argue that social media usage is likely to have a strong negative impact on people's psychological well-being, particularly for Generation Z (Gen Z – people born in the period from the mid-1990s to the early 2010s). Moreover, it might be that it remains to be discovered the extent of the harmful impact of social media on people's mental health (Liu *et al.*, 2021). The perceived risk and communication intensity were two significant factors that led to changes in social media communication (Yu *et al.*, 2020). One thing that cannot be ignored is that the COVID-19 pandemic caused an even more significant gap between digitally advantaged and digitally disadvantaged groups (Nguyen, Hargittai, and Marler, 2021). When developing sustainable communication patterns with positive results during uncertain times, the upside is that behaviors and connections established during the hard times can persist even when the stressors are less impactful. For example, Schwab and Malleret (2020) showed that some behavioral changes caused by lockdown are likely to become permanent.

When defining the types of new behaviors that occurred in people's life, He and Harris (2020) point out that it is likely that increased levels of social and self-actualization needs will lead to having responsible and prosocial behaviors as consumers. For example, the information overload led to an increased fear of COVID-19 and social media fatigue, which led to people's intention to discontinue social media (Liu *et al.*, 2021), which is another changing behavior positive a long-term impact. When speaking about changes in individual health conduct, White *et al.* (2021) have proven that these changes result from health beliefs, attitudes, values, and social pressure. Furthermore, these changes are not limited to individuals. However, they are also valid for businesses that now have the chance to shift their perspective toward a more genuine and authentic corporate social responsibility (He and Harris, 2020). Furthermore, even authorities now have a chance to rebuild a trustworthy relationship with the public based on honesty, transparent and accountable exchange, empathy, and concern (White *et al.*, 2021). During the 2020 lockdown and curfew, people have discovered or were encouraged to discover the importance of small actions for their long-term impact on their well-being. In the case of France, healthcare providers and public authorities promoted physical activity at home or outside (1h/day and close to home), together with pieces of advice related to sleep hygiene (Chouchou *et al.*, 2021). This strategy was also confirmed by Schwab and Malleret (2020), who mentioned the reminders coming from health authorities about walking or exercising daily. Nonetheless, we are obliged to acknowledge that people reached 'behavioral fatigue' at some point, as we tend to become increasingly tired of self-regulating (Brodeur *et al.*, 2021). Self-regulation is a powerful tool in developing coping mechanisms that are essential in dealing with the fear of the virus (Deniz, 2021). Ways to tackle such effects include mindfulness, exercise, better sleep, and spiritual health as ways to improve resilience (Paredes *et al.*, 2021). Based on the changing behaviors of people, facilitated by technology development at a faster pace than we could understand, healthcare and well-being providers are more critical than ever (Egan, 2020). Furthermore, the spread of 'infodemic' (an excessive amount of information is detrimental to finding solutions (Zarocostas, 2020)) is evidence that it is not about quantity but quality. Therefore, the current paper was designed to answer questions related to changes in people's behavior regarding overall well-being based on previous research and results in 2020 and 2021.

### **3. RESEARCH – METHODOLOGY AND RESULTS**

As behavior changes generated by the COVID-19 outbreak seem to stay, major understanding trends are a salient step in developing the right strategy and communication strategy. This step is even more critical when referring to well-being and healthcare providers expected to expand their impact as people's interest in such subjects is growing. The question remains: what are these well-being and healthcare trends telling us? Moreover, how can we leverage them in the business communication and marketing strategy of well-being providers?

#### **3.1. Research methodology**

To discover the most relevant growing trends when it comes to developing a healthy lifestyle as a result of the COVID-19 outbreak, a content analysis was developed. For this, a series of 40 scientific papers were included in the analysis. Criteria for inclusion in the analyzed corpus included: 2020 or 2021 as publication dates, availability in scientific databases like ScienceDirect, Scopus, and Elsevier, and the paper's topic should have been related to one of these keywords: 'well-being', 'wellness', 'exercise', 'vegan', 'COVID-19'. These keywords were established based on a report developed by Ayto and Conolly (2021), who argue that consumers are getting away from a learning phase toward an action phase when we speak about 'exercise, self-care, and veganism'. The corpus built in this way included 40 papers with 276051 words, and the list of papers included in this study is presented in Appendix 1.

After gathering all the content needed to perform the content analysis, the software AntConc (developed by Laurence Anthony, AntConc is a corpus analysis toolkit for concordance and text analysis) was used, and the significant findings are included in the next section.

### 3.2. Main findings and discussion

The corpus built for this analysis proves to be a cry for health, as among the most popular words, 'health' recorded 1472 hits, the most visual concept in the entire corpus, other than connectors. Going one step further, we can see that the most common phrases with this crucial concept relate to 'health behaviors' (or 'health behavior'), 'health outcomes' (or 'health effects'), and 'health risks', together with 'health benefits' (as it can be seen in Figure 1). Based on this information, we can argue that there is an increasing preoccupation with health-related subjects, especially in a moment of crisis such as the COVID-19 outbreak.

Total No. of Cluster Types 612			Total No. of Cluster Tokens 1472
Rank	Freq	Range	Cluster
1	149	20	health and
2	35	11	health and
3	34	3	health behaviors
4	32	8	health outcomes
5	25	5	health-related
6	21	12	health, and
7	20	8	health care
8	17	9	health in
9	17	8	health organization
10	16	5	health behavior
11	14	3	health risk
12	13	5	health effects
13	12	4	health was
14	11	4	health benefits
15	11	6	health of

*Figure 1: Most common clusters, including the word 'health'*  
(Source: Corpus analysis using AntConc)

When referring to the keywords used for selecting the papers included in the corpus analysis, we see that 'well-being' was another popular concept in the entire corpus: 840 hits. As we discover collocations with the concept of 'well-being', we discover a trend of 'reframing well-being as a core value', together with an increased focus on communities' and countries' well-being.

*Figure following on the next page*

Concordance	Concordance Pic	File View	Clusters/N-Gram	Collocate	Word List	Keyword List
Concordance Hits 249						
Hit	KWIC	File				
1	y, placating solutions. Reframing	wellbeing as a core value can	1-s2.0-S2468			
2	of the measurement of the	wellbeing of a country, by which	978-3-030-53			
3	onmental decision on community	wellbeing. Thus, a definition of well	j.jenvman.2021			
4	asises the importance of defining	wellbeing in a form that supports	j.jenvman.2021			
5	atively and significantly related to	wellbeing in a sample of 244 nurses	j.msl.2020.9.b			
6	an adequate measure of broader	wellbeing. Within a span of small	978-3-030-53			
7	cing natural resource elements to	wellbeing is a straightforward task c	j.jenvman.2021			
8	that improves or maintains the	wellbeing of a target community of	j.jenvman.2021			
9	its "short update on relevant	wellbeing work across Whitehall by	978-3-030-53			
10	donic and eudaimonic aspects of	wellbeing, in addition to the evaluati	1-s2.0-S0169			
11	ettings to promote psychosocial	wellbeing (Inter-Agency Standing	fsoc-06-6126			
12	he multivariate nature of national	wellbeing in Allin and Hand (2014),	978-3-030-53			
13	an "on-going challenge for	wellbeing 68 P. ALLIN AND D. J.	978-3-030-53			
14	in the context of national	wellbeing elsewhere (Allin and Han	978-3-030-53			
15	the use of the national	wellbeing measures alongside takir	978-3-030-53			
16	of end state values to	wellbeing may also be monetised, th	j.jenvman.2021			
17	previous, significantly decreased	wellbeing was also reported. The st	1-s2.0-S0165			
18	re directly important for boosting	wellbeing. It also suggests that bot	1-s2.0-S0191			
19	ontinuous data (depression and	wellbeing) were analysed using Fi	1-s2.0-S2589			
20	space in subjective health and	wellbeing during and after the first	1-s2.0-S0169			
21	ed/living together reported better	wellbeing during and after the mos	1-s2.0-S0169			
22	is involve participants discussing	wellbeing preferences and category	j.jenvman.2021			
23	no changes to the ONS	wellbeing measures (and conclude	978-3-030-53			
24	programmes, and summarises the	wellbeing analysis and data collecti	978-3-030-53			
25	on life satisfaction and subjective	wellbeing before and during the par	1-s2.0-S2352			
26	a study of child psychological	wellbeing, Wells and Evans (2003)	1-s2.0-S0169			
27	ed validated scales for subjective	wellbeing, optimism and gratitude (	1-s2.0-S2352			
28	sizeable amount of variance in	wellbeing—between 25% and 37%,	1-s2.0-S0191			
29	noted above, a range of	wellbeing measurement and policy	978-3-030-53			
30	have focused so far on	wellbeing measures and policy in th	978-3-030-53			
31	ol their feelings during general	wellbeing crises and stay away fr	1-s2.0-S0165			
32	how is the level of	wellbeing changing and the nation p	978-3-030-53			
33	reviewing the measuring national	wellbeing programme and the now r	978-3-030-53			
34	demonstrate the effectiveness of	wellbeing economy approaches on	978-3-030-53			
35	The process into which national	wellbeing indicators are absorbed f	978-3-030-53			
36	-benefits and trade-offs among	wellbeing categories are being asse	j.jenvman.2021			
37	cerning the relative importance of	wellbeing components are either pe	j.jenvman.2021			
38	as a measure of economic	wellbeing. And, as if all that	978-3-030-53			
39	kdown (OR 0.95 per additional	wellbeing score as measured by	1-s2.0-S2589			
40	wz3/1 Data set college students '	wellbeing: Available at Mendeley D	1-s2.0-S2352			
41	wz3/1 Data set college students '	wellbeing: Available at Mendeley D	1-s2.0-S2352			
42	ivergent validity with measures of	wellbeing, experiential avoidance, a	1-s2.0-S2212			
43	on analyses to predict eudemonic	wellbeing from background variable	1-s2.0-S0191			
44	al economic conditions can affect	wellbeing, and because the particul	1-s2.0-S0014			
45						

Figure 2: Collocations using the word 'well-being'  
(Source: Corpus analysis using AntConc)

Also, there is a visible concern about the 'psychological' or 'psychosocial' well-being of people based on the prevalence of these concepts. Considering this together with 'values' and 'human values' concepts' association with well-being, we can say that a focus on the human side is proving to be more and more important. Even more than that, a paper included in the corpus shows the focus of policymakers on 'creating a demand for well-being information, evidence, knowledge'. Therefore, regardless of their niche, the role of well-being providers is increasingly crucial for people's harmony. It is also supported by phrases like 'holistic wellness' or 'meditation-based wellness' and enhanced by the occurrence of phrases related to 'mindfulness' like 'Fun team activities such as a "21-day meditation/yoga/mindfulness challenge" can be organized to encourage employees to practice mindfulness both during and post crisis'. In contrast, the impact of mindfulness is explained as follows: 'Mindfulness and virtues had strong effects on eudemonic well-being' (Verhaeghen, 2021).

Other than 'mindfulness' and 'well-being', another analysis question was related to 'exercise'. Probably the most relevant information included in the corpus is that 'adults in the UK report a wide range of changes to their eating- and exercise-related thoughts and behaviors, as well as their body image, during the lockdown associated with this pandemic' (Robertson *et al.*, 2021). In this era of change, primarily related to habits correlated with eating, exercising, self-care, and mindfulness, there is a growing need for authentic, powerful well-being providers that can model from infant stages these new behaviors for a long-term positive impact of such changes. When it comes to eating behaviors, there is a growing trend toward veganism, which is also visible in the analyzed corpus: 'The number of people identifying as a vegan has risen substantially within Western cultures (e.g., US, UK, and Australia) over the past several years' (North *et al.*, 2021). The concept of 'vegan' tends to be associated with a lifestyle rather than a simple diet choice, therefore creating the context, the spaces where people can explore their chosen lifestyle could be a potent tool to become even more relevant in the 'well-being' industry. Based on the observations included in this corpus analysis, we can argue that well-being and healthcare providers now have a chance to be riding the wave of change inside people's life. Whether speaking about the general concept of well-being, wellness, or the narrower concepts of exercising and veganism, people are now, in the era and post-era of COVID-19, more open to embracing changes likely to bring them more health and a general state of harmony.

#### 4. CONCLUSION

This paper is another chance to discover how major consumer trends evolve when referring to health and well-being. Based on the elements emphasized in this paper, it is clear that shifting behaviors are a reality and that well-being habits are changing, creating the momentum that providers of this industry can leverage in gaining a significant position on the market. Further research in this area might relate to discovering precisely the extent of these changes. Even more important than that, how can well-being providers develop a robust communication strategy to reach people precisely in this time of significant changes. Nonetheless, the trends are here and are here to stay until more and more people will become aware of its importance and will master the tools through which they can reach harmony on all levels.

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# THE INFLUENCE OF ACCOMMODATION STRUCTURE AND AFFILIATION TO THE INTERNATIONAL HOTEL CHAINS ON PERFORMANCE OF TOURISM DESTINATIONS ON THE CASE OF CROATIAN COASTAL DESTINATIONS

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## ABSTRACT

*Study aims to examine the relationship between performance of tourism destinations and its accommodation structure, namely the share of hotel in total accommodation capacities, and the share of internationally affiliated in total hotel capacities. Destination performance model was created as a composite index based on the combination of 8 indicators that cover economic, social, and environmental impact of tourism on a destination. Performance model is tested on the sample of 30 Croatian destinations. Finally, share of hotel in total accommodation and share of internationally affiliated capacities in total hotel capacities are tested against the measured destination performance via Pearson correlation coefficient. The research shows stronger link between the share of hotels, than international affiliation, with destination performance, where the later is even found to have some minor, yet statistically insignificant, negative correlation with environmental indicators. Tourism destination performance model developed in this paper is supply oriented and adjusted for micro destinations. In that sense, it differs from most of the practical destination performance/competitiveness measurement models that have been designed in a very comprehensive way for macro destinations (countries). Model can be applied to help destination managers in assessing strong and critical points of a micro destination, as well as managing its development. The specific accommodation structure in Croatia with relatively high share of so-called private accommodation and domination of sun&beach product in sampled destinations point to the need for a model and findings of this research to be tested on other types of micro destinations. **Keywords:** accommodation structure, destination competitiveness, destination performance measurement model, international hotel affiliation*

## 1. INTRODUCTION

Businesses have traditionally measured their business performance using financial accounting tools (Barber 2008), and the search for a more effective and better integrated model of measuring performance dates back to the late 1980s with the emergence of more sophisticated models (McNair and Masconi, 1987; Kaplan, 1990; Druker, 1990; Kaplan and Norton, 1992), when numerous publications emphasize the need for a more relevant, balanced and strategically and implementation-oriented performance measurement system. Probably due to the complex structure of the tourism product on the supply side, the new business performance measurement models had difficulties in adapting to the overall tourism system (Yilmaz and Biticci, 2006). There are generally no major differences around the basic concept of competitiveness, but due to the wide field of application of this term in economics and tourism with regard to what are potential objects and areas of competitiveness, there is no uniquely accepted definition (Crouch and Ritchie, 2003, p. 12 - 14). Defining competitiveness, Newall (1992) argues that competitiveness is the production of a larger quantity of higher quality products or services that are successfully marketed in domestic and foreign markets. Crouch and Ritchie (2003) tourism competitiveness model has been used as a methodological foundation in scientific research

related to both tourism competitiveness and performance (Ivanov and Ivanova, 2016; Atilla 2016, Hanafiah and Zulfikly, 2019), where this research preferred “macro” destinations (countries) compared to micro destinations. However, researchers outline differences between destination performance and competitiveness (Croes and Kubickova, 2013; Hafiz Hanafiah et al., 2016; Mazanec et al., 2007) also emphasizing the need for the exact relationship between destination competitiveness and performance to be investigated. According to Page (2009), internationally affiliated hotels accounted to 30% of the total global stock in 2009, where the estimate shows that the share will reach 60% until 2050. Some authors acknowledge that internationally affiliated hotels have a significant influence on destination competitiveness (Gu et al., 2012; Masadeh, 2013; Dioko and So, 2012), with the later source also noting that this influence has so far been largely unknown.

## **2. LITERATURE REVIEW**

### **2.1. Tourism competitiveness vs tourism performance**

The competitiveness of tourist destinations (as well as the notion of competitiveness in general) in the scientific literature began to appear in the last two decades of the 20th century, but only since the 1990s there are intensified efforts to understand what exactly means the competitiveness of tourist destinations and how it should be measured (Crouch, 2007). Ritchie and Crouch (2003, p.2.) provide the following definition: “In summary, what makes a tourist destination truly competitive is the ability to raise tourist spending, attract more visitors who are profitably provided with satisfying and memorable experiences, while increasing the well-being of the local population and preserves the natural capital of the destination for future generations.” The model of competitiveness of tourist destinations is a conceptual model, or as the authors themselves point out (Ritchie and Crouch, 2003, p.60.) “a conceptual model is a tool that provides a useful way of thinking about a complex phenomenon.” With this regard, it should be understood that it is not a direct tool with which destination competitiveness could be measured, as attributes are given only as an indication of possible measures, not explicit methods of measuring them. Furthermore, from the position of the topic of this paper, it is important to know that competitiveness does not imply success, or as the authors themselves point out (Ritchie and Crouch, 2003, p.26.): “competitiveness is no guarantee of success.” Other commonly used competitiveness models in tourism include Dwyer and Kim (2003), Heath (2003), and Gooroochurn and Sugiyarto (2005). Conceptually based on the previous developments in modelling tourism competitiveness, tourism and travel competitiveness index (World Economic Forum, 2019) measures tourism competitiveness of the countries biannually, and is one of the most renowned and used tourism competitiveness model in practice. Index is based on the 4 pillars/subindices (3 prior to 2013):

- Enabling environment
- Travel and tourism policy and enabling conditions
- Infrastructure
- Natural and cultural resources

TTCI has seen methodological criticism since its inception, which included preference of the model for more advanced economies (Hafiz Hanafiah et al., 2016; Wu et al., 2012), arbitrary weighing of the indicators (Wu et al., 2012, Mendola and Volo, 2017), reliability and validity related to general statistical methods in formulating and developing index (Mendola and Volo, 2017). The crucial, and from the point of this paper the most relevant, criticism stems from the point that the basic idea of measuring destination performance through competitiveness isn’t correct due to difference of the concepts and their practical application, where Croes and Kubickova (2013) suggested that TTIC should also take into account destination performance.

Researchers have lately noted a distinction between competitiveness and competitive advantages, suggesting that the former must also include actual performance of a destination (Porter, 2011). Difference outlined lies in the ability of a destination to effectuate its advantages, primarily in tourism revenues (Hafiz Hanafiah et al., 2016; Li et al., 2013), thus demonstrating its ability to compete. Mazenec et al. (2007) used three variables to assess tourism performance: the market share based on international arrivals, tourism growth and the distance-weighted market share. Croes and Kubickova (2013) designed a ranking system to assess the performance of tourism destinations using competing theory and proposing a performance indicator scaled by the dynamism of performance over time (tourism receipts growth rates and tourism demand), the size of the industrial base of the economic structure (tourism added value on GDP) and the quality of life standards over time. This study suggested that tourism competitiveness is the antecedent to tourism performance. Hanafiah et al. (2016) proposed a performance-based destination competitiveness measurement for tourist destinations, with competitiveness theory as the basis. In their article, it has been asserted that performance is a significant measurement of destination competitiveness, where measurement includes satisfaction, productivity and quality of life. Hanafiah and Zulfikly (2019) set tourism performance as an endogenous construct of seven exogenous constructs: core resources, complementary conditions, infrastructure quality, DM, environmental management, tourism price and globalisation, however finding only core resources, complementary conditions and globalisation to have a substantial effect on destination performance on the sample of 115 countries.

## **2.2. Influence of hotels on tourist destinations**

Researchers have long debated that characteristics of industries related to various elements of tourism value chain have effects on destination competitiveness (Chung & Whang, 2011; Farmaki & Papatheodorou, 2015). Vanhove (2012) outlined hotels as the backbone of the accommodation industry and a dominant accommodation type in many destinations. Furthermore, he stated that hotel sector is also the most labour intensive sector of tourism with the highest value added per overnight, where an employment rate of 1.5 to 2 persons isn't exceptional in developed countries (however is usually significantly lower in developing countries). Page (2009) has stressed that the influence of the hotel industry on global tourism and subsequently destinations is further emphasized by the process of increased affiliation to international hotel chains. Vanhove (2012) identifies franchise agreements, hotel management agreements and marketing alliances (where terms hotel commercialisation or consortia is also used) as the most frequent models that contribute to accelerated trend of affiliation to international organisations. Dioko & So (2012, p.555) claim that "the precise effects on a destination arising from the entry or presence of internationally branded hotel chains are largely unknown but can be considerable". Ivanova and Ivanov (2016) argued that the presence of international chain within a destination increases the market visibility of hotels in a destination through their inclusion in chains' brand websites, global distribution systems (GDSs) and online travel agencies (OTAs) chains have contracts. This would lead to a conclusion that increased share of affiliated hotels in a destination would lead to the greater overall visibility of the destination, with expected positive effects on both competitiveness and performance. They also assume that these would drive hotel (and thus destination) image, as well as indicate solid business environment to other potential entrants. Masadeh (2013) has emphasized standardised and internationalised training programs that improve local hotel industry human resources and know-how, which can later be distributed throughout other companies, once these professional leave parent companies (Gu et al, 2012). Ozturk and Cancer (2014) suggest that international hotel chains are usually the pioneers in adopting new information and communication technologies thus driving innovation in a destination.



Ivanov and Ivanova (2016) have found positive correlation between destination competitiveness (measured on country level) and affiliation to international hotel chains using regression models, however noting: „Number of affiliated hotels and the number of rooms in affiliated hotels are more important drivers of destination competitiveness than the share of affiliated hotels/rooms in country's hotel industry.” (Ivanov & Ivanova, 2016 p.77.).

### **3. RESEARCH METHOD**

#### **3.1. Introduction**

The research is based on the creation of destination performance measurement model, which uses indicators that are calculated based on secondary data. Indicators are chosen from the wide array of indicators specified in publication of the World Tourism Organization (UNWTO, 2004), respecting the principles of sustainability. Measurement model is a composite index, where according to the relevant literature on the subject (Nardo et al, 2005; Cherchye et al, 2008; Hudrlikova, 2013), among the necessary methodological steps mandatory in synthesizing include the following:

- Choice of data / indicators
- Replacing missing data
- Multivariate analysis
- Standardization of indicators
- Aggregation

The model is tested on the sample of 30 Croatian destinations, out of which 28 coastal, while two remaining are capital Zagreb and Varaždin in the northern continental part of Croatia. Coastal destinations with more than a million annual overnights have been chosen, where island and peninsula destinations have been aggregated in the way that each peninsula and island make for one destination (contrary to Croatian administrative division on cities and municipalities) since they make logical destination framework in terms of supply chain and customer perception.

#### **3.2. Indicators**

Choice of indicators follows classification of UNWTO (2004) where indicators are chosen to measure economic, social and environmental impact of destination performance. Model is developed in two variants:

- Basic model with reduced set of indicators, where each performance category is represented by the single indicator that is considered the most appropriate. Such an approach is based to follow the initial research intention that the model should be robust and simple enough to allow for the practical use for destination managers;
- Extended model that includes additional indicators that are selected following the specific issues related to Croatian tourism to serve as a more precise measurement tool.

Following the arguments related to the crucial issues of competitiveness and performance listed in *Literature review* section and UNWTO (2004) the set of variables shown in table 1 have been selected to the model:

*Table following on the next page*

*Table 1: Base indicators of the extended destination performance measurement model*

Type	Label	Indicator	Calculation	Explanation
Economic	E1	Tourism revenues per inhabitant	Tourism revenues recorded in destination / number of inhabitants	Largely debated as crucial indicator of both destination competitiveness and performance
	E2	Accommodation occupancy	Bed occupancy of all accommodation establishments within a destination	Indicates overall (average) performance of accommodation sector
	E3	Employment	Share of employed persons in total working contingent (1 - unemployment rate)	Indicator of overall economic performance of destination
Social	S1	Seasonality	Ratio of the busiest annual quarter to ideal - (1/ (share of the leading quarter in tourist overnights) / 0.25)	Extensive seasonality is one of its most emphasized negative effects of tourism. The highest value of indicator is desirable (when it is as close to 0,25)
	S2	Change in population	% change in destination population between the two official censuses	Indicator that reflects the idea that successful destination attracts permanent inhabitants as opposed to converting dwellings to tourism accommodation
Environmental	O1	Area per tourist bed	Destination area / number of tourist beds in all accommodations	Follows the general sustainability premise that it is necessary to preserve resources for the next generations
	O2	Share of households connected to the sewage system	% of the households and all constructed objects connected to the sewage system in total	Refers to specific problem of Croatia where coastal cities lag behind EU standards in sewage system water purifiers and especially in number of households that are connected to sewage system
	O3	Share of recycled in total waste	% of the total waste generated within a destination that is further recycled in any way (not deponed)	Refers to specific problem of Croatia where most of the country lags behind agreed EU norms on share of recycled waste

Data sources for indicators include Croatian Financial Agency for tourism revenues, Croatian National Bureau of Statistics for data on accommodation, overnights, seasonality, area and population, and Croatian Environmental Agency for data on sewage and waste treatment on destination level. Data for all indicators is for 2019, where population trends are based on estimates for 2020 compared to 2011 census. For the purposes of the basic model, indicators are reduced to the following:

- E1 – Tourism revenues per inhabitant
- S2 – Change in population
- O1 – Area per tourist bed

In that sense basic model of destination performance measurement suggests that a destination is more successful when it maximizes tourism related revenues on minimum accommodation density, while destination continues to attract permanent population thus signifying desirable community, as opposed to the effects of over-tourism.

### 3.3. Model synthesis

Following the usual procedures basic indicators (E1, RE2, E3, S1, S2, O1, O2, O3) have been converted into standardized indicators (E'1, E'1, E'2, S'1, S'1, O'1, O'2, O'3) using logarithmic or standard normalisation method, depending on the particular indicator. At the end, all of the 7 indicators are set in numeric scale 1-10 to ensure the equal contribution of each indicator in the model. There are various methods of synthesis of composite indices. TTCI (World Economic Forum, 2015) is constructed as the sum of its normalised and weighted components. Other commonly used composite indices, such as Human Development Index (Deb, 2015), or the suggested in the field of tourism such as tourist loyalty index (Cossío-Silva

et al, 2019), calculate the index as the product of its components, where in case of HDI it is a n-th root of the product of n indicators. Difference stemming from these principle mathematical methods (sum or product) is that product method in final result sanctions more heavily any relatively low indicator of a particular sample element (in this case a destination). In the case of sum, overall result (index) is gained incrementally giving more opportunity for negative aspects to be offset by positive aspects. In the situation where number of indicators is reduced to relatively small number of the most vital ones, as it is the case in constructing human development index, it is more logical to apply product method that is therefore selected as the synthesis method:

$$DP = \sqrt[3]{E'PxS'PxO'P}, EP = \sqrt[3]{E'1xE'2xE'3}, SP = \sqrt[3]{S'1xS'2}, OP = \sqrt[3]{O'1xO'2xO'3}$$

DP – destination performance (extended model), EP – economic performance, SP – social performance, OP – environmental performance.

For the basic model:  $DPB = \sqrt[3]{E'1xS'2xO'1}$ , DPB – destination performance (basic model)

### 3.4. Hypothesis and constructing hotel accommodation-based variables

As the aim of this paper is to examine the relationship between performance of tourism destinations and its accommodation structure, the following research hypothesis are set:

- H0 – Share of hotel in total accommodation capacities is positively correlated with (measured) destination performance;
- H1 – Share of internationally affiliated hotel stock in a destination is positively correlated with (measured) destination performance.

For the purpose of testing the hypothesis, the following variables are formed:

- SH – share of hotels in total accommodation capacities measured in beds, based on data from Croatian National Bureau of Statistics;
- Variable referring to the share of internationally affiliated hotels in a destination is developed in two variants:
  - SI – share of internationally affiliated in hotel capacities (beds) in a destination;
  - SI' – share of internationally affiliated in total accommodation capacities (beds) in a destination.

Internationally affiliated hotels include international hotel management companies regardless on the contract type (management contract, franchise or any other) and marketing alliances that operate in more than 3 countries, in order to exclude local / regional companies that have significant presence in Croatia. Data for determining SI and SI' for destinations from the sample is based on the author's own research based on the list of all registered hotels in Croatia as issued by Croatian Ministry of Tourism.

## 4. ANALYSIS

### 4.1. Multivariate analysis

Nardo et al (2005) and Hudrlikova, (2013) suggest principal component or factor analysis as the most suitable method of multivariate analysis in the process of building composite indices. However, both methods have limits in terms of minimum sample size and/or ratio of sample to number of variables where suggested minimums are sample size of 100, or sample size to number of variables ratio of 5. In the case of the extended model, both of the criteria are significantly violated with sample size of 30 and 8 indicators (variables), where the Keyser-Meyer-Olkin measure of sampling adequacy equals 0.43 which is below any acceptable criteria

for both multivariate analysis methods (OECD, 2008). Since the basic model has less indicators (sample size to number of variables ratio equals 10), principal factor analysis has been run to show correlation matrix, explanation of variance and eigen values of indicators for the basic model using SPSS program package:

*Table 2: Principal component analysis of indicators in the basic model*

		E'1	S'2	O'1
<b>Correlation</b>	E'1	1.000	.140	-.059
	S'2	.140	1.000	-.088
	O'1	-.059	-.088	1.000
<b>Sig. (1-tailed)</b>	E'1		.230	.379
	S'2	.230		.321
	O'1	.379	.321	

a. Determinant = .971

#### **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.532
	Approx. Chi-Square	0.813
Bartlett's Test of Sphericity	df	3
	Sig.	0.846

#### **Communalities**

	Initial	Extraction
E'1	1,000	.435
S'2	1,000	.496
O'1	1,000	.265

#### **Total variance explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.196	39.863	39.863	1.196	39.863	39.863
2	0.949	31.617	71.481			
3	0.856	28.519	100.000			

Multivariate analysis shows that the sample is on the border of adequacy for principle component or factor analysis in the case of the basic model with KMO between 0.5 and 0.6 (Hudrlikova, 2013), where correlation matrix and explanation of variance point to satisfactory combination of indicators.

## **4.2. Results**

Table 4 shows the results of economic performance (EP), social performance (SP), environmental performance (OP), destination performance by extended model (DP) and destination performance for the basic model (DPB) for the sample destinations:

*Table following on the next page*

*Table 3: Results of destination performance measurement model for sample destinations*

Destination	EP	SP	OP	DP	DPB	Destination	EP	SP	OP	DP	DPB
Varaždin	2,2	7,0	6,3	4,4	3,4	Rab	5,4	4,6	3,7	4,5	5,2
Zagreb	5,3	7,9	5,8	6,1	5,4	Pag	4,9	4,4	2,6	3,8	6,0
Umag	6,3	5,5	2,5	4,3	5,8	Zadar	4,1	5,5	2,9	3,9	5,4
Poreč	8,8	4,7	6,7	6,8	6,9	Biograd nm	2,7	5,4	1,5	2,5	5,5
Vrsar	5,0	1,9	3,4	3,4	1,5	Murter	1,0	4,2	1,0	1,4	2,8
Rovinj	8,5	5,0	5,2	6,2	5,5	Vodice	2,5	3,9	1,7	2,4	4,7
Pula	4,3	4,9	4,0	4,3	4,0	Šibenik	3,7	3,7	3,0	3,4	4,7
Medulin	4,2	5,6	1,0	2,6	3,2	Split	3,7	4,5	2,4	3,3	3,4
Labin	6,0	4,4	2,3	3,8	4,4	Makarska	3,4	4,9	1,3	2,6	3,2
Opatija	6,2	4,9	4,1	5,0	7,0	Podgora	4,3	3,3	1,8	2,9	5,1
Rijeka	1,9	4,3	2,6	2,6	3,0	Brač	4,7	5,1	2,1	3,5	7,1
Crikvenica	4,9	4,7	3,4	4,2	4,7	Hvar	4,5	4,7	2,0	3,3	6,9
Krk	5,6	5,7	4,5	5,1	6,6	Korčula	2,8	4,4	2,1	2,8	5,1
Cres	5,9	4,3	3,4	4,4	7,0	Pelješac	2,9	4,3	2,1	2,9	5,3
Lošinj	7,3	4,4	2,5	4,3	6,7	Dubrovnik	7,6	5,4	3,6	5,3	5,8

Generally, model shows higher performance for destinations on the northern part of Croatia, where basic model favours destination with lower accommodation density. Basic model shows smaller variance of the index values across the sample compared to the extended model.

### 4.3. Testing hypothesis

Hypothesis testing is conducted via Pearson correlation test using both performance measurement models and variables expressing share of hotel in total accommodation (SH) and both variants of variable expressing share internationally affiliated hotels in hotel stock (SI) and total accommodation stock (SI'). Results are shown in table 5, with statistically significant correlations are indicated in bold:

*Table 4: Testing hypothesis results*

Variable/hypothesis	Model	DP (extended model)	DPB (basic model)
SH/ HO (share of hotel in total)		<b>r=0,555; p=0,001 &lt; 0,05</b>	r=0,344; p=0,063 > 0,05
SI / H1 (share of int. in hotel)		r=0,272; p=0,146 > 0,05	r=0,102; p=0,593 > 0,05
SI' / H1 (share of int. in total)		<b>r=0,401; p=0,028 &lt; 0,05</b>	r=0,226; p=0,229 > 0,05

All of the correlations between SH, SI and SI' variables and both performance measurement models are positive, yet only two tests show statistically significant correlations, both for the extended model. However, it has to be pointed out that share of hotels in total accommodation is highly correlated with extended destination performance (DPB) and near the statistical significance for the basic model, where it is reasonable to assume that it would be statistically significant in case of the larger sample. As for the correlation between both variables representing the share of internationally affiliated hotels and destination performance, it is positive only in the case of share of internationally affiliated in total accommodation capacities for the extended model.

## 5. DISCUSSION

Research results partially confirm findings of Ivanov and Ivanova (2016), where they suggested that for a destination on a macro level is essentially important to have internationally affiliated hotel as large as possible, rather to have a significant share of internationally affiliated hotels in total accommodation structure. In the context of Croatian tourism where the share of hotels and resorts has been continuously decreasing for decades falling jointly under 15% in total bed structure in 2019 in favour of rapidly growing private accommodation (that in general records significantly lower prices), it is not surprising that share of hotels in total accommodation positively affects destination performance.

Regarding the share of internationally affiliated hotels in hotel or accommodation stock and its effect on destinations, this research provides less decisive outcome. This is somewhat surprising given the fact that vast majority (>90%) of internationally affiliated hotels in destinations from the sample have been present (and internationally affiliated) in the respective destinations for more than 5 years, where it would be reasonable to expect that this would lead to stronger and measurable positive effects, even on the small sample as in this case. Furthermore, there is also a danger of confusing cause and effect – do internationally affiliated hotels come in already successful destinations and to what degree they make them more successful. In that sense, the share of internationally affiliated hotels could be a measure of some components of destination performance (or competitiveness) rather than its cause. Furthermore, it has to be noted that research shows negative (yet weak and statistically insignificant) effects of the share of internationally affiliated hotels on tourism density and waste treatment. The first correlation has two possible explanations. First is that international brands favour destinations with higher tourism concentration that signals higher demand for these destinations, thus minimizing business risks. The second is that the appearance of international brands serves as an attractor for other accommodation developers resulting in more accommodation in destinations that have more internationally affiliated properties. Waste management is generally responsibility of local and regional authorities, where hotel managers are limited by the infrastructure and practices of the same authorities, however positive effect of share of affiliated hotels on economic indicators of destination (that is in case of occupancy even statistically significant) would lead to a conclusion that the influence on economy would through local taxes spill into better infrastructure management, which is not the case here. Basic model proposed in this research shows better statistic appropriateness in terms of the rules for constructing composite indices. It is also more universal, being stripped of the indicators that are crucial for Croatian coast in the present moment (seasonality, occupancy, waste management, sewage, to a degree even unemployment). That said, if the sample was in some of the highly developed countries, most of these aspects would be irrelevant since the issues are generally resolved and there would be little difference between destinations. The later would be same in the case of the country that is far less developed than Croatia (the same issues wouldn't be resolved at all, again giving approximately same results for various destinations). Basic model shows no statistically significant correlations with any of the variables SH, SI or SI', however it is reasonable to assume that correlation with SH would be significant with only slightly larger sample. In evaluating the meaning of the results for general destination competitiveness, it has to be noted that a large, but country and region dependent, share of competitiveness comes from national, or in the best case, regional legislation and policies. What TTIC (World Economic Forum, 2019) emphasizes in the first subindices (Enabling environment, Travel and tourism policy and enabling conditions) is country specific, or to a degree region specific, for countries where regions have significant decision making responsibilities, especially in the field of tourism. Croatia, as a highly centralised country, has generally no differences between its destinations for the first two pillars of competitiveness, at least as it is determined by TTIC. In that sense competitiveness (and performance) variations between destinations steam only from pillars infrastructure and natural and cultural resources.

## 6. CONCLUSION

This research aims to contribute to the ongoing scientific debate on the exact relationship between destination competitiveness and performance and to create destination performance model that could be used for destination managers as a simple performance measurement tool. Research confirms positive influence of share of hotels in accommodation stock to destination performance, however isn't as decisive in determining influence of internationally affiliated hotels to their respective destinations, where some environmental variables show even negative,

yet statistically insignificant, correlations with the share of internationally affiliated hotels. Research limitations stem from the relatively small sample size that incorporates mainly the largest Croatian coastal destinations, homogenous product structure (dominant sun & beach) among sample destinations and all being from the same country, where country level policies have been identified as the large source of overall competitiveness, and potentially, performance. Further development is envisioned in two ways: to further test and potentially enlarge the extended model with the aim of more exact insight of destination performance and competitiveness relationship in theoretic sense, while further development of basic destination performance model should aim for it becoming more universal practical measurement tool for destination performance.

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# EXAMINING FACTORS INFLUENCE INDIVIDUAL BEHAVIOUR TO CONTINUE USE OF MOBILE SHOPPING APPS WITH THE INTEGRATION OF TECHNOLOGY ACCEPTANCE MODEL AND BRAND AWARENESS

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## ABSTRACT

*The purpose of this study is to examine factors which influence individual behaviour to continue use of mobile shopping Apps. In these research components of technology acceptance model (TAM) and brand awareness facets are used as independent variables. Two elements of TAM perceived ease of use (EOU) and perceived usefulness (USF) have shown positive influence on customer satisfaction (SAT). Therefore, three elements of brand awareness such as PBA, PBR, and PRA indicate positive influence on customer satisfaction (SAT). A wide range of research on brand awareness has been published, but little is discussed about factors which influence individual behaviour in continuance intention (INT) with the integration of technology acceptance model. The population of this study consists individual working in education and business sectors across the Pakistan. The data will be collected using survey questionnaires built on constructs items and demographic information of the respondents. For data analysis, the Structural Equation Modeling (SEM) approach will be used.*

**Keywords:** Brand Awareness, Satisfaction, Continuance Intention, Technology acceptance model

## 1. INTRODUCTION

Digital media plays a big role on consumer buying activities and behaviour's in this new era (Samar Rahi, Mazuri Abd Ghani, et al., 2020; Thaichon, 2017). As a result, companies need to grow in internet world for survival (Jensen & Wagner, 2018; S. Rahi, 2018b). In this essence, different researchers for instance Ajzen (1991) introduced theory of planned behaviour, theory of reasoned action developed by Fishbein and Ajzen (1979) and technology adoption model by Davis' (1989a) to investigate user attitude towards adoption of technology. Some other researcher have investigated user involvement behaviour Tarute et al. (2017), consumer's satisfaction (Shin, 2015), and intentions to continue use of technology Lee' (2018); Samar; Rahi et al. (2020); Samar Rahi, Mubbsher Munawar Khan, et al. (2020); Rahi et al. (2021). Technology acceptance model is used in the different adoption studies because it might forecast consumer intentions and provides more evidence and validation (Vahdat et al., 2020). Furthermore, TAM has been seen popular model in analysing technology adoption and consumer integration in innovation activities (Hernández et al., 2010; Rahi, Ghani, Alnaser, et al., 2018; Rahi, Ghani, & Ngah, 2018; S. Samar et al., 2017).

Contrary to above investigation, the current research investigates factors which influence on individual behaviour to continue usage of mobile shopping Apps with the integration of technology acceptance model and brand awareness. The current research is developed in the context of mobile-shopping application by concentrating on perceived usefulness and perceived ease of use (Rahi, Abd.Ghani, et al., 2019). Therefore, such research incorporates and expands TAM about continued intentions to explore the impact of m-shopping application utilization. Additionally, brands-awareness has been widely known as a unifying factor (Barreda et al., 2015; Homburg et al., 2010), therefore, this study addressed three main elements of brands-awareness. According to this viewpoint, the three key elements of brands-awareness are platform brand awareness, knowledge-product brand awareness, and service-provider brand awareness. Such a theoretical framework enables us to dig into the various positions of brands-awareness to investigate its complex impact on customer perception and behaviour in the manifestation of continues use of m-shopping apps. User intention as behavioural outcomes has studied in the context of pre-adoption (Rahi & Abd. Ghani, 2019b, 2019c; Rahi, Othman Mansour Majeed, et al., 2019; Rahi Samar & Abd Ghani Mazuri, 2019; Rahi Samar & Abd.Ghani Mazuri, 2019; Sarkar & Khare, 2019). Since m-shopping applications are becoming increasingly popular, it will be beneficial for market experts and management of electronic retail firms to investigate variables which influence user continuance intention (S. Rahi & M. Ghani, 2018). The purpose of this research is to examine which influence individual behaviour to continue use of mobile shopping Apps by using the technology acceptance model and brand awareness facets including platform brand awareness, knowledge product brand awareness, and service provider brand awareness.

## **2. LITERATURE REVIEW**

E-commerce depends on the business transactions that are performed electronically from and within entities and persons (Huangg et al., 2014; Rahi & Abd. Ghani, 2018, 2019a; S. Rahi & M. Ghani, 2016). It happens on the smartphone which quite often has network connectivity, while the digital electronic commerce system allows digital purchases through smart phones with an expanse of electronic commerce (Huangg et al., 2014; R. Samar et al., 2017; Yehh & Li., 2009). The use of a portable devices for the browsing, ordering or payment to merchandiser has become a common method for contemporary customers (Hung; et al., 2012; Rahi, 2015). This research focuses on the scope of utilizing digital retail applications for purchasing experiences. This manuscript is written in order to learn more about the association within technology acceptance model (TAM) and INT. Other indicators such as brands awareness and SAT have been used in the literature to determine which position they perform in relation to the two previously listed factors.

### **2.1. The technology acceptance model (TAM)**

The theory of reasoned action (TRA) had been used to establish the TAM (Fishbein & Ajzen, 1979). TAR and TAM both propose a certain causation pattern, in which mentality factors affect the decorum intentions and expectation affects specific behaviour (S. Rahi & M. A. Ghani, 2016; Young Im' & Hancer', 2014). According to Talantis et al. (2020), TAM utilizes 2 factors that assess the consumers attitudes and continuance intentions towards its implementation of emerging technologies: "Perceived ease of use (EOU) and perceived usefulness (USF). According to TAM, every other variable reflects the key variables which influence attitudes regarding m-shopping app usage (Kim; et al., 2016b). The framework repeatedly indicates that USF and EOU are the important factors in m-shopping app progress (Pentina et al., 2014).

### *2.1.1. Perceived Usefulness (USF)*

Perceived usefulness (USF) has been described as: “the extent to which the individual assumes that the use of a certain process will increase their working efficiency” (Davis', 1989a). TAM2 often theorizes how individuals are using a conceptual image to measure the relation among critical mission targets as well as the consequent outcomes mostly as criterion of evaluating the recipient's success possibility (i.e. USF) (Venkatesh' & Davis', 2000). When consumers realize that the application is useful and serves the requirements, individuals take a good mindset (Lee', 2018; Morosan' & DeFranco;, 2016). (Bilgihan et al., 2015; S Rahi et al., 2017) discovered this to be helpful in explaining timeshares investors' plans of using smartphones applications as a conventional innovation background. The first hypothesis is then suggested as:

- **H1:** Perceived usefulness (USF) has positive influence on customer satisfaction (SAT).

### *2.1.2. Perceived ease of use (EOU)*

Perceived ease of use (EOU) indicates: “as much as a human thinks the use of a certain mechanism is effortless” (Davis', 1989a). As a result, minimal time put to adopt smartphone applications leads to a stronger desire to utilize the modern technologies since it would be ostensibly faster and several utility-focused (Laforet & Li, 2005). However, perceived ease of use applies to the extent that the individual thinks new technologies are simple when using (Veríssimo;, 2016). In several experiments the beneficial influence of the electronic ease has been shown in the research (Gill et al., 2017; Lin' et al., 2017). (Hong' et al., 2006) proved the presence of a substantial interaction among EOU and customer satisfaction. Thus, EOU is hypothesised as:

- **H2:** Perceived ease of use (EOU) has positive influence on customer satisfaction (SAT).

## **2.2. Platform- Brand Awareness (PBA)**

The platform provides the consumers with information on products, interacts with manufacturers as well and transfers content to multiple channels (Lin' et al., 2017). The recognition of an Internet information portal with a consumer experience resulted in brand awareness (Du' et al., 2020).

## **2.3. Knowledge- Product Brand Awareness (PBR)**

For several years, WOMs are being believed to be amongst the very important brands awareness modes (Lu' et al., 2014a). To put it another way, individuals are going to buy items, ingested them, and exchanged their experiences with others by socialization to reassure them (Rahi & Ahmad, 2020). Customers' awareness of the products' distinctive PBR would have resulted in the creation of brands-recognition.

## **2.4. Service- Provider Brand Awareness (PRA)**

The value of a knowledge product is based on the reputation of providers that attribute knowledge products to customers. This will be particularly true since the rise of the Digital Celebrity society, which makes Popularity into a discretionary income (Albertt et al., 2017). On the basis of this diverse Brands Recognition (BAR) concept, we have described “Platform-Brand Awareness, Knowledge-Product Brand Awareness and Service-Provider Brand Awareness” as a recognition of OKS in correlation with 3 brands recognition aspects. Evidence shows how brands awareness builds confidence by marketers in products for business (Chaudhuri; & HolbrookK, 2001a).

As a result, we contend that brands recognition has a strong relation among both the “brand-awareness” factors and customer satisfactions (UST). Thus, we advance the following hypothesis:

- **H3:** Platform- Brand Awareness (PBA) has positive influence on customer satisfaction (SAT).
- **H4:** Knowledge-Product Brand Awareness (PBR) has positive influence on customer satisfaction (SAT).
- **H5:** Service- Provider Brand Awareness (PRA) has positive influence on customer satisfaction (SAT).

According to the behaviour principle, continued intentions (INT) clarify the possibility of choosing m-shopping apps for business workers across the service distribution stage (Ajzenn, 2002a). Because of the explanatory potential of behavioural intention, INT have become a key topic in IS and market research (Hurr et al., 2017). Prior studies found that intentions are a significant predictor of existing behaviour (Rahi & Ishaq, 2020; Venkatesh & Davis, 2000). Although smartphones became pervasive, few users have had the opportunity of using branded products in the retail sector since they're still in their adolescence. Therefore, exploring consumers' intention to continue using mobile shopping apps would be a good practice, making for a prompt analysis into consumers' impressions of m-shopping app usage.

## 2.5. Customer satisfaction and user continuance intention

Customer satisfaction (SAT) has been described as a key component, whenever it comes to consumer engagement (Nascimento et al., 2018; Samar Rahi et al., 2017; Rahi et al., 2021). SAT would be a prerequisite to the development and retention of a core constituency of prolonged customers (Nascimento et al., 2018; Rahi, 2016a; Samar Rahi, 2018). Correspondingly, in the sense of information Systems, the interaction would be frequently predicted where satisfactions with an Information system appears to strengthen a customer's willingness to proceed which use the method (Limayem. et al., 2007; Rahi, 2016b). According to Bhattacharjee and Lin' (2015a), study shows that SAT in reality has become a key predictor of continuance intentions (INT) after acknowledgement. Therefore, we hypothesized customer satisfaction (SAT) as:

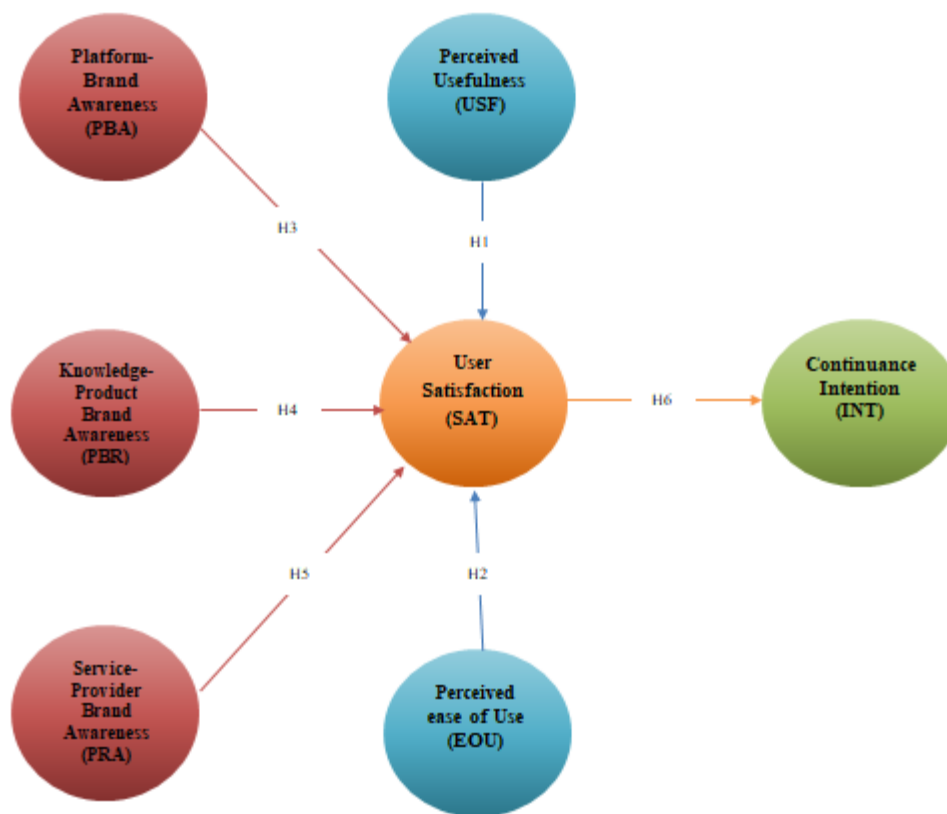
- **H6:** Satisfaction (SAT) has positive influence on user continuance intention (INT).

## 2.6. Research model

For the theoretical framework of analysis, the variables listed in the preceding sections are considered. The two components of TAM (“Perceived Usefulness (USF) and Perceived ease of Use (EOU)”) and three components of brand awareness (“Platform- Brands Awareness (PBA), Knowledge-Product Brands Awareness (PBR), and Service-Provider Brands Awareness (PRA)”) are contemplated as Independent variables. “Customer satisfaction (SAT) and user continuance intention (INT)” are contemplated as dependent variables.

*Figure following on the next page*

*Figure 1: The proposed research framework*



### 3. RESEARCH METHODOLOGY

#### 3.1. Research Paradigm

Researchers' scientific views are referred to as research paradigms. These are the principles and arrangements that govern when to approach experimental issues and perform analysis (Creswell, 2003). Such paradigms become fundamental scientific theories about when research could be conducted (Samar Rahi, 2017). The “positivist approach” will be practiced in this prosecution (S. Rahi, 2018a). The paradigm proponents claim that information is being acquired by research methods (Samar Rahi, 2017). In natural sciences the model for positivism are being best adapted (Hirschheim;, 1985).

#### 3.2. Study Level

This research takes a deductive approach since we all get a philosophy formulated by theorists so we're not introducing any different idea; instead, we will examining the theories and models by acquiring additional responses from participants and observing the results using numerous methodological methods (Rahi, Alnaser, et al., 2019; Samar Rahi, 2017).

#### 3.3. Research Methods

The “qualitative approach”, even as title implies would be concerned with accuracy and can be intended to gather rigorously information on a specific study topic (Samar Rahi, 2017). According to (Lune & Bergg, 2017), this category encompasses a participant's thoughts and desires when contrasted to “quantitative approaches”. We are replacing the current concept in this research but evaluate consensus view with some mathematical experiments such that this approach is not suggested in this analysis. According to (Grinnell. Jr & Unrau., 2010), “Quantitative methods” are a methodological approach employed to quantitatively classify findings through statistics and to identify their bases of positivity and the Interpretivists are

mainly using this method. Unlike qualitative approaches, this technique relies on gathering new information from a wider demographic in response to a situation and analysing the data, but it ignores a person's thoughts and perceptions as well as consistency issues (Bell; & Bryman', 2007). For this analysis a quantitative approach is used as the thesis does not lead to a fresh concept and testing an established assertion with the use of new sampling techniques.

### **3.4. Research type**

The "positivist paradigm" will be practiced in this study. For this analysis, a quantitative approach will be used, as the research does not lead to a fresh concept and testing an established assertion with the use of new sampling techniques. Empirical data analysis will be required for a quantitative study. The technology continuance model and numerous assumptions will be evaluated using structural equation modelling. "Structural equation modeling (SEM) is a computational method for evaluating and predicting cause-effect relationships through combining statistical evidence with qualitative causation hypotheses" (S. Rahi, 2017; Samar Rahi, 2017). Because of the explorative aspect of our study, we will select "partial least squares structural equation modeling (PLS-SEM)" to perform our statistical research (Shiau et al., 2019). We will use the SmartPLS software to analyse data using the standardized PLS-SEM technique (Dijkstra & Henseler, 2015; Hooi et al., 2018). Path analysis will be employed to evaluate the hypothesis produced by the conceptual framework. Five parameters will be used to assess convergent validity factor loadings: "Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), and variance inflation factor (VIF)".

### **3.5. Research Design**

The term "research strategy" refers to a structured compilation and assessment of information, as well as the structured description of that statistics. The researcher then employed the technique for analysis outlined herein for this specific study. Initially, a field of concern for the study will be chosen and then a subject that will require further investigation in detail will be picked. A thorough study of the research articles will be conducted. A wide range of experiments will be performed to analyse the effect of these factors. When the survey will be done, the data will be analysed in line with the research problem and the research's objective, accompanied by a description of the findings obtained from the data using analytical methods. Besides that, the research's results and conclusions will be discussed on a higher stage and suggestions, and guidelines will be made for the company to make greater strides by using mobile applications. Afterward, the research will yield a conclusion. After that, a checklist of sources will be created to support the topics provided in the analysis.

### **3.6. Population and sampling.**

On whom people, items and/or organizations we want to apply our study and the results of the study is the population of the study and "The representative part of the population is known to be the sample" (Samar Rahi, 2017). Since we could not analyse almost every demographic owing to time limits, we will choose a specific subset of the demographic to review. A specific subset of a populace will assume information as to the large subset or remainder populace (Malhotra & Birks, 2007). In current research, the study's populations consists of workers from enterprises who have direct interaction with education sector.

### **3.7. Sampling Technique applied**

The process of the sample determines the sampling procedure required (S. Rahi & M. A. Ghani, 2018; Samar Rahi, 2017). In this analysis, the "convenience sampling technique" is used, that has been a kind of "non-probability sampling method" (Rahi, Ghani, & Ngah, 2018).

Convenience sampling is a method of collecting information about a populace which has been closer by and readily available to the scientist (Samar Rahi, 2017). Convenience sampling helps researchers to collect answers in a timely manner.

#### 4. EXPECTED RESULTS

The technology acceptance model (TAM) has a positive influence on customer satisfaction (SAT), when customers have higher perceived ease of use (EOU) and perceived usefulness (USF), they are highly satisfied with the continuous use of mobile shopping apps. Brands Awareness facets ("Platform- Brands Awareness (PBA), Knowledge-Product Brands Awareness (PBR), and Service-Provider Brands Awareness (PRA)") have a positive influence on customer satisfaction (SAT), which in fact, positively impact individual behaviour to continue use of mobile shopping apps.

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## EMPIRICAL ANALYSIS OF PUBLIC DEBT AND CREDIT ACTIVITY IMPACT ON ECONOMIC GROWTH IN THE REPUBLIC OF CROATIA

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### ABSTRACT

*The aim of this paper is to identify debt forms that have a significant impact on GDP trends in the Republic of Croatia and to determine to what extent and in which direction certain forms affect GDP. A multiple linear regression model for the period 2005-2018 has been developed to answer the question of the impact on GDP of increasing or decreasing public and foreign debt and loans to households and companies. The results of the research indicate a strong positive correlation between GDP and loans to households and a negative correlation between GDP and public debt. The variable of loans granted to companies is not significant in the model. The results of the research indicate the necessity of a change in fiscal policy in the direction of using debt in the function of financing capital investments as the foundation of technological progress, productivity growth and related economic growth.*

**Keywords:** *economic growth, GDP, regression analysis, debt*

### 1. INTRODUCTION

The global financial crisis in 2007 and 2008 also affected the Croatian economy. Croatian gross domestic product (GDP) stagnated after many years of consecutive growth, and in 2009 the Croatian economy entered a recession. Declining trends of the Croatian economy are accompanied by ratings of credit rating agencies. Although a political consensus about the necessary shift in debt management exist, there is a lack of empirical studies that scientifically support the thesis of the negative impact of debt on GDP. In this paper authors try to contribute in understanding of the importance and impact of debt by simultaneously analyzing public debt, external debt, loans to companies and households, and GDP trends. The aim of this paper is to identify debt forms that have a significant impact on GDP trends and to determine to what extent and in what direction certain forms affect GDP. Economic theory predicts that government debt will negatively affect the structure of GDP by squeezing out private investment. By analyzing the data from the observed period, the growth trend of public debt and decrease in corporate loans is visible, which supports the theoretical considerations and implications of government debt. The crowding out of private investment then determine long-term GDP movements by reducing the amount of capital in an economy. However, the dynamics of economic trends depend on many factors that are not covered by simplified economic models, so the consequences of public debt growth are not unambiguous. The empirical research presented in this paper aims to contribute to a better understanding of the

complex mechanisms of the impact of debt on economic growth. This paper is divided into five chapters. The introductory chapter is followed by a literature review with relevant and recent research on the debt impact and loan activity on economic growth in the Republic of Croatia. The third chapter describes the research model and data. The results of the empirical part of the paper are presented in the fourth chapter, while the last chapter contains the main conclusions.

## **2. THE IMPACT OF PUBLIC DEBT AND CREDIT ACTIVITY ON ECONOMIC GROWTH IN THE REPUBLIC OF CROATIA**

In the last decade, numerous studies have been conducted on the impact of debt and credit activity on the economic growth in the Republic of Croatia. In the continuation, the review of relevant research based on the available data for the last ten years, public debt and credit activity in the Republic of Croatia and a comparison with other countries are analyzed. Škrinjarić and Orlović (2017) examined the existence of a nonlinear relationship between the share of public debt in GDP and the GDP growth rate in the Republic of Croatia. The variables consumer price index, the share of fixed capital in GDP and the openness rate, which represents net exports to the Republic of Croatia, were considered as control variables. The results indicate that given the size of the share of public debt in GDP, there are different strengths of the effect of public debt growth rate on economic growth. According to Buturac (2019), from 2008 until Republic of Croatia entered the European Union (EU), the growth of public debt was the largest driver of total indebtedness in the Republic of Croatia, which contributed to a significant decline in credit ratings. With the accession of the Republic of Croatia to the EU, public debt stabilized, which consequently resulted in a slight reduction of public debt in GDP and in improvement in the country's credit rating. Buturac (2017) and Buturac (2019) concluded that new models of economic growth based on the growth of investment consumption and exports of technologically more complex products are the key to stronger economic growth. In analyzing the impact of public debt sustainability on fiscal policy in the Republic of Croatia, Šimović (2018) applied a regression model with regime changes to differentiate regimes in which fiscal policy has more or less impact on economic growth during different cycles. The results of the analysis indicate a negative impact of the recession on the sustainability of public debt and that the level of public debt significantly affects and reduces the effectiveness of fiscal policy in the Republic of Croatia. For the sustainability of public finances and lower costs of government debt, it is necessary to define appropriate fiscal policies and public debt management policies based on data on the main drivers of public debt (Andabaka, Družić and Mustać, 2017). Škare, Sinković and Porada-Rochon (2019) showed that more robust and valuable results of the analysis of financial development and economic growth are obtained when the credit structure (loans to companies and households) is used as a proxy variable for the finance. For the Republic of Croatia, credit to firms and loans to households have different impacts on economic growth. Loans to households are more sensitive to economic crises and have a long-term negative impact on economic growth, while credit to firms have a long-term positive effect on economic growth, increasing exports and openness, leading to growth in investment and employment. The regression framework with the change of regime analyzed the movement of supply and demand for loans to firms and households in the Republic of Croatia (Dumičić and Ljubaj, 2017). The authors concluded that limited demand significantly slows down the lending activity of households and firms due to unfavorable GDP trends, and that lending can only be stimulated to a limited extent by monetary policy. In order to stabilize government debt, it is necessary to apply special policies and strategies of public debt management (Sudarić and Glavota, 2018). Each system stabilization measure has its positive and negative effect on the economy, while the consequences primarily depend on the combination of measures to be applied by economic policy makers. According to the results of Samodol and Brlečić Valčić (2018), the annual growth rate of money supply in the Republic of Croatia is positively

correlated with the unemployment rate, while financial sector development indicators and annual growth rate of loans to the private sector are negatively related to unemployment. The share of general government debt in GDP is positively related to unemployment, while the annual growth rate of general government debt is negatively related to unemployment. In addition to research where public debt and credit activities are estimated for the Republic of Croatia, there are also studies in which a comparative analysis of the impact of debt and credit activity on economic growth was conducted for several countries, including the Republic of Croatia. Multiple regression model, with credit growth rate as a dependent variable and non-performing loans rate, deposit growth rate, return on capital and real GDP growth rate as independent variables, factors influencing credit growth rate in Bosnia and Herzegovina, Turkey, Serbia and the Republic of Croatia are analyzed (Alihodžić and Ekşi, 2018). The results of the analysis indicate that in all analyzed countries the rate of non-performing loans negatively affects the rate of credit growth. In all countries, except the Republic of Croatia, the return on capital has a positive effect on credit growth. Growth in deposits and GDP have a positive effect on credit growth in all observed countries. Multiple regression analysis with independent variables, GDP growth rate, unemployment rate, consumer price index, amount of bank loans and stock market indices, and dependent variable, level of non-performing loans, was applied on the example of the economy of Bosnia and Herzegovina and Croatia (Pavković, Hrgović and Cesarec, 2018). The obtained results show that the GDP growth rate is significant in both countries, the unemployment rate in Bosnia and Herzegovina, and the amount of loans in the Republic of Croatia. Šimović, Davidović and Buljan (2020) concluded that in the post-crisis period the level of public debt in the Republic of Croatia stabilized and that the share of public debt in GDP gradually decreased as a result of economic recovery and long-term fiscal consolidation. Compared to the new member states of Central and Eastern Europe, authors point out that the Republic of Croatia records the highest share of public debt in GDP, while the dynamics of its reduction in the post-crisis period is similar in all analyzed countries.

### 3. RESEARCH METHODS AND DATA

In this paper, in addition to public and foreign debt, the debt of companies and households is also observed. A statistical model was developed to answer the question of the impact of increasing or decreasing public and foreign debt and debt of households and companies on GDP. An econometric model of multiple linear regression was used to determine the interaction and relationship of the analyzed variables. The model analysis consists of three steps. The first step determines the shape of model and properties of the variables and parameters. In the second part, parameters, variances, standard variations, prognostic values and other statistical-analytical quantities are estimated. Finally, hypotheses are tested and the quality of the results is examined. The standard form of the multiple linear regression equation with  $k$  independent variables is (Greene, 2018):

$$Y = a + b_1x_1 + b_2x_2 + \dots + b_kx_k \quad (1)$$

In equation (1), the term  $a$  represents a constant term, i.e. the value of the dependent variable  $Y$  in cases when  $X$  is equal to zero. The term  $b$  is a regression coefficient that shows the average change of the dependent variable  $Y$  when the corresponding variable  $X$  is increased by one unit and the other variables are unchanged. If the term  $b$  is positive, the ratio of the dependent and independent variable is proportional, and if it is negative, the ratio of the dependent and independent variable is inversely proportional. The paper uses GDP as a dependent variable, and public debt, foreign debt and loans to companies and households as independent variables. The model determines which independent variables had the greatest impact on the Croatian GDP in the period 2005-2018.

In addition, methods of analysis and synthesis and graphical representation will be used to compare the movements of variables representing the macroeconomic environment (GDP) and the vulnerability of the economy (loans to companies - non-financial sector, loans to households and public debt). Using the collected data, with software support (www.wessa.net and MATLAB), a statistical model of multiple linear regression based on OLS (Ordinary Least Squares) method was developed. In the model, the real growth/fall rate of GDP in the Republic of Croatia is set as a dependent variable, and the nominal growth/fall rates of foreign debt, public debt, loans to companies and households are set as independent variables. Let GDP represents the real rate of gross domestic product changes, inod represents nominal rate of foreign debt changes, javnid represents nominal rate of public debt changes, and ST and TD nominal rates of changes in loans to companies and households. The model equation is:

$$GDP = a + b_1 \cdot inod + b_2 \cdot javnid + b_3 \cdot TD + b_4 \cdot ST + \varepsilon \quad (2)$$

Data collected for the analyzed period 2005-2018. are shown in Figure 1. The data indicate a downward trend of all variables with a slight recovery of GDP after 2013, and loans after 2016. Foreign and public debt also show accelerated growth after 2016.

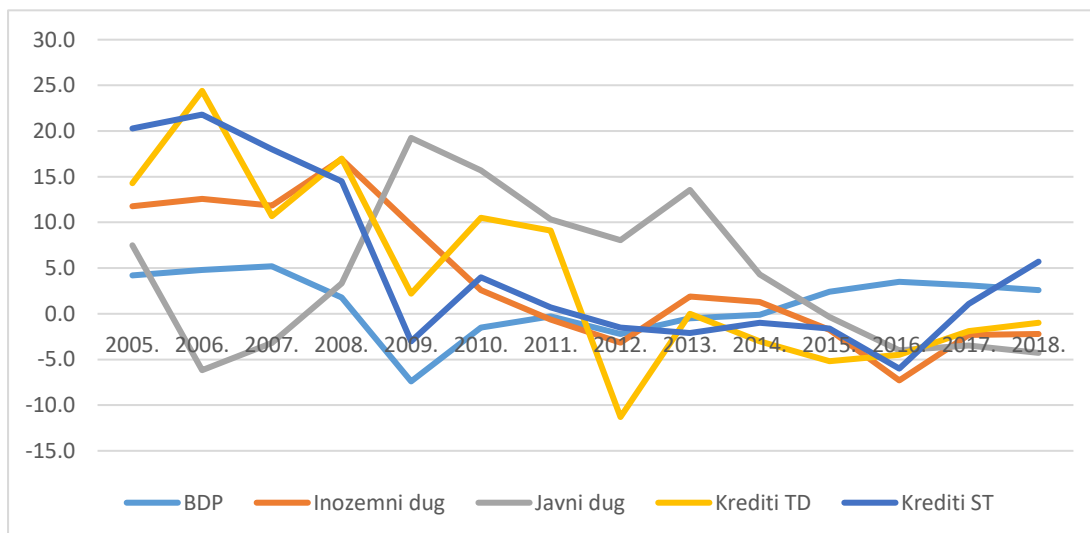


Figure 1: Annual growth rates of selected variables from 2005 to 2018  
(Source: author's according to the CNB Bulletin 256 (<https://www.hnb.hr/en/-/bilten-br-256>))

#### 4. RESEARCH RESULTS

By analyzing the relationship between the variables, it can be noticed that the dependent variable GDP is in a positive correlation with the independent variables inod, ST and TD, while in the negative correlation with the independent variable javnid (Table 1). The highest correlation is with the ST variable ( $r = 0.584$ ).

	GDP	inod	javnid	TD	ST
GDP	1.000	0.099	-0.839	0.334	0.584
inod	0.099	1.000	0.102	0.809	0.790
javnid	-0.839	0.102	1.000	-0.053	-0.328
TD	0.334	0.809	-0.053	1.000	0.837
ST	0.584	0.790	-0.328	0.837	1.000

Table 1: Correlation matrix  
(Source: author's calculation)

The correlation of independent variables shows that the largest positive correlation between the variables of loans to companies and loans to households. By analyzing the data obtained by regression analysis (Table 2), it can be concluded that the variable javnid is significant ( $p < 0.05$ ), while the variables foreign debt, loans to households and loans to companies are not significant. Also, a high value of Variance inflation factor (VIF) can be observed, which indicates potential multicollinearity in the set model. Given the above, the model was repeated with not significant variables. Since the p-value of the variable loans to households is only slightly above 0.05, this variable is also included in the new model.

Multiple Linear Regression - Ordinary Least Squares					
Term	Coef	SE Coef	t-value	p-value	VIF
Constant	1.521	0.607	2.51	0.034	
inod	-0.216	0.123	-1.75	0.114	4.63
javnid	-0.233	0.071	-3.27	0.010	1.92
TD	0.046	0.088	0.52	0.617	4.36
ST	0.235	0.118	2.00	0.077	6.87

Table 2: Multiple linear regression - OLS  
(Source: author's calculation)

By repeated linear regression model, the results shown in Table 3 were obtained.

Multiple Linear Regression - Ordinary Least Squares					
Term	Coef	SE Coef	t-value	p-value	VIF
Constant	1.775	0.591	3.00	0.012	
javnid	-2.978	0.057	-5.23	0.000	1.12
ST	0.124	0.049	2.49	0.030	1.12

Table 3: Multiple linear regression – OLS, repeated model  
(Source: author's calculation)

Empirical t-ratios, i.e. the corresponding p-values related to the independent variables, show that the variables public debt and ST are significant. Also, the value of VIF for both variables is 1.12, from which it can be concluded that there is no multicollinearity, i.e. it is negligible. Based on the obtained data, the model equation is:

$$GDP[t] = 1.775 - 2.978 \text{ javnid}[t] + 0.124 \text{ ST}[t] \quad (3)$$

Therefore, if the Croatian public debt nominally increases by 1 %, and other variables remain unchanged, real GDP will decrease by 2.978 % on average. By increasing loans to households by 1 %, while others retain the same, Croatia's GDP will increase by 0.124 % on average.

Model Summary				
S	R-squared	R-sq(adjusted)	F-test	p-value
1,607	0,811	0.776	19,6	0,000

Table 4: Linear regression statistics  
(Source: author's calculation)



The coefficient of determination (Table 4) is 0.811 and shows that this regression model interpreted 81.1 % of the variations of the dependent variable. The value of the coefficient of determination indicates the conclusion that the model is representative. The representativeness of the model was also confirmed by the F-test. According to the results of the F-test, it can be concluded that the regression equation is significant. The standard error of the estimated regression is 1.61 and shows that the average deviation from the expected values of the share of GDP is 1.61 %. In conclusion, it can be determined that the selected model is representative.

## 5. CONCLUSION

Following the economic trends of the Republic of Croatia in the period 2005-2018, it is clear that the global financial crisis has affected the Republic of Croatia and left a deep mark on its economy. In late 2015, the country emerges from a long-running recession and slowly begins to recover its economy. Public and foreign debt are reduced and the possibility of easier and cheaper debt opens up. Despite coming out of the recession at the end of 2015, the Republic of Croatia is yet to solve long-term structural problems. The negative demographic picture, high unemployment rate and constant outflow of population represent an increasing challenge for the country. Particular pressure is being put on the pension system, which is based on intergenerational solidarity. The current ratio of employees to pension beneficiaries is one step closer to the collapse of the pension system. The results of the research conducted in this paper indicate a strong positive correlation between GDP and loans to households and a negative correlation between GDP and public debt. The obtained results support the predictions of economic theory about the negative impact of public debt on economic growth. The problem is, of course, a bit more complex, and the reason for the increase in public debt plays a very important role. In fact, public debt is not negative in itself, but a combination of a negative impact on private investment and a lack of quality investment projects that should be financed by public debt. The results of the research indicate the necessity of a change in fiscal policy in the direction of using debt in the function of financing capital investments as the foundation of technological progress, productivity growth and related economic growth. The variable of loans granted to companies is not significant in the model. Private companies, which should be a pillar of the economy, play a particularly important role in the country's economic growth. The structure of the Croatian economy is such that the effect of small and medium enterprises on economic growth does not realize its full potential. Financial sector has a role to back up investments of the private sector which enhance capital accumulation and growth. Results presented in this paper suggest the need for further research in the direction of identifying factors strengthening the role of financial sector in entrepreneurship development as a generator of new employment and income growth.

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## THE MOROCCAN ECONOMIC DIPLOMACY AFTER COVID-19

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### ABSTRACT

*This article aims to meet the challenges of the new post-Covid-19 economic diplomacy in a context of economic recovery, the objective would be to retrace the actions taken by the Morocco towards its allies as well as to highlight the opportunities to be seized in order to reposition Morocco in international trade flows. In this sense, the role of public and private actors should not be neglected to promote a better image of an open and attractive Morocco and to ensure active strategic monitoring in their countries of assignment in relation to the actions undertaken by the main competing countries hence the importance of being part of an active economic intelligence system in the post-covid-19 era.*

**Keywords:** *Economic Diplomacy, Covid-19, State, Economic intelligence, International relations, vaccine Covid-19, Moroccan State*

### 1. INTRODUCTION

Triggered in December 2019 in Wuhan, capital of Hubei province in central China, COVID-19 landed in Morocco in March 2020. The current crisis has had significant repercussions on the economic and social situation around the world and is continuing to generate consequences as long as the situation is not yet under control. States are therefore increasingly called upon on the one hand to demonstrate good management of the health crisis and on the other hand to support the post-Covid-19 economic recovery. The Moroccan state, for its part, has spared no effort in the management of the first phase of the pandemic, going from a state of health emergency to the constitution of an economic watch committee with the aim of discuss and decide on the various measures to be undertaken in order to preserve the economic and social situation of the country against the pandemic. That said, some weaknesses were noted in the Moroccan State's management of the health crisis in the face of an unknown virus causing a high risk despite the efforts made. In other words, even in times of crisis, Moroccan economic diplomacy has responded by mobilizing all its forces to formalize diplomatic relations with its allies in order to chart a post-Covid-19 economic recovery plan. This recovery must prove to be ambitious, based on the shortcomings identified during the management of a health crisis. The purpose of this article will be to first retrace the role of the State in the midst of a crisis and more precisely the one played by the Moroccan State as well as to identify the weaknesses observed in order to support the actions undertaken in order to trace an ambitious economic recovery plan.

### 2. TOWARDS A RETURN OF THE WELFARE STATE

Faced with new players on the international scene such as multinational firms, international economic and financial institutions, non-governmental organizations and Think-Thank, financial markets and economic integration zones, we have witnessed the abolition of the State's role as guarantor of national security, the realistic school state has become obsolete or ineffective.

It should also be remembered that the realistic approach is one of the dominant approaches in the study of international relations. Realism advocates the important role of the sovereign state as the guarantor of national security, as emphasized by Kauppi and Viotti the epitome of realist thought: the state is by nature unitary; the state is rational and constantly aims to maximize its national interest, which involves the periodic use of force; security and political matters are the main purpose of foreign policy. In other words, each state always aims to defend and increase its political and military power. The powers being unequal, the States are also unequal, some being favored by the unequal natural distribution of the geographical, economic, demographic and other resources, or more able to use effectively the military force and the diplomatic stratagem, this rivalry leads ultimately to the domination of the weakest by the strongest. In the era of Covid-19, the international chessboard is fitting into this vision as the race is not just a military race but rather a health one. During the crisis, each state took a set of health measures aimed at reducing the spread of the virus, starting with the closure of borders, state of health emergency, successive confinements and re-confinements throughout the year. 2020, the suspension of international flights and the restriction of free movement within countries. Each state has reacted differently in an effort to combat the spread of the virus. Each state was called upon and under pressure to rectify the situation and therefore protect the health security of its citizens by offering social assistance to the most deprived affected directly by the crisis, within the limits of the means available. The State has therefore seen its role metamorphosed, we are therefore witnessing the return of the strong and active State which tends towards an awareness, more and more rigorous, of the real challenges linked to the living conditions of citizens and requiring serious responses from the state. The contemporary state is more than ever a great risk manager.

### **3. THE MOROCCAN STATE IN THE FACE OF COVID-19**

Morocco, for its part, has shown good management of the health crisis except few mistakes that could have been avoided. First of all, total containment was imposed respectively under Decree-Law No. 2.20.292 and Decree No. 2.20.293 declared since the start of the pandemic, the increase in hospital capacity to reach 3,000 beds instead of 500 available before Covid-19, the mobilization of hospitality professionals by distributing meals in favor of nursing staff and making hotel rooms available to them. Then, the creation of a special fund to come to the aid of the neediest who find themselves inactive or suspended from activity. Banks have also offered loans payment deferrals for individuals operating in the private sector and liberal functions. Companies were also able to benefit from many categories of payments deferrals, in particular the DAMANE OXYGENE loan, DAMANE RELANCE and others. The Moroccan management of the health crisis has taken up the challenge of producing masks, respirators, screening kits and the design of dedicated applications at competitive prices. On the diplomatic front, Morocco followed the experience of countries which have demonstrated good management of the first phase of the crisis by first securing a stock of chloroquine. Then in collaboration with China, South Korea and Turkey, Morocco made sure to import the necessary medical supplies and equipment while waiting to start production there. This is both bilateral and multilateral collaboration and proof of international cooperation to tackle this scourge. As a result, the Moroccan economy has partially come to a standstill with significant costs to cover. The impact of this crisis can be noticed on the supply and demand side: first on the supply side, the bankruptcy of several companies. Then, demand side, the loss of certain jobs following the bankruptcy of employers, particularly in services sector. The establishment of the Economic Watch Committee should respond to the negative effects of this crisis which caused a drop in national consumption. As a reminder, this fund represents 2.7% of Moroccan GDP. Despite the mobilization of public authority actors and voluntary donations from private companies and individuals, access to aid has not been done in an equitable manner, while Moroccans are all

equal in the face of national solidarity. The exceptional traffic authorizations were distributed recklessly, the complaints were not handled on time, the decision to maintain the celebration of Aid Al Adha only increased the number of cases of contamination, and the fact to require a deduction of 03 days from salaries of civil servant while the contributions are voluntary. These examples are the proof of Moroccan social system fragility, this fragility is not due solely to the effects of the health crisis of the corona virus it is indeed the result of inappropriate choices, excessive bureaucracy, corruption and administrative inefficiency of state organs, of the targeting and organization system and Government deplorable communication, etc.

#### **4. THE MOROCCAN STATE POST COVID-19**

It would be wise to build on the shortcomings identified during the management of the coronavirus health crisis to move forward and build a state that puts people at the center of its concerns without neglecting the economic aspect. The Covid-19 pandemic has largely shown the importance of the theories advanced by the realistic school according to which the state is the one and only guarantor of national security, since all countries have turned to their states to find solutions. To the effects of the health crisis that the whole world has gone through. That said, private actors, civil society and social organizations also had their say, but the main role was the one played by public authorities. In the era of digitization, E - government, E - learning, E - Commerce, work from home, the Moroccan state must think about modernizing itself and chasing out archaic inherited habits to meet the needs of the population, produce public policies that will elbow technological progress and protect the national economy. As guarantor of national security, the Moroccan state, under the directives of the sovereign, has joined the path of anti-covid-19 vaccination insofar as priority has been given to the front lines: the medical profession and the agent's authorities, security forces, national education, the elderly and those vulnerable to the virus. The vaccine is free for the most deprived and reimbursable for the insured. This initiative should be congratulated since Morocco is considered to be the first African country to have immunized its population in a structured framework with the objective of immunizing all components of the Moroccan people (i.e. 80% of the population) to reduce and then eliminate cases of contamination and death due to the epidemic; and to contain the spread of the virus. The vaccination campaign for all society is proof of the state goodwill to increase equality between citizens, but much remains to be done in this area. Reconsider health as a public good is a priority to the Nation, to reduce the difference in terms of the quality of health services between the private and the public health sector, to increase investments in public health, to support health professionals, and to encourage the industrial ecosystem and scientific research in relation to health. The goal is to guarantee the sovereignty of Morocco in terms of health services. There is also a lot of work to be done in terms of equity and social equality in various areas other than health, including education, justice, scientific research, economic growth and social protection. Covid-19 has enabled states including Morocco to realize the extent of the limits of their socio-economic systems face to this health crisis. The first challenge that the Moroccan state will face is to adopt a policy of changing priorities while first putting people at the heart of development strategies, then it remains to develop post-crisis scenarios adjusted to revive activity. Economic for the sectors most affected by the current health crisis, we cite mainly the real estate and construction sectors, tourism and automobile manufacturing. These sectors have suffered a significant drop in terms of turnover and employment, the scope of the State intervention must expand to fill the gaps left by the current pandemic which has caused a loss of 432,000 jobs in 2020, a drop in investments with the decline in imports of capital goods and equipment loans. In terms of prospects, by adopting a proactive watch, the Moroccan State will be able to anticipate for a better management of unpredictability the national economy should resume growth in 2021, benefiting from the gradual return of optimism against the background of accelerated deployment of the vaccine.

Against Covid-19 (2,447,716 people received their first dose of vaccine on February 21) and the operationalization of the economic recovery plan, supported by the beginnings of a good agricultural campaign.

## **5. MOROCCAN POST-COVID-19 ECONOMIC DIPLOMACY**

Economic diplomacy arouses particular interest because it is at the center of the major concerns of each country wishing to position itself on the international scene offering an image of a stable, attractive and open country. It is not enough to just deal with diplomacy, but it is to integrate the economic dimension into the international sphere by using diplomatic means. Several authors and economists have tried to define this broad concept which touches most sensitive areas on which a country should rely, namely politics and the economy. Guy Carron de la Carrière defines Economic Diplomacy as "the pursuit of economic objectives by diplomatic means whether or not they rely on economic instruments to achieve them". Marie Christine Kessler, defines it as "the implementation by a public authority of a commercial and financial policy, intended to ensure the economic prosperity of the country through the interests of its companies, its socio-professional groups, its citizens. » In terms of an interaction between different actors, public and private, considering the importance of political issues and economic objectives. The definition retained by the Chamber of Commerce and Industry was the one advanced by Amine Dafir according to which he defines economic diplomacy as being: "the set of mechanisms and practices adopted by actors, public or private, with the aim of achieving economic objectives of a State through the use of political means or to achieve the political objectives through the use of economic means. This definition encompasses the various aspects that the field of economic diplomacy must cover by tracing the role of the various actors who can intervene in this field. In the context of the current health crisis, economic diplomacy has taken different forms depending on the means of each country. In fact, since the start of the Covid-19 epidemic, which brought several difficulties, all countries have been racing for a vaccine to counter the negative effects caused by the corona virus crisis. Morocco has opted for Sinovac vaccine in collaboration with the Sinopharm laboratory and the Swedish Astra Zeneca, while the countries of the European Union have validated the American vaccines Pfizer and Moderna and German BioNtech. For some countries, the race was to produce a vaccine to put an end to a pandemic that has paralyzed the international economy for more than ten months, for others the challenge is to vaccinate its population in the global public good goal. In both cases, the challenges are political and economic, whether for better reintegration into the world scene or for the acquisition of soft power internationally. Israel is the first country to vaccinate 75% of the population in a record time, a political coup to gain international prestige and aimed at gaining the confidence of the population for the next elections. China for its part recorded in 2020 a growth rate around 2%, benefiting, directly or indirectly, from the European and American economic slowdown, which remains paradoxical in a period of unprecedented crisis. The Chinese vaccine exported to Africa, Brazil, the United Arab Emirates, Egypt and Turkey increases the soft power of the country which has seen its image deteriorate in previous months. From Jakarta to Cairo via Ankara, Beijing then traces its new sanitary silk route which extends from its neighboring countries to Latin America to take the vaccine leadership. United Kingdom vaccine issue is purely political due to the Brexit even outside the European Union. The mapping of vaccine distribution still remains uneven in the world, since rich countries have obtained 70% of the doses administered in the world, sometimes they have even gone further and have acquired four times what their population has need this by excluding other countries in the world that need it more. Something that goes against the Covax mechanism (a platform developed by the WHO with the objective of accelerating the development and manufacture of vaccines against Covid-19 and ensuring fair and equitable access to them. global scale).

The North-South aspect is present even in access to the vaccine, this individualism could indeed boomerang in Western countries because one will not be able to live vaccinated and isolated with closed borders. So, beyond the principles of the Covax mechanism from an economic and diplomatic point of view, this inequality of access to the vaccine will work against the general interest of these countries. Morocco, for its part, began the vaccination campaign by operating by age group waiting to massively extend the vaccine to the entire population within a maximum period of six months depending on the arrival of the doses ordered. Considered the first African country to receive large doses of Chinese and Indian vaccines, Morocco has launched the free vaccination program to fight the pandemic, to minimize the negative health, social and economic consequences of successive confinements and deconfinements. The challenge is certainly social but also economic after the various diplomatic actions undertaken by the Shereefian kingdom to be part of the post-Covid-19 recovery mechanism. We have to know that Morocco of Mohammed VI has become, in fifteen years, the fifth African power on the continent, the second African investor after South Africa, and the first investor in West Africa. . Presented in this order, these figures give Morocco's African policy a vigorous economic dimension. Therefore, many journalists see the African orientation of Morocco's foreign policy as a means of responding to the interests of Moroccan companies, whether public or private. Several researchers believe that the Kingdom's economic diplomacy rests on a representation of West Africa "as a possible substitute market, a compensatory space in which Morocco can influence". Others are convinced that "Morocco is relying on its economic diplomacy to boost its economic growth and balance its trade balance". This last postulate is valid in the era of the current health crisis, the flagship action of the year 2020 undertaken by Morocco is the normalization of diplomatic relations with Israel, it mainly involves investments in the sectors of water resources, civil aviation and of course cooperation on the issue of visas from which holders of diplomatic passports will be exempted. This diplomatic strategy of the State of Israel has found a relevant sponsor in the Trump administration, which has proven to be the main interlocutor for peace between the Arab world and Israel. The approach of the American presidency is defined as transnational, because for the states which promote diplomatic relations with Israel will benefit from an advantage, for example for the Arab Emirates there was the advantage of being able to buy jetfighters from United States. For Morocco, however, the benefit is the United States' recognition of Morocco's sovereignty over the Sahara after a conflict that lasted over 45 years. Remember that the Sahara is an arid territory but, at the same time, important because it represents for Morocco a trading gateway to West and Sub-Saharan Africa. The United States, meanwhile, signed a memorandum of understanding for \$ 3 billion in aid for private investment projects in Morocco and countries in sub-Saharan Africa. These events were followed directly by the opening of consulates general of several African countries in the southern provinces of Morocco, legally based on diplomatic standards and practices in accordance with the 1963 Vienna Convention on Consular Relations. This confirms that these countries approve of a confidence in Morocco in general and the Moroccan Sahara in particular, the Sahara for Morocco has the potential to be a hub of growth and a door to the African continent. These new consulates also reflect the vision of their countries toward Moroccan Sahara as a source of influence and an important point of the Kingdom on the continent, as well as "real" and "frank" support for territorial integrity of Morocco and recognition of the stability and security enjoyed by the southern provinces despite a disturbed regional context, which augurs well for a favorable economic development. On the other hand, an investment of 10 billion dirhams (or 1.1 billion USD) will be used to finance the construction project of the Dakhla Atlantic port located 40 km north of Dakhla city. The port will consist of a main dike of 2,800 m, a secondary dike of 600 m, a commercial quay of 800 m by 12, a deep-sea fishing wharf of 1,500 m by 7, 'a 39-hectare basin and a boat lift with a capacity of 450 tons.

The platform will also have an industrial zone of 270 ha and a free zone of 13 ha. Dakhla Atlantique is expected to have a forecast traffic of 2.2 million tons of goods in the first few years, with the ambition of becoming a hub for relations and trade with West Africa and Latin America.

## 6. CONCLUSION

In conclusion, it would be wise to recall that Morocco has been congratulated by the international community for its actions undertaken about the management of the first phase of the virus. In addition, the vaccination campaign which is currently taking place in a structured manner and under good conditions is experiencing unprecedented success which augurs well for good control at this stage that said the results obtained are more than satisfactory in comparison. With other countries that have suffered the full brunt of the consequences of Covid-19. Despite the weaknesses from which the socio-economic model suffers, Morocco is working on an economic recovery plan allowing it to reposition itself in the world economy by adopting restructuring measures in several areas, notably public policies. On the human level, it would be necessary to strengthen health infrastructure at a structural level, while focusing on the obligation to identify the most vulnerable population. Economically, exports should be the workhorse since the state should encourage Moroccan companies in this direction in order to develop the Made in Morocco label internationally. Moreover, it is necessary to take advantage of the normalization with Israel a country known for the most advanced agricultural technologies, irrigation methods, wastewater reuse and others, for this, partnership between the two countries are essential. On the other hand, the Moroccan consumer also has his role to play as long as he must be made aware of substituting imported products with 100% Moroccan products manufactured locally, opting for trips to Moroccan territory the goal is to contribute to the revival of the tourism sector, in particular catering, transport and crafts industry. Finally, as the current crisis has brought profound changes to the world economy, hence the need for Morocco to adapt to it, through the development of digital at all scales.

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## CAPITAL MARKET VS. REAL ESTATE MARKET – INVESTMENT ASPECT

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### ABSTRACT

*The basic goal of this paper is to compare the Croatian capital market and the real estate market from the perspective of a potential investor. For this purpose, a sample of shares from the Zagreb Stock Exchange was selected as a representative of the capital market, and different types of real estate were selected as a representative of the real estate market. The investor aspect involves a portfolio approach to determine the relationship between expected rates of return and risk, and this is done here by setting efficient frontiers. By comparing the efficient frontiers for these two markets, it was found that the real estate market allows more efficient investments, and it is located northwest of the efficient frontier composed of investing in stocks. Moreover, a specific declining form of the efficient frontier of real estate investments has been established, suggesting the possibility of achieving higher rates of return with lower rates of risk.*

**Keywords:** Capital market, Real estate market, Efficient frontier

### 1. INTRODUCTION

The market as a place where buyers and sellers meet each other to determine the prices of goods, in this case the prices of securities and real estate, is of particular importance to the whole economy. The number and price of real estate depends on the location, type, age and size, while the value of the capital market (securities) largely depends on the business success of the companies that issued these securities. In the territory of the Republic of Croatia, a different structure of real estate is visible depending on the type of real estate and geographical position, and a different structure of return on securities (in this case shares) which depends on the achieved business results of the company. In the mainland of the Republic of Croatia, agricultural and forest lands predominate while along the coastal area predominant are flats, apartments, holiday homes and construction lands. Due to its special features, the Republic of Croatia with its diverse and rich spatial characteristics, is an extremely attractive area for real

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<sup>1</sup> This work is the result of research on the graduation thesis of the same name defended at the Faculty of Economics and Tourism „Dr. Mijo Mirković“.

estate trading. On the other hand, the illiquidity of shares in the domestic capital market is a less attractive area for domestic and foreign investors. For this reason, the aim of this paper is to compare the capital market and the real estate market from the perspective of investors. Namely, due to a series of circumstances, the capital market in the Republic of Croatia is not at the level that would be desirable, and this especially refers to the fulfillment of the allocative function that the capital market, i.e. the financial market in general, needs to fulfill. Although the number of listed securities on the Zagreb Stock Exchange is significant, their liquidity and realized trading volume are not. All this contributes to the fact that Croatian companies cannot rely on the capital market as the dominant source of financing, but they are directed to other forms of financing such as bank loans. Hence the fact that the Croatian financial system is bank-centric. On the other hand, from the aspect of investors who would be willing to invest their money, the Croatian capital market does not offer a sufficient number of high-quality securities that would enable all investors to create a portfolio in accordance with their wishes and risk appetite. Therefore, the question arises whether the real estate market can fill this gap and ensure that investors achieve the desired rates of return on their investments. It should, of course, be taken into account that investing in real estate is of a completely different nature (long-term) and is associated with some additional risks that are not present in the capital market (demographic trends, regulatory risk, etc.). Regardless, a higher level of risk should also result in higher rates of return, and this is what this paper seeks to test. This introductory part, which sets out the aim and subject of the research, is followed by a chapter which briefly lists the main features of the capital and real estate markets with special emphasis on their differences. The following is a chapter with a review of previous research and the results obtained which will be used to compare with the results obtained by this research. The next two chapters refer to the presentation of the methodology used, respectively to the presentation of the obtained research results. The article ends with a concluding discussion and a review of the literature used.

## **2. DIFFERENCES BETWEEN CAPITAL MARKET AND REAL ESTATE MARKET**

The real estate market actually consists of a number of separate markets that differ in terms of the type of real estate and the geographical position they occupy. Since each individual property is located in a specific unique location, they should be viewed as extremely separate entities, and each individual property should be approached as a separate market, different from others. The analysis of the market when buying/selling comes down to recognizing the specifics of each individual property according to which it achieves a unique market position. The Real Estate Sales Tax Act (OG 115/16, 106/18) in the Republic of Croatia defines real estate as all land and buildings. Land can be agricultural, construction or classified as other land, while buildings include residential, commercial and all other buildings and their parts. When we talk about financial investments, we mean investments in securities and other forms of financial assets, and when we talk about real investments, we mean investments in equipment, buildings and/or inventories. Thus, real investment is characterized by investment in the tangible form of property. They are considered one of the most complex investment decisions made by applying capital budgeting techniques. Real investments can be viewed as productive and non-productive. A significant item of non-productive investments are housing investments, while productive investments are viewed through investments in long-term and/or short-term assets. Unlike financial investments, real investments have a low degree of liquidity and are viewed as an investment in the productive value of tangible assets. The basic purpose of real investments is to invest in tangible assets with the aim of performing entrepreneurial activities that will lead to the growth and development of a particular company. The right investment decision to invest in real assets brings an increase in the income and value of a company; however, a wrong decision can lead to long-term financial difficulties and potential financial instability.

In general, the main differences between the capital market and the real estate market can be structured as shown in Table 1. Given the expected returns, investments in all forms of assets can achieve positive or negative rates of return. A key feature of financial assets is a high degree of liquidity and identifying the size of an investment, as well as its return, is fairly easy. Return on financial investments are dividends, interest and other fees received as current investment income. Returns are paid for each individual financial instrument, and in addition to these current returns, profit can be made by selling financial instruments at a higher price than the cost of acquiring them. On the other hand, real investments, instead of holding (keeping) and achieving certain returns, find their purpose in productive use for performing various business activities. The value of real investments is more difficult to estimate than financial investments since they also involve investments in net working capital needed to perform business activities. Due to the difficulties in evaluating the size of real investments and their returns, the techniques of budgeting, as well as the assessment of financial efficiency, are more complex than with financial investments.

<i>Financial investments</i>	<i>Real investments</i>
Holding and achieving certain return	Productive use to perform certain business activities
Assessing financial efficiency is easier	It is difficult to estimate the real value because they include investments in net working capital as well
Simpler budgeting techniques	It is necessary to differentiate profits from business activities to individual investments
High level of liquidity – marketable financial instruments	More complex budgeting techniques than financial investments
Easier identification of investment size and return	
Return are paid for each individual financial instrument (interest, dividends)	The assessment of financial efficiency is more complex than with long-term financial investments (difficulties in valuing real investments and their returns)
The possibility of making a capital gain (selling at a price higher than the purchase)	

*Table 1: Characteristics of financial and real investments*

*(Source: according to Orsag, S., Dedi, L. (2013). Budžetiranje kapitala – Procjena investicijskih projekata, Zagreb: Masmedia, pages 16-18.)*

### **3. EMPIRICAL RESEARCH ON RATES OF RETURN ON THE REAL ESTATE MARKET AND CAPITAL MARKET**

Examining the list of previous works that dealt with the same topic, a lack of literature was noticed that directly compares the realization of returns on the capital market and the real estate market. Primarily, those are research that seeks to determine the variables that have a dominant impact on one or another market. It is only incidental that these researches deal on the returns achieved in these markets and their comparison. Therefore, the literature review presented here will be somewhat more modest, but quite sufficient to establish the current trend. There are studies that have not found any link between the return that can be made in the capital market and the real estate market. One such study was conducted by Assaf, Khrais and Yamin (2014) who, researching these markets for the period from 2002 to 2012, did not find any significant causal relationship in returns between these two markets. The statement is true in both directions. The results of this research are actually specific because in most cases the relationship between the rates of return on the capital market and the real estate market is in

some way established and proven. Moreover, comparisons of return rates achieved in these markets have been made, and the research conducted by Johnston (1994) can best support this. Analyzing previous researches, he showed that on the US market the return on the stock exchange index S&P 500 for the period 1983-1992, was always higher than the return achieved on the RN Index, which was taken as an approximation of the return on investment in real estate. However, by changing the return indicator on the real estate market, i.e. by replacing the RN Index with the REIT indicator, a diametrically opposite conclusion is reached. Exploring the period from 1973 until 1994 in the US market, he showed that the return on REIT for the entire analyzed period was 37% higher than the total return on the capital market measured by the return on the S&P 500 index, while also showing lower risk than the S&P 500. A similar conclusion was reached by Olanrele, Said and Daud (2015) who indirectly established, on the example of Malaysia for the period 2006-2013, that the returns on REIT were higher than the returns on the official stock index of the stock exchange. Namely, the primary area of their research was focused on determining whether past REIT performance could serve as a benchmark for forecasting future REIT performance. Although they did not come up with a statistically significant conclusion, they pointed to a completely different area of determining possible tools for forecasting future REIT returns. The first step in this direction is to determine the achieved rates of return on these markets in order to compare them, and this research is also directed in that direction.

#### 4. METHODOLOGY AND DATA

A significant problem of this type of research on the example of the Republic of Croatia is the availability of the data. Therefore, the comparison of return rates on the capital market and the real estate market was achieved by adjusting the standard methodology to the available data. Namely, in the analysis of investments in the capital market, the survey is conducted for a three-year period (2017-2019) taking data on the market price of shares on a monthly basis. Ordinary shares of non-financial corporations that are part of the CROBEX stock exchange index were selected in the sample in order to ensure liquidity criteria. Their list is visible in Table 2. As an approximation of the return rates achievable on the real estate market, it was not possible to use the REIT return, as is usual in the world literature, due to the lack of such data on the Croatian market. Instead, it was created a "virtual" real estate portfolio composed of different types of real estate in accordance with the division made by The Institute of Economics Zagreb in its publications "An Overview of the Real Estate Market in the Republic of Croatia". From the mentioned publications, data on realized prices per square meter of each type of real estate on an annual basis were used.

<i><b>TICKER</b></i>	<i><b>COMPANY</b></i>	<i><b>TICKER</b></i>	<i><b>COMPANY</b></i>
ADPL	AD Plastik d.d.	KRAS	Kraš d.d.
ATGR	Atlantic Grupa d.d.	MAIS	Maistra d.d.
ATPL	Atlantska plovidba d.d.	OPTE	OT – Optima Telekom d.d.
AUHR	Auto Hrvatska d.d.	PODR	Podravka d.d.
DDJH	Đuro Đaković Grupa d.d.	RIVP	Valamar Riviera d.d.
DLKV	Dalekovod d.d.	SAPN	Saponia d.d.
ERNT	Ericsson Nikola Tesla d.d.	TPNG	Tankerska Next Generation d.d.
HT	Hrvatski Telekom d.d.	VIRO	Viro tvornica šećera d.d.
IGH	Institut IGH d.d.		

*Table 2: List of shares forming the sample  
(Source: Authors)*

For this reason, the longest possible period with available data from 2012 to 2019 was taken into consideration. The difference in the coverage of data on returns on the capital market and real estate market is due to the illiquidity of the capital market where an increase in the number of analyzed years would lead to a significant decrease in the number of shares in the sample. The described methodological correction represents a trade-off caused by data availability. Through the collected data, return rates were calculated using the following equation:

$$R_i = \ln(\text{final price}) / \text{starting price} \quad (1)$$

The data obtained was used in further analysis of portfolio formation and comparison of equity investments (capital market) and portfolios composed of different types of real estates (approximation for real estate market). The obtained input data (adjusted on an annual basis) are shown in Table 3 and Table 4 for comparison.

<i>Ticker</i>	<i>Return rate</i>			<i>Ticker</i>	<i>Return rate</i>		
	<i>2017</i>	<i>2018</i>	<i>2019</i>		<i>2017</i>	<i>2018</i>	<i>2019</i>
<i>ADPL</i>	0,031317	0,027969	0,028856	<i>KRAS</i>	0,012879	0,014694	0,012919
<i>ATGR</i>	0,008083	0,006913	0,005857	<i>MAIS</i>	0,019225	0,019337	0,018868
<i>ATPL</i>	0,014677	0,013148	0,016808	<i>OPTE</i>	0,362092	0,335536	0,315754
<i>AUHR</i>	0,009047	0,009558	0,008735	<i>PODR</i>	0,017460	0,018530	0,014642
<i>DDJH</i>	0,105571	0,175860	0,250655	<i>RIVP</i>	0,087766	0,093053	0,098247
<i>DLKV</i>	0,146985	0,200347	0,297552	<i>SAPN</i>	0,019569	0,022471	0,023068
<i>ERNT</i>	0,005725	0,006419	0,006192	<i>TPNG</i>	0,062600	0,084285	0,100210
<i>HT</i>	0,029572	0,032226	0,031592	<i>VIRO</i>	0,016941	0,035947	0,053540
<i>IGH</i>	0,021754	0,030310	0,037335				

*Table 3: Average annual rates of return on shares from the sample  
(Source: Author's calculation)*

<i>Year</i>	<i>Flats / apartments</i>	<i>Family houses</i>	<i>Agricultural lands</i>	<i>Forest lands</i>	<i>Building lands</i>	<i>Business spaces</i>
2013	- 0,03684	0,07671	0,03489	0,01592	0,20119	- 0,06329
2014	- 0,02268	0,09884	- 0,01729	- 0,14513	0,10629	- 0,06188
2015	- 0,03685	0,06839	0,02866	- 0,67905	- 0,01269	- 0,06535
2016	0,00432	- 0,09280	0,04421	- 0,27444	0,07380	- 0,00061
2017	0,05161	- 0,00613	- 0,01635	0,06618	0,09423	- 0,03103
2018	0,02531	- 1,63269	0,09431	0,03390	0,08611	-0,07406
2019	0,07415	-0,23657	0,09531	- 0,04879	0,01637	- 0,26156

*Table 4: Average annual rates of return on real estate  
(Source: Author's calculation)*

## 5. RESEARCH RESULTS

A further step in the analysis involved the usage of Excel's *Solver* plugin to optimize the portfolios. The aim of this part of the research is to determine the efficient frontier in accordance with the settings of modern portfolio theory. In this sense, the compositions of efficient portfolios for given rates of return were calculated with a presentation of the achieved levels of risk measured by standard deviation. In doing so, share portfolios are calculated on the basis of all shares in the sample, unless their share has been eliminated by the optimization process. The same logic was followed in the formation of the so-called "virtual" portfolio consisting of different types of real estate that would "act as shares". The results obtained are shown in Table 5 and Table 6.

Ticker	Required rate of return				Ticker	Required rate of return			
	2%	5%	10%	15%		2%	5%	10%	15%
ADPL	0%	0%	0%	0%	KRAS	1,26%	1,34%	1,34%	1,35%
ATGR	16,81%	18,41%	18,88%	19,03%	MAIS	24,27%	26,93%	27,86%	28,19%
ATPL	10,31%	10,35%	10,10%	9,98%	OPTE	1,57%	2,66%	3,26%	3,51%
AUHR	0%	0%	0%	0%	PODR	10,97%	15,96%	18,73%	19,85%
DDJH	0%	0%	0%	0%	RIVP	1,15%	0%	0%	0%
DLKV	0%	0%	0,05%	0,31%	SAPN	0%	0%	0%	0%
ERNT	2,11%	0%	0%	0%	TPNG	0%	0%	0%	0%
HT	30,84%	24,34%	19,79%	17,78%	VIRO	0%	0%	0%	0%
IGH	0,70%	0%	0%	0%	$\sigma = \pm$	<b>0,02751</b>	<b>0,05361</b>	<b>0,10195</b>	<b>0,15133</b>

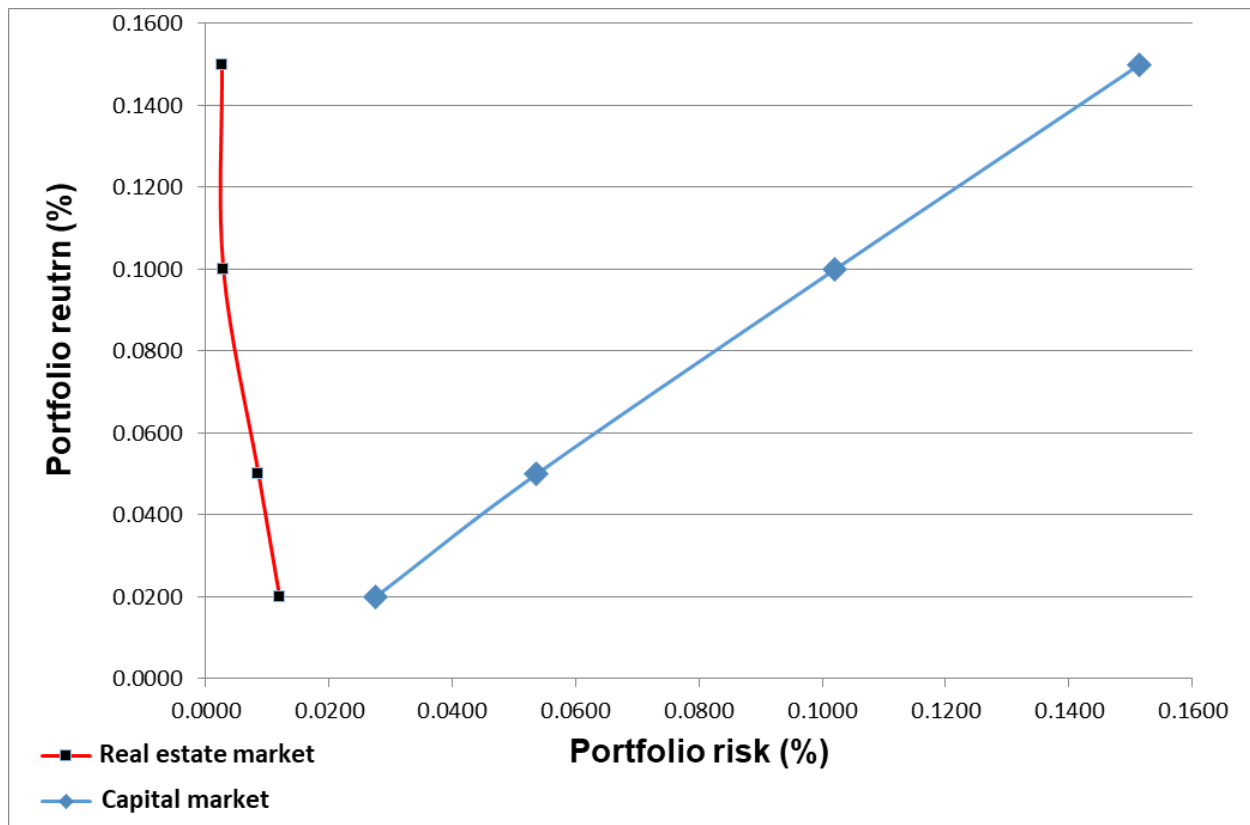
Table 5: Composition of optimal share portfolios for required return rates  
(Source: Author's calculation)

Required return	Flats / apartments	Family houses	Agricultural land	Forest land	Building land	Business space	Risk $\sigma = \pm$
2%	31,10%	1,77%	37,64%	0%	14,79%	14,70%	<b>0,01194</b>
5%	49,79%	0,22%	12,52%	0%	32,83%	4,63%	<b>0,00856</b>
10%	56,63%	0%	0%	0%	43,37%	0%	<b>0,00293</b>
15%	55,23%	0%	0%	0%	44,77%	0%	<b>0,00271</b>

Table 6: Composition of optimal real estate portfolios for required return rates  
(Source: Author's calculation)

The comparison of the obtained results can most easily be achieved through a graphical approach in which both efficient frontiers will be displayed in the same coordinate system. The stated is shown in Graph 1. What is immediately noticeable is that the efficient frontier composed of shares takes its usual increasing form, expressing the inevitability of taking a higher level of risk in order to achieve a higher level of return. In contrast, the efficient frontier curve composed of different types of real estate takes on an unusually declining shape. By comparing the curves of efficient frontiers, we confirm the results of the previously mentioned empirical research, which is that the same rate of return can be achieved in the real estate market with lower levels of risk. Therefore, such a result is in line with the situation in other countries. However, the very shape of the efficient frontier of real estate investment is specific because its declining shape suggests that it is possible to achieve maximum returns with a minimum level of risk at the same time. Such results are not expected, and they represent a specific situation on the real estate market of the Republic of Croatia. The reasons for this can be found in the relatively short period of real estate market analysis, low frequency of input data, the way of forming the real estate portfolio, but also in the specific situation of exceptional increase in real estate prices in the Republic of Croatia within the analyzed period. In any case, this area deserves further attention and creates new research opportunities.

Graph following on the next page



Graph 1: Comparison of efficient frontier on real estate and capital market  
(Source: Authors)

## 6. CONCLUSION

The goal of each investor is to create an optimal portfolio that suits his interests and preferences, i.e. a portfolio that ensures the greatest possible utility. Since this paper compares the capital and real estate market, optimal portfolios for both markets have been created through empirical research. The obtained efficient frontier related to investment in the capital market shows that for optimal equity portfolios, the total expected return increases in proportion to the level of risk. On the other hand, an efficient frontier made up of optimal real estate portfolios shows quite unusual movements. In addition to being at lower levels of risk for each level of expected return, and thus indicating the relative profitability of investing in real estate compared to investing in shares, the efficient frontier takes a declining form. This actually suggests that the highest rate of return can be achieved at the lowest level of risk. This result is contradictory to the usual notion of a rational investor, and could possibly be explained in terms of a risk-seeking investor. The result obtained would make sense only if all participants in the real estate market were of a predominantly risk-seeking character which is then projected onto the overall performance of the market. Although this is not proven here, the authors are of the opinion that the results obtained are only a consequence of a short coverage of the analyzed period, the applied methodology or something else. In any case, a new area for further research is hereby opened.

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## **LIMITATIONS OF LIABILITY FOR DAMAGE CAUSED BY ACTS OF PUBLIC VIOLENCE**

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### **ABSTRACT**

*Liability for damage is based under certain conditions or in accordance with certain rules. The legal order sometimes sets greater or lesser limits on the institution of liability for damage, although all the conditions of liability are satisfied. In some cases, they are particularly accentuated, such as the situation in a special case of liability for damage caused by acts of public violence. In these situations, the state often has the position of a liable entity for compensation for damage caused to citizens as a result of terrorist acts, public demonstrations or manifestations and other forms of public violence. These phenomena represent the challenges of the modern world. Taking into account the different classification of limits of liability for damage in the legal literature, limitations of liability for damage caused by acts of public violence include limits regarding the heads of damages ("subject limits"), limits regarding the injured parties entitled to compensation ("personal limits") and other limits (voluntary, limits in time and other). Starting from the analysis of this case, in this paper the author will examine, through scientific methods, the hypothesis whether the set limits on liability caused by acts of public violence in domestic law, in principle, correspond to comparative law and observed international and regional legal documents (regardless of the different models of indemnification of victims). The author's findings are affirmative. In addition, he concludes that the limits of liability are possible on the basis of the legislative policy of the state as long as they are not in conflict with the constitutional norms and as long as there is a balance between the interests of the victim and liable entity. The analysis showed that there is a mutual connection between the so-called subject and personal limits. Also, certain de lege ferenda proposals have matured with regard to the degree of development of tort law. In addition to the theoretical analysis, the scope of compensation and the circle of persons entitled to compensation in this particular case are also of practical importance for obtaining compensation before the courts.*

**Keywords:** *acts of public violence, limitations regarding the injured parties, limitations of liability for damage, limitations regarding the heads of damages*

### **1. INTRODUCTORY CONSIDERATIONS**

Legal documents, especially rules of national laws, sometimes establish special cases of liability for damage, but also set borders to the legal institute of liability. Such is the situation in case of liability for damage caused by the act of public violence. In such situations, often the state plays the role of a party liable for damages caused to citizens. The acts of public violence (the term used by Karanikić Mirić, 2013, p. 198) include terrorist acts, public demonstrations or manifestations, and more broadly they also encompass other forms of public violence. These phenomena represent a challenge faced by the modern world, making this theme very current in the context of tort law. Criminal law can be used as a starting point for defining terrorism. The most common and recognizable characteristics of terrorism are acts of intimidating, instigating uncertainty, violence, often political connotations, grave violation of public peace and order, etc. Public demonstrations and manifestations, (non)organized and (non)approved, are those occurring in a public place, where demonstrations express a negative, and manifestations a positive stand (Nikolić, 1995, p. 415). Public gathering of citizens is, for instance, pursuant to Public gathering Act [Zakon o javnom okupljanju] in the Republika

Srpska, every organized gathering of citizens at an appropriate place, for the purpose of publically expressing their political, social and other beliefs and interests (art. 2 and art. 8, para. 1, Public gathering Act). The existing Public gathering Act contains the rule on strict liability for damage (on facilities or places), but only of the organizer of such gathering (not the state, as it is the case in this article) and only in cases of public events and other public gatherings, the aim of which is to accomplish a financial gain (art. 23, 28, and 30, para. 6, Public gatherings Act). Immediate normative ground for establishing the strict liability of the organizer of a public gathering for every damage in general was contained in art. 7 of the Draft Public gatherings Act in the Republika Srpska from 2015, which was not enacted. Such rule is contained, for example, in art. 6 of the Public gatherings Act of Canton Sarajevo. In the broadest sense, the acts of public violence could relate to certain groups of criminal acts of violence committed wilfully, which could sometimes carry the attribute of "public", with prescribed compensation for damage according to specific rules and before a special body, and in some laws such as Croatian or Montenegrin. However, sometimes the difference in rules (regarding types and extent of indemnification, the circle of individuals, etc.) and rights can be confusing, especially those treating individuals harmed by the acts of terrorism or during public demonstrations / manifestations and rules and rights anticipated for victims of criminal acts of violence, hence the question of victim protection effectiveness (Bukovac Puvača, 2013, p. 351-354). Limitations of liability for damage come to light in cases of harm caused by acts of public violence. Yugoslav Contracts and Tort Act [Zakon o obligacionim odnosima] from 1978 (hereinafter: CTA) defines in art. 180 a special case of liability (of state) for damage caused by terrorist acts, public demonstrations or manifestations. This article was erased in the Amendments to the Contract and Tort Act of the Republika Srpska of 1996. Former Yugoslav republics and now independent states retained this provision (including BiH Federation, as BiH entity, hereinafter: FBiH), with the exception of the Republic of Croatia, which enacted a separate Act on liability for damage caused by acts of terrorism and public demonstrations. Limitation of liability includes various instruments for reducing or excluding liability for damage, although all conditions for establishing liability are met (Magnus, 2008, p. 273). In our legal doctrine, Karanikić Mirić (2012, p. 244) classifies limitations of liability for damage into the following: "1. statutory, judicial and voluntary limitations of liability, 2. limitations in time, 3. limitations with respect to the grounds of liability, 4. limitations concerning the identities of injured party and tortfeasor, 5. limitations regarding the heads of damages, as well as 6. those in respect of the amounts of compensation, 7. special instances of the exclusion of liability, and 8. breach of information duties which may lead to a loss of right to compensation." Magnus (2008, p. 274) finds the justification for limitation of liability for damage in general in the protection of tortfeasor from an exceeding burden of his liability for damage, as well as in creating a fine balance between the interest of the injured party and of the tortfeasor (Karanikić Mirić, 2012, p. 244). In addition, some authors claim that thus increasing liability for damage is kept under control (Rogers, Spier and Viney, 1995, Karanikić Mirić, 2012, p. 247). Limitations of liability for damage are the product of legislative policy of the state, since the state is authorized to regulate rules related to contract and tort relations, including claims for damages, as long as they do not contradict constitutional norms. Hence, for example, the Constitutional court of the Republika Srpska in its Decision no. U-9/18 of 27 February 2019 established that art. 43 of the Acquisition of Joint Stock Companies Act ("Official Gazette of the Republika Srpska", no. 65/08, 92/09 and 59/13) is not in compliance with the Constitution of the Republika Srpska. "The Court held that the way the contested provision of the relevant Act regulated the question of liability for damage caused by members and employees of the Commission (for Securities) in the course of duty, is not in compliance with a constitutional principle of equality of citizens and equality before the law under art. 10 of the Constitution, nor with the principle of rule of law guaranteed by the Constitution.

By excluding liability of Commission members and employees for damage caused in the course of duty, unless damage was caused intentionally, the Court held that the legislation had significantly limited, i.e., diminished civil liability of the stated subjects, placing these individuals in a privileged position in relation to other citizens." Having in mind different classification of limitations of liability for damage in legal literature, limiting liability for damage from acts of public violence includes limitation in terms of the circle of damage or limits regarding the heads of damages ("subject limits"), limitation in terms of the circle of injured parties who have a right to compensation ("personal limits") and other limitations (limits in time, voluntary and other). In this paper, the author will, through scientific methods, theoretically analyze these limitations of liability for damage caused by the acts of public violence, and then examine a thesis whether the set limits of liability for damage in laws that have inherited Yugoslav article 180 of CTA, in principle, correspond to comparative law legislative practice and considered international and regional legal documents, with the aim to come to concrete conclusions, as well as to conclusions on more general theoretical level.

## **2. LIMITATIONS OF LIABILITY FOR DAMAGE ON THE EXAMPLE OF DAMAGE CAUSED BY THE ACTS OF PUBLIC VIOLENCE**

National laws recognize mechanisms of limitations of liability for damage caused by the acts of public violence. In reference to European Union law, it is not focused on rules related to limitations of liability for damage (Magnus, 2008, p. 274). General rules of liability for damage are modified in relation to liability for damage caused by the acts of public violence, both in terms of conditions for liability and limitations of liability that are the subject of this paper. Set too broadly, the institute of liability for damage could instigate the flood of claims for damages toward the state (in that context, see Karanikić Mirić, 2012, p. 250).

### **2.1. Limitations of liability in terms of the circle of damage: "subject limits"**

Generally speaking, the injured party has a right to compensation of material (property) and immaterial (non-property, moral) damage. The circle of damage covered by the award in relation to this liability has developed depending on the socio-economic and legal circumstances, hence it represents a category that is the subject of change. In the process of enactment of CTA, Yugoslav legislator had considered limitations of liability under art. 180 of CTA only for damage caused by death or bodily harm, but after demonstrations in Kosovo and Metohija in 1981, it had changed its opinion and enabled, by the 1985 Amendments to CTA, the compensation of damages to individuals whose property was damaged or destroyed (Nikolić, 1995, p. 414). The injured party can seek compensation for damages if the damage caused was anticipated by the law (material or immaterial, damage caused by the death or bodily injury or material damage caused by damaging or destroying the property of an individual) and from statutory causes (terrorist acts, public demonstrations or manifestations). Bodily injury encompasses impairment of health, since CTA does not treat it differently nor is it rational, according to the opinion of commentators, for health to enjoy less protection than property (Nikolić, 1995, p. 414). Forms of non-material damage are also limited and conditioned through prescribing damages in art. 180 of CTA, so in case of bodily injury they are limited to suffered physical pain, fear and psychological pain due to diminished activities of daily living or disfigurement, and in case of death to psychological pain due to death of a close person (Karanikić Mirić, 2013, p. 200). Material damage in case of death, bodily injury and impairment of health includes, observed summarily, lost earnings, costs of treatment and funeral, damage caused by loss of spousal support (see, for instance, art. 193-195 of CTA of Serbia and the Republika Srpska). Comparative legal approach has revealed that Slovenian law anticipates limitation of the right to damages for damage caused by death or bodily injury (material and immaterial). It does not state damages caused by destruction or damage to property (art. 156 of

CTA [Obligacijski zakonik]). Croatian law anticipates, besides defining the maximum amount of award, limiting damages to material and non-material damage caused by death, bodily injury or impairment of health (art. 7 of Act on Liability for damage caused by terrorist acts and public demonstrations). This Act anticipates restitution in case of damage or destruction of material goods, through reconstruction according to a special Reconstruction Act. The Serbian (art. 180 of CTA) and Macedonian law (art. 166 para. 1 of CTA of Macedonia), CTA of FBiH (art. 180 of CTA) and Montenegrin law (art. 187, para. 1 of CTA of Montenegro) recognize material and non-material damage caused by death, bodily injury or damage, i.e. the destruction of property of an individual. Draft CTA of RS/FBiH of 2003 and BiH CTA Bill of 2010 that were not enacted, contained the same solutions as Serbian law i.e. art. 180 of CTA in terms of heads of damages. However, in the working version of the Civil Code of the Republic of Serbia of 2016, in variant 1, art. 336, the Commission for drafting of the Civil Code considered expanding limits in terms of types of damage to include damages caused by loss of spousal support. It is rightly observed in legal theory (Karanikić Mirić, 2013, p. 200) that such proposal is unnecessary, since, as a form of the loss of earnings it is subsumed under property damage caused by death according to art. 194 of CTA (the right of a person who was supported by the deceased in the form of a cash annuity). So, formally speaking, the most restrictive circle of damage is anticipated by Slovenian and Croatian laws, while other laws of former Yugoslav republics mainly recognize the same scope of damages incorporated in the inherited CTA. The reason for limiting the circle of damage or the award amount can also be looked for in the legislative policy of the state based on financial motives, i.e. the need to protect the state from paying enormous amounts of damages. The existing provisions cover sufficient circle of the most important damages caused to an individual. In art. 180 para. 1 of CTA, acts of violence or terror, including public demonstrations and manifestations, represent causes of damage, i.e. circumstances leading to damage, the harmful event. Klarić (1996, p. 285-286) and Stanković (1980, p. 535) state that the acts of violence should be interpreted narrowly and in logical connection to the acts of terror, what is being confirmed by the title of the article, hence it would be most appropriate, in para. 1, to use the notion of "terrorist act" (Pilipović, 2020, p. 6). In general regime of liability (besides art. 180 of CTA, such as the case is in the Republika Srpska due to erasing of art. 180, but also when the injured party decides to sue the tortfeasor instead of the state), the injured party has the right to seek compensation of all types of damages according to CTA, without limitations of art. 180 of CTA. Broadly speaking, by special Act on monetary award to victims of crimes in the Republic of Croatia, the compensation is awarded only for damage caused by heavy bodily injury or grave impairment of one's health as a result of a criminal act of violence, as prescribed by art. 5 of this Act, as well as in case of death of immediate victim. The circle of damage for which compensation can be awarded does not include non-material damage (Meškić, 2017, p. 38). The same is envisaged by the 2015 Montenegrin Act on Compensation of damage to victims of criminal acts of violence, while this regulation was not adopted in BiH.

## **2.2. Limitations of liability in terms of circle of injured parties: "personal limits"**

Limitations in terms of circle of injured parties according to art. 180 of the Yugoslav CTA are manifested in several ways. Firstly, legal entity does not have a right to compensation in case of damage or destruction of property (art. 180, para. 1 of CTA of Serbia and FBiH and art. 187 of CTA of Montenegro). *Ratio legis* of this solution can be found in circumstances that existed based on the 1974 Constitution in former Yugoslavia, since social legal entities were indirectly the state legal entities, and private legal entities were few and economically weak (Babić, 2003, p. 43). Further on, Slovenian law does not mention damage caused by destruction or damage of property either owned by individual or by a legal entity (art. 156 of CTA). The Republika Srpska law does not recognize provisions from art. 180 of CTA, so the legal entity may seek

compensation from the tortfeasor according to general rules. Draft/Bill CTA in BiH of 2003 and 2010 did not contain proposals for extending the circle of injured parties. On the other side, proposals of the future civil codes in Serbia (art. 336 and Variant 2) and Northern Macedonia (art. 166, para. 1 and an alternative according to a working version of the Civil Code of Macedonia of 2015) anticipate the right of legal entity to compensation on that basis. Legal entity has the right to compensation due to destruction or damage to property according to the existing Macedonian law (art. 166, para. 1 of CTA), and in Croatian law the Reconstruction Act anticipates mechanisms in relation to renewal of destroyed or damaged material goods during the war, to individuals and legal entities (Pilipović, 2020, p. 5). Legal entity can sustain damage in the form of destruction or damage to its property that can be reflected as a real damage and/or loss of earnings. On that basis, there is no reason to treat legal entity differently from an individual, i.e. it should not be discriminated nor is it in the spirit of the system of basic rights and freedoms protection. Since socio-legal circumstances have changed in relation to the treatment of legal entities in comparison to the period of enactment of CTA, *de lege ferenda* proposal should be supported, since it advocates for the recognition of the right to compensation to a legal entity due to damage or destruction to its property based on Yugoslav CTA in art. 180 of CTA (that did not erase that article) through legislative intervention (Stanišić, 2014, p. 42), i.e. proposals of civil codes of neighboring states that anticipate the right to compensation to a legal entity should be supported. Secondly, according to the nature of things, a legal entity does not suffer material or moral damage caused by death or bodily injury, but theoretically speaking a discussion on damage compensation suffered by a legal entity as an employer may be opened (Karanikić Mirić, 2013, p. 201). However, in legal theory, more and more is talked about the need to redefine the concept of non-material damage in Serbian law and to explicitly stipulate the right of legal person to compensation of non-material damage, since according to the stand of case law in the system of regular hearing, the non-material damage is not passed to legal persons (Pilipović, 2017, p. 657-673). This still does not mean that there is an obligation to extend the liability to non-material damage in terms of a legal entity in the case of liability in this article. Thirdly, the circle of indirectly injured parties is related to individuals. Only physical person (as directly or indirectly injured party) has the right to compensation of non-material damage caused by death or bodily injury under art. 180 of CTA (Serbia). For example, in case of death or very serious disability of a close person, the court may pass to certain members of the family rightful monetary compensation (of non-material damage) for their psychological pain (art. 201 of CTA Serbia). So, physical persons act as members of the family. In case of death of a close person, those are the spouse, children, parents, brothers and sisters if between them and the deceased there was a long-lasting community of life, then extra-marital partner if between him and the deceased there was a long-lasting community of life (art. 201, para. 1, 2 and 4 of CTA Serbia). In case of grave disability, the same circle of individuals is defined, except for brothers and sisters (art. 201, para. 3 and 4 of CTA Serbia). In case law, there was a disputed circle of persons who were entitled to compensation, so in time and through extensive interpretation courts have expanded the circle of injured parties anticipated by law, and the non-material damage was awarded even to grandparents, stepfather and stepmother, to mother due to the loss of embryo, all under special circumstances (Pajtić, Radovanović and Dudaš, 2018, p. 552-553). Some of those cases, justified and clarified in legal practice, should be legitimated. So, the circle of injured parties (close persons) is precisely defined by CTA, while in some other legislations and models of legal regulations that circle of persons is given by description. Draft Common Frame of Reference (DCFR), prepared by the Study Group on a European Civil Code and the European Research Group on Existing EC Private Law (edited by Christian von Bar et al.) of 2009, stipulates in art. 2:202 (1) the right to compensation of non-material damage to persons who are in a particularly close personal relationship to the injured person, and in case of personal injury or death of injured person. Principles of European

Tort Law (PETL), prepared by the European Group on Tort Law in 2005, in art. 10:301 (1) stipulate that non-pecuniary damage can also be the subject of compensation for persons having a close relationship with a victim suffering a fatal or very serious non-fatal injury (see more in Lahe and Kull, 2016, p. 1–7). In the broadest sense, by special Act on monetary compensation for victims of crimes in the Republic of Croatia, the right to damage compensation was given to direct and indirect victims (spouse and partner, child, adoptee, grandparents), under certain conditions. Fourthly, the civil legal protection in case of terrorist acts, i.e. public demonstrations or manifestations was excluded by special explicit provision of (Yugoslavian) CTA in relation to organizers, participants, instigators and helpers in acts of violence or terror, public demonstrations and manifestations that are aimed at undermining of constitutional order (art. 180, para. 2 of CTA that was amended in 1985), which is considered to be justified. It is also emphasized that mere participation in actions from art. 180 of CTA should not be sanctioned by loss of right to compensation, but the use of means of violence in such actions should (Karanikić Mirić, 2013, p. 205). The circle of persons who are excluded from the right to damage compensation is somewhat more precisely defined in Croatian law, and it is not related to the aim of undermining of constitutional order (art. 5 of Act on Liability for damage caused by terrorist attacks and public demonstrations). In general regime of liability (besides art. 180 of CTA, like the case in the Republika Srpska, but also when the injured party decides to sue the tortfeasor instead of the state), the legal entity may claim the compensation of (material) damage but from the tortfeasor only, so any limitations given in special provisions of art. 180 of CTA are then irrelevant.

### **2.3. Other limitations of liability for damage**

The voluntary limitation of liability for damages caused by acts of public violence can be considered in case when injured parties release (remission) the due obligation of damage compensation by the state through agreement (Karanikić Mirić, 2012, p. 251) or in case when injured parties decide not to sue the state or tortfeasor for damage compensation. It follows from the FBiH Supreme Court Decision No. 32 0 P 043202 12 Rev, dated 7 February 2013: "In out-of-court settlement, the injured party may validly waive only those damages (claims) that were known or foreseeable under ordinary circumstances at the moment of conclusion of out-of-court settlement." Temporal limitation of liability for damages (limitations in time) is in concrete case only the different name for application of rule on statute of limitations to damage compensation claims, and which was introduced for the purpose of legal certainty, reliability and other reasons. In relation to statute of limitations of damage compensation right, in this case general rules on statute of limitations of damage compensation claims apply, but some authors believe that the application of "privileged" limitation period from art. 377 of CTA is inappropriate (Nikolić, 1995, p. 418). Anyhow, in judicial practice and legal theory, the application of art. 377 of CTA to state as the liable entity when it is not the tortfeasor is disputable, and there are various opinions (see Karanikić Mirić, 2011, p. 178-204; Draškić, 2020, p. 194-209; also see 1983 European Convention on the Compensation of Victims of Violent Crimes and 2007 Swiss Federal law on aid to victims of criminal acts). Some foreign laws stipulate limitation period for such acts. Swiss law stipulates limitation period of 5 years for damage compensation claims of crime victims submitted to the relevant cantonal body (Meškić, 2017, p. 40). In relation to right of recourse, the state has the right and the obligation to claim the compensation for paid amount from person who caused the damage, and that right becomes the subject of statute of limitations in periods stipulated by statute of limitations for damage compensation claims (for instance, art. 180, para. 3 and 4 of CTA of Serbia). Limitation in relation to the amount of compensation includes defining of both the minimum and the maximum amount of compensation that may be awarded in the concrete case. That is stipulated by some international documents (e.g. European Convention on the Compensation of Victims

of Violent Crimes, dated 24 November 1983), and for instance the Croatian law also recognizes it in cases of damages caused by acts of public violence (art. 7, para. 2 of the Act on liability for damage caused by terrorist acts and public demonstrations), as well as Austrian law in relation to loss of earnings and support, up to maximum monthly amount in accordance with the Act on Crime Victims (Meškić, 2017, p. 36). Besides the stated, the circle of reasons for damage liability exclusion is small. Release of liability may be the topic only in case of explicit action of the injured party, and some believe that the state may advert to force majeure (Karanikić Mirić, 2013, p. 207). Explicit action of the third person as the reason of release from strict liability of state is out of question in this case. There are no limitations in relation to liable person. The injured parties may choose between the state as the liable party or the tortfeasor, in relation to damage compensation claims. They are in better position when the liable party is the state. The state is liable under the rules of strict liability, originally, primarily and directly (Decision of the FBiH Supreme Court, No. 53 0 P 001538 09 Rev, dated 22 February 2011).

#### **2.4. International / regional legal documents, national laws of some states outside of Yugoslavian circle and limitations of liability for damage**

International and regional legal documents regulate the issue of compensation of damage caused by terrorism, but also by acts of violence in general. So, according to item 1 of Declaration on Basic Principles of Justice for Victims of Crime and Abuse of Power that was adopted by UN General Assembly by the Decision No. 40/34 of 29 November 1985, the damage suffered by the victim includes physical or mental injuries, emotional suffering, economic loss or significant violation of basic rights. Victims and their families have the right to financial compensation for suffered significant bodily injury or impairment of physical or mental health as the consequence of major crimes (item 12 of Declaration). The definition of damage is given more flexibly, but it may be adjusted to comprehension of notion of damage in domestic law. The stated obligation falls on the state if the damage cannot be collected from the tortfeasor or from other sources. The obligation of the state is of subsidiary character according to 1985 UN Declaration on Basic Principles of Justice for Victims of Crime and Abuse of Power and 1983 European Convention on the Compensation of Victims of Violent Crimes. According to art. 2 of European Convention on the Compensation of Victims of Violent Crimes of 24 November 1983, the state should provide mechanisms for damage compensation of injured parties who suffered serious bodily injury or health impairment as direct consequences of intentional crime of violence, and in cases when the damage cannot be compensated from other sources (and when the offender cannot be prosecuted and punished). Such damage, according to provisions of Declaration, includes the loss of earnings, costs of treatment and funeral, and compensation for lost support to family members of the injured party. So, the supported family members have the right to damage compensation. Council Directive 2004/80/EC of 20 April 2004 relating to compensation to crime victims of 29 April 2004 left the discretionary space to member states to create the system that will ensure the fair damage compensation to victims of intentional violent crimes (art. 12). Directive 2012/29/EU of The European Parliament And Of The Council of 25 October 2012, establishing minimum standards on the rights, support and protection of victims of crime, and replacing the Council Framework Decision 2001/220/JHA, in article 9 stipulates obligation of the state member to ensure, within the criminal procedure, the right of the injured party to decision on damage compensation by tortfeasor, except in case national regulations stipulate bringing of such decision in some other procedure. According to Directive (EU) 2017/541 of the European Parliament and of the Council of 15 March 2017 on combating terrorism and replacing Council Framework Decision 2002/475/JHA and amending Council Decision 2005/671/JHA, the victim of terrorism is the physical person who suffered the damage, including bodily, mental or emotional damage or economic loss, to the extent to which it is directly caused by the crime of terrorism, or member of the family of the person whose



death is directly caused by the criminal act and who suffered the damage as the consequence of that person's death. Family members of terrorism survivors have the right to access victim support services and protection measures. So, the injured party is the physical person, the damage may be reflected as non-material and material, but it has to be directly caused by the crime of terrorism. Family members have the right to damage compensation in the sense of tort law, in case of victim's death. Assisting victims in relation to damage compensation claims is not questioned by the relevant national damage compensation rules of the state. Further on, this Directive stipulates that member states should ensure that all victims of terrorism also have the access to programs for damage compensation in the member state in which the crime of terrorism was committed. Council of Europe Guidelines on eradicating impunity for serious human rights violations of 30 March 2011 in its item XVI state the obligation of the member state to take all appropriate measures to establish accessible and effective mechanisms which ensure that victims of serious human rights violations receive prompt and adequate reparation for the harm suffered, including compensation, indemnification and restitution. Similar general obligation of damage compensation by the state is stated in Recommendation Rec (2006)8 of the Committee of Ministers of Council of Europe to member states on assistance to crime victims, of 14 June 2006. (Warsaw) Council of Europe Convention on the Prevention of Terrorism of 16 May 2005 in art. 13 stipulates the obligation of states to adopt measures for protection and assistance to victims of terrorism that was committed in the territory of the state, and those measures may be introduced through relevant state programs and in accordance with national legislation, among others the financial aid and indemnification of terrorism victims and their family members. So, this Convention does not impose the compensation mechanism nor does it exclude the possibility of limitation of state's liability for damage, because it is realized according to provisions of the Convention and in accordance with the national legislation. To conclude by reviewing both general and concrete international and regional legal documents related to these issues, which either stipulate limitations for compensation of damage caused by terrorist acts and other acts of violence (both „subject and personal“<sup>1</sup>) or contain norms sufficiently flexible not to exclude the possibility of states stipulating certain limitations of such damage compensation, and often the defining of concrete rules is left to state legislation. The right to damage compensation is granted to injured parties and their immediate family members, but international and regional documents most often do not specify which family members are considered the immediate family, but leave that to national legislation as well. Often, states may choose mechanisms of protection, but they also may provide greater legal protection (e.g. for wider circle of damages or for legal persons), for it is not explicitly excluded. What is the situation in some countries outside of Yugoslav circle of states? Austrian law also recognizes limitations in relation to circle of damage, in the sense of reparation of bodily injury consequences, impaired health or death, which includes the lump sum compensation for non-material damage, loss of earnings, costs of treatment, etc. (Koch and Koziol, 2004, p. 6-8; Meškić, 2017, p. 35-36). Austrian Act on assistance to crime victims, from 1972 with amendments, includes supported persons into the circle of persons with the right to damage compensation, and excludes the injured party who participated in the crime (Koch and Koziol, 2004, p. 7-8). In case of bodily injuries (including psychological ones in French law), German and French laws allow compensation of damage caused by acts of public violence, while excluding compensation of damage to property (Moreteau and Lafay, 2004, p. 30-31; Magnus, 2004, p. 47-48). Maybe the best conclusion is the one made by Koziol (2004, p. 302) in summing the results of comparative study and concluding that there is no unique system that provides full indemnification to victims of terrorism, i.e. that covers all heads of damages.

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<sup>1</sup> They are mainly related to enabling the compensation of damage caused by death, bodily injuries or health impairment, as well as compensation of material damage to physical persons. Causes of damage are mainly recognized as crimes of terrorism and violence with intent (as direct causes).

### 3. CONCLUSION

In case of causing damage to others, in general it has to be compensated, according to principle of full compensation. Legal order sometimes sets higher or lower limits to institute of liability for damage, although all conditions for its establishment are met. In some cases it is especially evident, like the situation with the special case of liability for damage caused by acts of public violence (this case was explicitly normed by Yugoslav legislation in art. 180 of CTA). In such cases, the state is often the entity liable for compensation of damage caused by terrorist acts and public gatherings, but also by other forms of public violence. Having in mind various classifications of limitations of liability for damage in theory, in the concrete case the limitation of liability for damage that is defined by the law (by imperative norm) may be considered. Limitation of liability for damage caused by acts of public violence includes limitations in terms of circle of damage ("subject limits"), limitations in terms of injured parties that have the right to compensation ("personal limits") and other limitations (in time, voluntary and others). The circle of damage and injured parties depend on social-economic and legal circumstances, i.e. on the degree of law development. In majority of former Yugoslav republics, the right to compensation of material and immaterial damage due to death or bodily injury is recognized, as well as damage or destruction of property of physical (natural) persons by precisely prescribed causes (terrorist acts, public demonstration or manifestations). Also, in majority of former Yugoslav republics the legal person has no right to compensation of material damage due to damage or destruction of property caused by acts of public violence, but that right should be recognized, as it is stipulated by future civil codes in Serbia and Northern Macedonia. The circle of indirectly injured parties is also related to physical persons and it should be extended in general sense. Only the physical person may be the injured party in liability of organizer of manifestations and in liability for denying necessary assistance from art. 181 and art. 182 of CTA. Organizers, participants, instigators and helpers are especially excluded from the right to damage compensation in acts of public violence from art. 180 of CTA. Injured parties may claim damage compensation from the tortfeasor instead from the state, in accordance with general rules on damage liability, and in that case limitations stipulated by art. 180 of CTA do not apply. In national law, set limitations of liability for damage caused by acts of public violence generally correspond to comparative legal and legislative practice and considered international and regional legal documents. International and regional legal documents either stipulate certain limitations in compensation of damage caused by terrorist acts and other acts of violence (both „subject and personal“), or contain sufficiently flexible norms that do not exclude the possibility of state prescribing certain limitations of such liability, and often the defining of concrete rules is left to state legislation. The right to damage compensation is granted to injured parties and members of their immediate family. Other systems outside the Yugoslavian region also have limitations of liability for damage caused by acts of public violence. Limitations of liability are possible on the basis of state legislative policy as long as they are not in conflict with the constitutional norms and as long as there is a balance between the interests of the victim and liable entity. This also sets limits to the legal institute of damage liability in general, like through some other mechanisms (stipulating of conditions of liability, interpreting of legal notions by courts, etc.). The performed analysis showed that there is interconnection of so-called subject and personal limits (e.g. damage due to death or bodily injury is, by its nature, related to physical persons as injured parties regardless of them being direct victims or persons close to ones as indirectly injured parties). Personal limitations are the consequence of limitations in terms of heads of damages. Having in mind justifications of liability limitations for damage due to acts of public violence, comparative legal models and indisputability of regulations from art. 180 of Yugoslav CTA before courts in states that recognize it, no constitutional legal problems with the issue of limitation of such liability for damage was found.

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## NASCENT CONSUMER BEHAVIORS IN THE PLATFORM ECONOMY DURING COVID-19 PANDEMIC

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### ABSTRACT

*The global economy has been severely impacted by the COVID-19 pandemic. A crucial condition causes human behavior to shift in unexpected ways, with certain aspects of behavior irreversible. The COVID-19 pandemic is not a typical crisis, and numerous steps were implemented to monitor disease transmission, involving complete and then partial lockdown. Since all aspects of the economy are intricately interconnected with public health initiatives and lockout, this culminated in economic instabilities in the nations, indicating a shift in market dynamics. Strict shutdown steps have also influenced everyday life, including consumer digital behavior. Given the increased usage of digital channels in this context, the aim of this paper is to examine the effect of the COVID-19 pandemic on consumer behavior, with a specific emphasis on the platform economy. The study adds to the literature that has been reviewed by reinforcing reports and surveys on changing consumer behavior in platforms. To begin, consumer behavior and the platform economy have been defined. To achieve our goal, we divided platforms into four business models, in which various digital platforms were explored across the economy and the results were presented.*

**Keywords:** *Consumer behavior, COVID-19, digital behavior, platform economy, transaction platforms*

### 1. INTRODUCTION

The world is undergoing a new economic revolution, which is causing disruptions to the economy, industries, labor markets, and our everyday lives on a scale not seen since the industrialization. As the spring season approaches, there is a renewed sense of caution as coronavirus cases rise in certain parts of the world. Although the uncertainty created by COVID-19 remains around the world, the impact varies by region. Because of the COVID-19 crisis, consumers have changed their behavior—quickly and in significant numbers. According to Solomon et al. (1995), consumer behavior is the study “of the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires”. Simultaneously, the importance of digital labor market matching is increasing as a result of technical advances and increased online accessibility (Kenney & Zysman, 2016). The emergence of the platform economy is at the heart of this transition. The platform economy refers to economic and social activity that is enabled by platforms. In this paper, we will concentrate on platforms that generate value and promote transactions between various types of individuals and organizations, which refer to what it is called transaction platforms (Ewans and Gawer, 2016). The exponential development of the platform economy has spawned a variety of business models that have drastically altered consumers' lifestyles as well as the business ecology (Chen et al., 2020). Resource sharing (e.g., Airbnb, Didi, YardClub), e-commerce (e.g., Amazon, Walmart, Aikucun), social media (e.g., Facebook, TikTok), and online media are examples of such business models (e.g., Netflix, Hulu). According to the Accenture COVID-19 Market Study, which was conducted in April 2020, consumers expanded their use of the platforms significantly during the outbreak. The aim of this study is to look at the impact of the COVID-19 pandemic on consumer behavior in the platform economy.

We chose marketplaces, search engines, social media, and finally online media as key platform sectors for this reason. To investigate, transactional platforms (e.g., Amazon, Netflix, and Airbnb) were used as samples since they are by far the most popular type of platform economy (Ewans, Gawer, 2018). Understanding consumer behavior in the face of this pandemic and beyond is critical for retailers and advertisers, as well as business and government policymakers, to adopt strategies and tactics to retain current customers and attract new ones.

## 2. COVID-19 AND PLATFORM ECONOMY

The COVID-19 pandemic and ensuing lockdowns have drastically altered the daily lives of billions of people around the world. It has had a particularly negative effect on digital platforms, with many people turning to the internet as a result of many stores closing and shoppers being forced to stay at home (Bellec, 2020). Restriction policies and border closures have caused all segments of business and society to digitize at breakneck pace in order to continue their operations, as well as pushed businesses that adhere to the stay-at-home economy (Sokolyanskaya, Lechardoy 2020). The latest OECD Policy Brief (OECD, 2020) elaborates on the usage of online platforms throughout the first half of 2020 using a new detailed sample of approximately 1,400 online platforms operating in nine activity areas in OECD and G20 countries. The study reveals that, during lockdowns, companies and people have increasingly switched to online channels to conduct economic activities. This was particularly the case in areas of activity involving little to no close presence for the distribution of goods and services (e.g., mobile payments, personal services, Marketplace B2B) (Figure 1). In these areas, the usage of online platforms, as given by Google Trends data, increased by about 20% in the first half of 2020. However, in operation areas requiring close connection (such as accommodation, restaurant booking and transport), platform activity declined significantly (by about 90% during the first half of 2020), reflecting the widespread economic dangers posed by the COVID-19 pandemic.

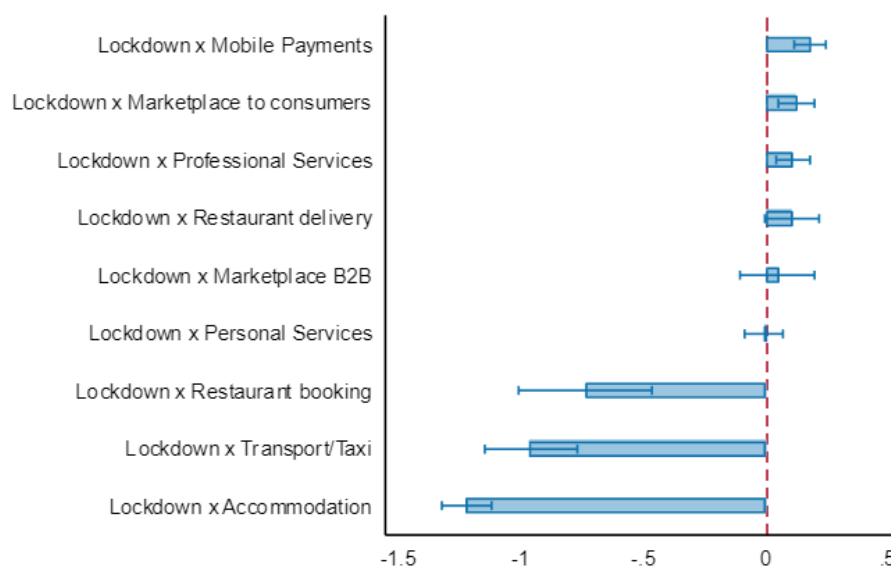


Figure 1<sup>1</sup>: Lockdown has impacted platform traffic differently across activity areas  
(Source: OECD estimations based on Google Trends and Crunchbase data)

<sup>1</sup> The bars represent the estimated coefficient of the lockdown indicator interacted with area dummies using regression (1) in Box3:  $\Delta PlatformUse_{s,c,t} = \beta_1 Lockdown_{c,t} + \beta_2 Lockdown_{c,t} * Areas + \theta t + \delta s_{c,t} + \epsilon_{p,s,c,t}$ . The dependent variable is the year-on-year logarithmic change of the Google Trends searches for online platforms. Full results are in column (3) Table 1A.1. The lines in the graph are the 95% confidence interval. The x-axis is in logarithmic scale (-1 is equivalent to a fall of online platform activity, as proxied by Google Trends searches, of 63%). Lockdown indicates the OECD containment index. The estimation includes country-area and month fixed effects, and standard errors are clustered at the platform-sector-country level

### 3. NEW DIGITAL CONSUMER IN THE TIME OF CRISIS

The COVID-19 outbreak triggered an external shock, a "natural experiment" scenario, in which the possibilities and weaknesses of the platform economy can be investigated. The pandemic has contributed to changes in consumer behavior – how customers read, shop, work and play, and affect the global online economy (Deloitte, 2020). While reviewing data on traffic rate of online platforms by sector from August 2019 to March 2020, people began to use more search engines, social media, and online entertaining media, while the usage rate of marketplaces decreased.

Type of platform	% change in traffic (March 2020 vs. August 2019)
Marketplaces	-18.2
Search engines	7.6
Social media	16.8
Online media	20.2

*Table 1: Traffic share of online platforms by sector  
(Source: Data from Similarweb (August 2019, March 2020))*

#### 3.1. Marketplaces

Nearly overnight, consumer behavior has changed dramatically, with most offline sales moving to online. Consumers began to spend less, and retail sales decreased during the lockdown, according to the report (Mitchell, 2020), though those who had previously shopped online tended to use online marketplaces more frequently. Conversely, the closing of physical stores has increased the popularity of online marketplaces and supermarket or food delivery services. For instance, Amazon has recruited 175,000 employees in the United States since mid-March 2020 to meet the growing demand for online shopping (Amazon, 2020).

##### 3.1.1. E-commerce consumer behavior

The implementation of social distances ensures that physical interaction is avoided and the rise of demand for e-Commerce is inevitable. Visitors to Amazon's website exceeded 2.54 billion for the month of March 2020, a rise of 65 % compared to the same time in 2019. The Walmart Grocery app recorded unprecedented downloads of 460% growth during pandemic. From bulk-purchasing to online shopping, consumers are changing what, where and how they are buying. According to study conducted by Accenture (2020), early in the pandemic, consumers concentrated on buying masks, keeping children occupied at home, and stocking up on grocery stores. At present, shoppers are concentrated on enhancing the home and garden. Business and industry and toys and games are still increasing, but not as important as they were during the pandemic. E-commerce covers a broad range of goods, across categories. Common Thread Collective (CTC, 2020) has provided useful updates to COVID data on e-Commerce shopping activity, including the chart below. Results have been aggregated via various e-commerce platforms across the world such as ShipBob, ShipHero, Attentive, Stackline, CTC, Klaviyo, Emarsys, Rakuten.

*Figure following on the next page*



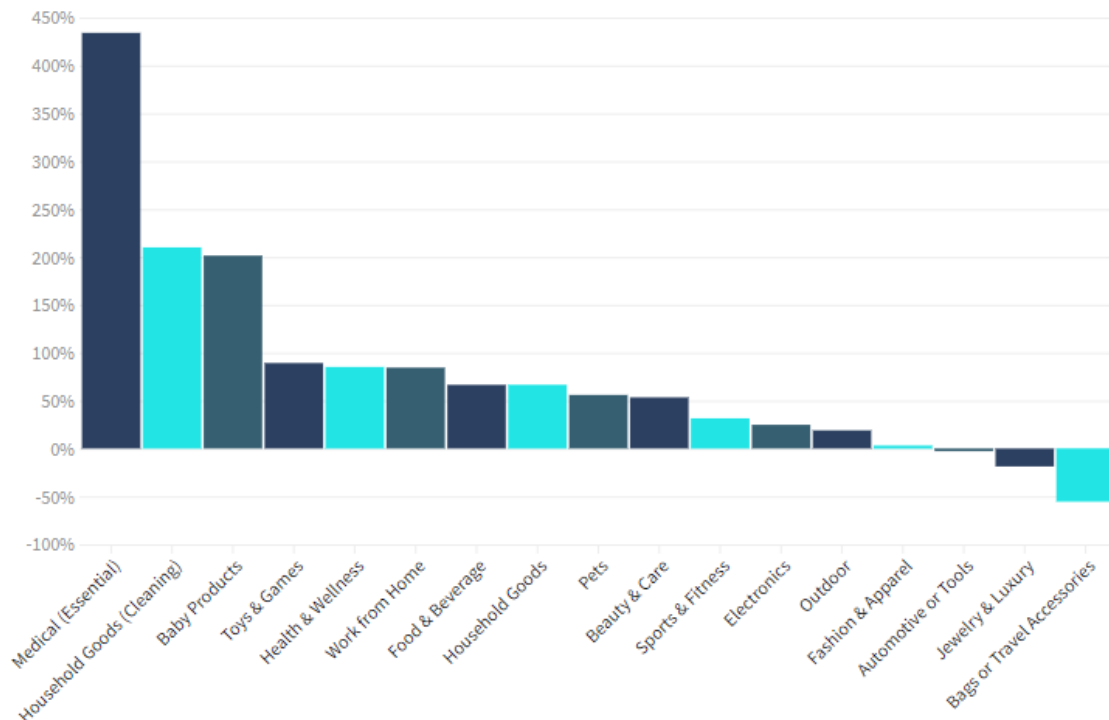


Figure 2: E-commerce consumer sales (COVID-19)  
(Source: Common Thread Collective)

The Figure 2 shows clear winners during the pandemic as baby products, household and medical goods top the sales. Despite the shift to e-commerce, A substantial proportion of e-commerce retailers are faced with the same economic implications as conventional brick-and-mortar retailers, following a decline in individual spending on products deemed non-essential such as jewelry & luxury products as well as travel accessories. According to study conducted by Bazaarvoice (2020) with a network of over 6,200 brand and retailer platforms, e-commerce was in surge in 2020 compared to 2019. Page clicks are up to 75% year-over-year and order counts are up to 57% over the same period. Although this growth has been declining since April and May, it is still more noticeable than the pre-pandemic growth we have seen.

Year-over-year percent growth — 2020 v. 2019

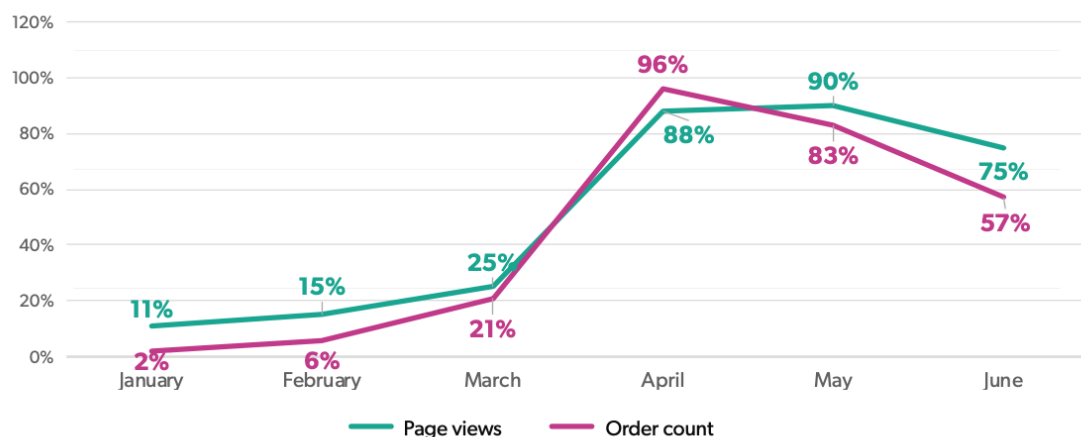


Figure 3: Monthly shopping activity, global  
(Source: Bazaarvoice network data)

### 3.1.2. Deceleration of the sharing economy

Sharing services related to hospitality and transport are being hit because of travel regulations. AirDNA, an organization that monitors Airbnb bookings, noticed a 53 percent drop in US bookings between February 3 and April 13 (Associated Press, 2020). Airbnb bookings have also been blocked in some cities. Some hosts and consumers failed to comprehend financial issues such as cancellation fees and commissions. In the meantime, the According to a global survey conducted by Cars.com in mid-March 2020, more than 40% of respondents have avoided using any ride-sharing and hailing services to minimize the chances of contracting the infectious virus (Newman, 2020). China's Didi and France's BlaBlaCar experienced the largest decrease in weekly app downloads, down 75 percent and 65 percent, respectively, between January 29, 2019 and March 7, 2020 (Hossain, 2021).

### 3.2. Changes in Search Behavior

As we explore the ever-changing coronavirus world, known as COVID-19, we are certainly seeing dramatic shifts in customer search behavior. According to Google Trends, "coronavirus" was the most searched topic in 2020. Also, questions beginning with the word 'why' were searched more than ever before (Dunne, 2021). Other examples of what we are increasingly searching the internet include: "yoga mats", "dumbbells", "sanitizer", "indoor activities", "free courses", "Netflix", "Zoom". During the mid of 2020, we have been asking some specific questions starting with "how": "how to bake bread", "how to entertain kids indoors. Also, vaccine related queries were in surge as well. There may be a high interest in vaccine-related terms worldwide, but it does not include asking the same questions. Searches for "Vaccines near me" have been five times more frequent since the beginning of the year (Pichai, 2021). On the other hand, A few other examples of what we have been searching less on the internet include: hotels, travel destinations, perfume, and heels. Figure 4 describes the fluctuation in consumer trends for Airbnb during 2020 globally. Strict lockdown in the 1<sup>st</sup> wave of pandemic hammered Airbnb and other similar businesses. Although the interest increased after easing the restrictions, trend continued to plummet following the 2<sup>nd</sup> wave at the end of the year.

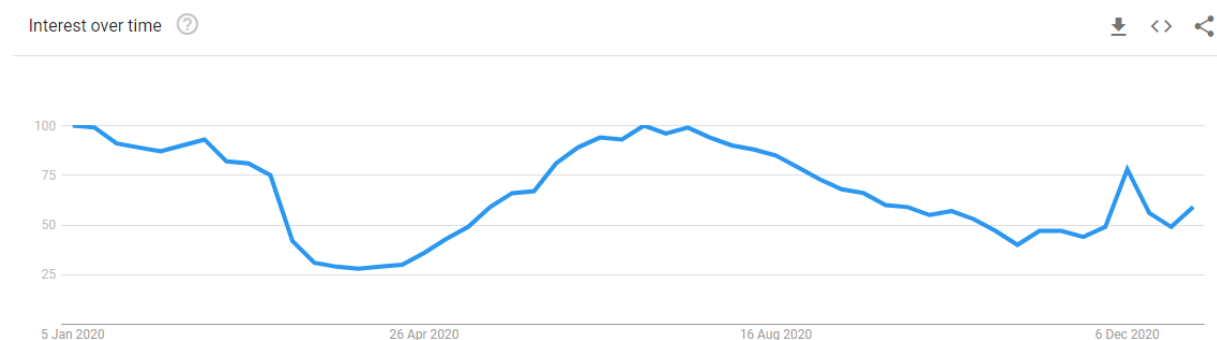


Figure 4: Search term: Airbnb  
(Source: Google Trends)

### 3.3. Changing behavior in the social media

Extra time on our hands has contributed to more gadgets in our hands, returning to leisure and connection. Online consumers have taken to social media for recent events and news. According to social media statistics, this took a leap during the pandemic. This is part of the perspective sought by the GlobalWebIndex (2020) in its latest analysis of market patterns in social media. Online consumers in the U.S. and U.K. have seen a 55% rise in those who have posted more on social media. Many who tried a new platform, TikTok was the platform of choice (33%).

This should come as no surprise, as Instagram (30%), TikTok (24%) and YouTube (21 per cent) are the favored sites to be used as escape or to be used solely for fun during these periods. TikTok's use spikes appeared in March, but it was unclear whether they were temporal or long-term. Figures fell during the outbreak but bounced back. Survey conducted by SocialMediaWeek (SMW) in the 2<sup>nd</sup> quarter of 2020 give the following highlights regarding the use of social media platforms:

- 63% of customers have used social media more in the last two weeks.
- 55% claim they use social media mainly for communication purposes.
- 54% are not paying attention to the amount of time they spend on social media.

As their use of social media has grown, respondents seem to have seen a difference in what they and others share during this period. According to Wold (2020), 86% of participants in the US agreed that they had seen a difference in the content they see on social media. They said that the content is now 'political,' 'overwhelming,' and 'stressful.' Approximately half (49%) of participants agreed that they had adjusted their posting actions due to recent events. Of those participants who have shifted their posting behavior, 43% share more information and resources as they relate to current affairs, 42% deviate from sharing as many selfies as possible and private updates, and 37% share more content promoting specific causes.

### **3.4. Online media**

For more than a decade, digital entertainment platforms and video streaming have been on the surge, but the number of subscribers has recently risen dramatically. For instance, Netflix has seen a large rise in subscriber numbers this year: nearly 16 million people created accounts in the first three months of 2020, nearly double the amount in the final months of 2019 (Ecommerce News, 2020). Hub Entertainment Research's study of 1,907 U.S. customers noted that the number of streaming channels used increased by more than 50 percent to around five services in 2020 from three in 2018 (Snider, 2020). The most widely used streaming services, as per a study of 1,000 users by HighSpeedInternet.com, the Internet service provider's comparison site: Netflix at 80%, led by Amazon Prime (67%), Hulu (57%), Disney+ (52%), HBO Max (35%) and Peacock (22%) (Snider, 2020). For the 14th annual edition of Deloitte's Digital Media Trends report, the consulting and professional services company conducted a pre-COVID-19 survey between December 2019 and January 2020 and a subsequent survey in May 2020 following the advent of the pandemic. Around 80 percent of U.S. customers currently subscribe to minimum one paid video subscription service, up from 73 percent in the pre-COVID-19 survey (Deloitte, 2020). According to Deloitte's May survey, some customers sign up for free trials, later cancel once the offer expires or when they complete the favorite series and change services in search of fresh content. Pre-pandemic, 20% of streaming video users canceled at least one service in the previous 12 months. Since the pandemic started, 17% of subscribers have indicated that they have already canceled at least one service.

## **4. CONCLUSION**

In this paper, we managed to explore how do people behave differently across various online platform. Overall, one may conclude that COVID-19 has unquestionably altered consumer behavior and the way they shop. A detailed examination of online platform use has shown how COVID-19 impacts people's lives online. Increased use of platforms opens them to new sources of knowledge as well as new ways to purchase the items they need even though retail stores are closed. Unfortunately, several businesses are witnessing a drop in revenue and employees are being laid off as a result of drastic shifts in changing behavior. It was largely visible that, for most part, figures for marketplaces were very dynamic, namely e-commerce was in dramatic rise particularly for medical and household products while use of sharing platforms decreased.

In addition, search engine, social and online media platforms also witnessed the boost. During the pandemic, people were overwhelmingly using “why” and “how” related questions while “coronavirus” was and still people’s all-time favorite. Lastly, when TV and Streaming platforms garnered huge number of new subscribers, TikTok was the new platform of choice on social media.

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## DOMESTIC AND INTERNATIONAL CHALLENGES IN HIGHER EDUCATION

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### ABSTRACT

*The scientific article examines the challenges facing higher education related to demographic problems and the quality of process management. Free movement and a single educational space are changing the attitudes, especially of young people, and their choice of where to pursue their education. A change in education management is needed to find solutions to deficits and to build a model of 'engaged universities' in which the quality of education is maintained at a level corresponding to the social and economic processes.*

**Keywords:** *Higher education, Demography, Human resources, Quality*

### 1. INTRODUCTION

In times of less and less spirituality and lack of those values that have helped our people to endure and survive, we are looking for and we are trying to fit into the European and world educational and cultural space. Some of us are actively pleading that we deserve it by right, others - that we are already comfortably located in it and we are almost waiting to be adorned with laurel wreaths. Unfortunately, our not so realistic expectations are not happening and to be more precise – they do not coincide with the attitude and behaviour of the communities that surround us. It is always a good idea to look for the best in ourselves and to present it in the best possible way, but most of all, we must have a clear idea where we are, what do we expect to happen to us and most importantly – how this can happen to us. And not only because today it is very important, when we are trying to overcome the consequences of the pandemic crisis situation, to wake us up and make us think that not everything starts with us and, of course, does not end with us, namely to look for the future in time and space; to realize, implement and seek opportunities and ideas that will boost our social development. The basic truth is that peoples who rely on their educational and cultural traditions, who uphold and develop them, get that place in social development that they do not need to demonstrate, interpret or plead, because they themselves are like that and that is their way of life. And this becomes even more difficult for us to accept from a historical point of view, because we have to write this truth with our Bulgarian alphabet and it is created by ourselves.

### 2. CONTEMPORARY STRATEGIC CHALLENGES

Lately a lot has been said and written about the development of Bulgarian higher education, we often look for our place in lists of European and global rankings, we are glad that we

accidentally or not so accidentally got into certain lists for the first time. It is almost an achievement and an important assessment that we are somewhere in the list of "contenders". Unfortunately, the process of restructuring this particularly important element of our education system has not only been uncompleted, but in the process of transformation we have been too unprepared to even adapt to these dynamic periods of political transformation. The market mechanisms confused it and made it stand still and it almost did not react to the influence of the external environment - it is about the educational process. We write excellent strategies and action plans and they look beautiful and interesting enough according to the European model, but our existence in this so-called educational space, or more simply - a place in society, is more and more in the corner or somewhere where to satisfy some very narrow or not very important claims. And I do not say that there are no beautiful and impressive exceptions that make us happy, but this mechanism has long been autonomously dead and "wakes up" only when it has to defend its survival or to mark that it is on the map. The academic autonomy of higher education institutions has led to quite critical deviations from the normal functioning of the educational process, such as not respecting the mandate of the head, the collective governing bodies to be elected in a not very democratic way, increasing the professional areas in which training is conducted without proven capacity, lack of any planning of these processes and a number of other deviations (Terziev, Bogdanova, 2019). I doubt that these processes have not been noticed by the multiple analyzers and researchers, from those who shall and are in charge of making the strategic documents, but the change, or to be more precise, the action attached to it turns to be so hard or almost impossible, that in the last more than thirty years this practically is not happening. The market mechanisms that established certain conditions for the production of endless in number and various in kind institutions performing training and providing this product, called science, created disproportions that will hardly be overcome and that in fact created the situation in which we shall search our name in the list and even more – at its end, and not to be there where we maybe expect to be!? In Bulgaria, the number of higher education institutions is more than 50, and in recent years the number of vacancies for students has always remained unfilled. Some of the reasons for this are due to the ongoing demographic processes and the deepening of the problem of population decline in the country, but this is far from the main problem in the functioning of our educational system. A return to old educational methods and even successful policies from the past is almost impossible because they were in line with the current then realities and sought to solve current problems. The existing ones do not answer many questions, while the competitors around us combine both past and future and are in the top lists of these rankings. Opponents of all forms of assessment will say that the criteria are not the best, the conditions are different and the funding is not very good and sufficient. But even if we accept that their thesis can be sustained, we are still in certain situation and conditions in which we shall make the most appropriate and efficient decisions. In order not to be unfounded in these statements, let's look at the results of one of the many rankings that have been published in recent months. It identifies the most popular universities in Europe. UniRank accepts several criteria as key in its ranking: to be licensed and / or accredited by the relevant higher education organization in each country, to offer at least four-year bachelor's and master's or doctoral programmes, and to run its own courses of training mainly in a traditional format. No Bulgarian university is included in this ranking in the Top 200, but it is more interesting how they are distributed in Europe and which countries find their place in it. Leading positions are held by the British education system - nearly 24% of the universities are positioned there, followed by Germany with nearly 16%. After them are Spain and France. In practice, the group of elite universities is determined by these four countries. Relevant clear positions are also held by representatives of the Netherlands with 10 universities, Italy - 9 universities, Switzerland and Russia with 7 universities each, etc. The Balkan countries are represented only by Greece.

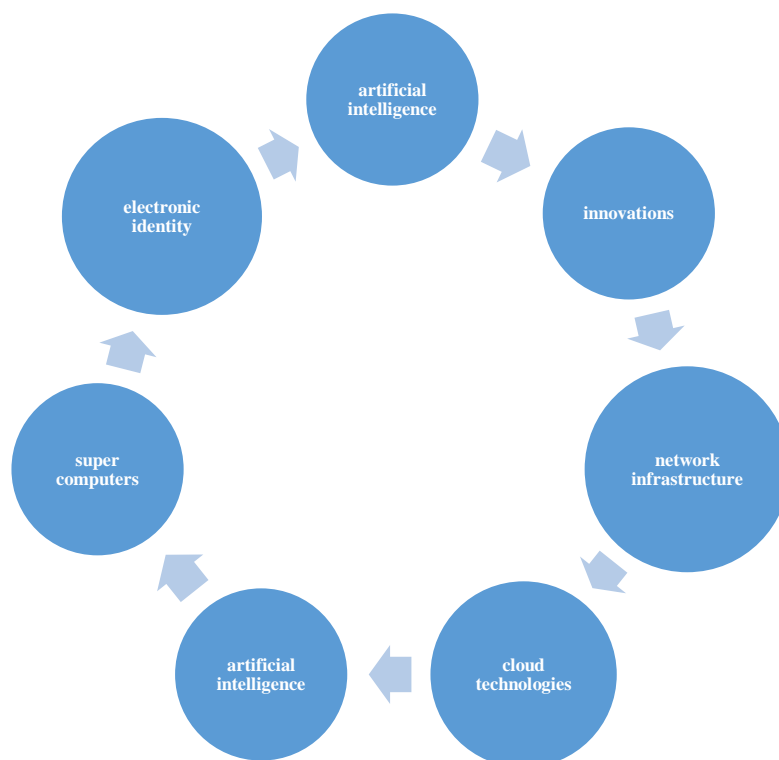
There are dozens of other rankings and evaluation systems of universities in the public space. In the best cases, several Bulgarian universities are in the forefront - Sofia University "St. Kliment Ohridski", the Technical and Medical Universities in Sofia. Without the claims of a detailed analysis, the breakthroughs in the Bulgarian higher education system must look for "clogging" and solving a complex of problems, which this time are put on the table, and their objective and correct solution must be sought. We can summarize them in two groups: problems of redundancy and problems of insufficiency. Obviously, there is a sufficient and, perhaps, quite a large number of educational institutions, that are distributed unevenly in the country, from the point of view of the scientific infrastructure. They are concentrated in the capital and several of the country's major cities. Most of them offer an educational product in almost all professional fields with few exceptions. In this line of thought, we cannot have a shortage of qualified staff and we should have good enough expertise in almost all areas. Regardless of the state standards and requirements for the accreditation procedures, not in all of them the offered (even paid) service is of sufficiently good quality. This process has at least two active parties - those who offer it and those who receive it. It will not be difficult to find a set of criticisms of both, but justifiably the result does not meet our European standards and in particular our expectations in the greater part of these two groups. In practice and in theory there is a problem in the efficiency of this process, which of course is continuous and quite complex in nature, which makes it difficult for management. Here is just a cursory example that hardly answers all the questions that arise. In the last few years there has been a restrictive attitude towards a number of specialties in the field of economics and administration and management, which comes to show us that in recent years a sufficient number and expertise of such personnel have been "produced". At the same time, almost every sociological research or survey in this direction reports a shortage of well-trained managers, and even specialists in the field of finance and accounting. The answers and criticism can be formulated in many directions, such as that the educational process in these areas is dealt with by almost all universities and the traditional three Bulgarian economic universities are placed in a particularly competitive environment, that education in some of them is placed in a position of direct economic benefit to fill a certain number of students, that one of the universities territorially is located in an area with a relatively small population and not very good road infrastructure and communication links, which makes it isolated or in worse positions from the rest. In their essence, all these statements are true, but do not answer the question - why with such a surplus there is a shortage in the actual primary market? (Terziev, Bogdanova, 2019; Terziev, Lyubcheva, 2020) In other cases, some of the engineering fields remain supposedly promising and necessary, but still unoccupied and the number of students who fall into these specialties have relatively low entry level. Until we solve the complex of problems in both directions and clarify the reasons for this, there is no way to implement and even think about a successful strategy in the field of higher education. It cannot come by itself and there is no way to "marketly" adapt to the situation, because the main element in the management process is planning. Planning good actions in this direction is an emanation of aerobatics in management and cannot be an action of one individual, or even of an entire ministry. Therefore, before moving from one to another programming period of financing of education (according to the established practice of the European Union) we must seek to solve these crisis problems, which are not a consequence of a pandemic situation or other crisis phenomena, but the lack of professional analysis, proper programming and good policy (Lyubcheva, Terziev, 2019a). And when we are looking for solutions to economic, political or other problems that strike us every day and will not leave us on a carefree island in the future, we need to think long and hard about the educational and cultural processes. Only their successful solution will lead to the much-desired efficient political and economic transformations. They are coming and in the near and distant future they will happen to us again, and they will weigh us down and carry us in the whirlwind of our aspirations.



But we need to be prepared to walk more upright and be where we want to be or where we think we need to be. Otherwise, the meaning of pointlessness will overwhelm us and give us unnecessary self-confidence, rivalry and malice, but it will not help us in the way out of our self-sufficiency.

### 3. THE MODERN AGENDA OF HIGHER EDUCATION.

Higher education today is associated with new topics, unthinkable for discussion even a decade ago, related to a new reality in social development that has emerged in the last few years. The discussion space is occupied by Industry 4.0, 5G and even 6 G network is already in the forefront, we use terminology that until yesterday could be found only in the dreams of some innovative researchers. Universities are part of the top centers of competence and of the strategic guidelines for smart development. If until now we have been looking for options on how education can respond to the rapidly developing high technologies, today we are already looking for opportunities to integrate education into cloud technologies and in the creation of artificial intelligence and supercomputers. At first glance, this is a challenge, but seen from the standpoint of the process of consistency and upgrading of knowledge, skills and competencies in recent years, it can be defined as a systematic logical and consistent development. The preconditions for such a development were created in a theoretical aspect, but achievements were reported only in some universities, which lead the rankings in the rating schemes. Achievements and challenges have different dimensions - some are "high", others quite trivial, but still significant (Fig. 1).



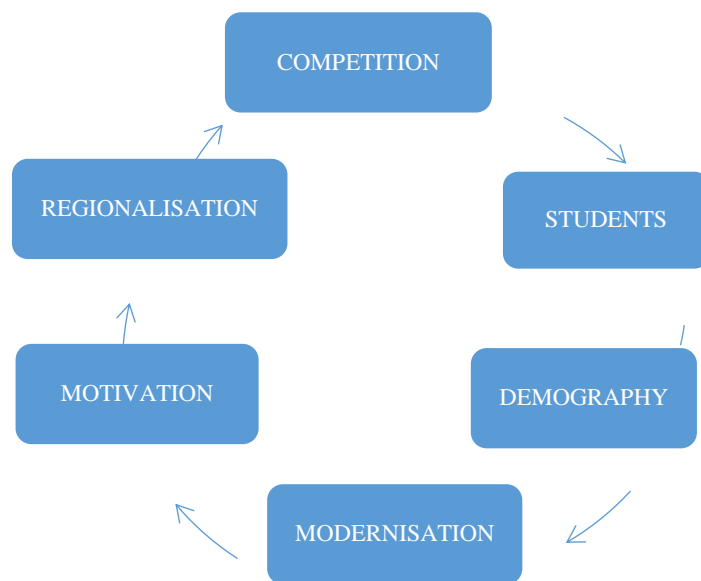
*Figure 1: Challenges of higher education*

Higher education in its system has always developed in different areas of science and has made changes that are aimed at training professionals in relevant areas of our economy. With different structures, but subordinated to foundations that provide sustainability and conditions for innovations that update it to be useful to society. There always have been great requirements from education – to provide specialists for various positions in industry and all economic fields, to be a good basis for research and scientific studies, to provide personal development mainly

to young people, but also without age restrictions, especially in the last years of one's career. To a greater or lesser extent, the correspondence between supply and needs is ensured both by the quality of the process itself and by the quantity of the offered educational service.

*Today's agenda of higher education is further complicated because it faces the risk of shortage of students ...*

We are facing number of challenges related, on the one hand, to the exceptional dynamics in the development of high technologies and information and communication systems, and on the other - to the risks of quality and human resources management and third - to the problems posed by the demographic crisis. In this multifaceted environment, higher education turned out to be insufficiently prepared (Fig. 2).



*Figure 2: Risks of Bulgarian higher education*

The reasons for this unpreparedness are related to the management of the resources available to higher education - human, financial and material. These three key factors also contain problems. They can be derived from the analysis of the risks of resource management, if any. Often such an analysis is considered unnecessary, based on the legal framework to which the higher education system is subordinated and the presumption that the law decides everything. But beyond the law, things look different enough. There are many factors and circumstances on which higher education depends - political, economic, financial, structural, organizational and others. Some of them are external to the system, others are part of the system itself, but together they cause serious discomfort. Consistent discussion and analysis can change the picture, but it is important to look at them in the context of the overall social and economic situation, because "isolated" analysis leads to partial and sometimes wrong decisions. From all external factors serious attention shall be paid to the demographic problems related to human resources. From these problems several elements can be defined – reduction of birth rate and the number of children, respectively of high school graduates; multidirectional and high-intensity migration processes from Bulgaria to foreign countries (universities); lowering of the quality of secondary education and increasing the number of bilinguals in the education system, which inevitably affects higher education. These elements change the nature of the existing inflow into the higher education system, affect its quality and are directly reflected in the number of young graduates.

This, in turn, requires a serious comprehensive analysis of the problems in all educational levels - based on well-organized statistical information and situational relationships (Terziev, Lyubcheva, 2020). Of course, there are many other risk factors, but they must be the subject of other research. In the context of a demographic crisis, the risk of higher education being left without candidates is quite high. The reassurance that the demographic crisis is not only Bulgarian issue does not answer these questions at all. Does this mean that higher education in the face of chancellors, educators and researchers must remain indifferent to demographic problems? And if the answer to this question is "no", then what is the place and role of their position in this alarming situation?

#### **4. HIGHER EDUCATION IN TIMES OF DEMOGRAPHIC CRISIS**

The demographic problem is not only a problem of the Ministry of Labour and Social Policy and the experts it gathers to develop strategies and measures to overcome the situation. The situation is like this and is not improving, it is constantly getting worse. The downward trend in state funding for public universities, especially in some professional fields, also does not solve the problems. In the last few years there is a repeating tendency - close as the absolute number of graduates and the number of state-funded first-year students, unoccupied vacancies, change of admission rules during the campaign in order to "utilize" all places. During the admission campaign of the school year 2019 - 2020 we witnessed various innovative tools to motivate young people to enter higher education (awards for students, bonuses for teachers, etc.). Naturally, this is already a clear indicator of the deepening crisis in the system due to the declining number of generations caused by low birth rate, which is part of the big demographic problem. Here are the figures for the 2020/2021 school year:

- The number of high school graduates in 2019/2020 in high and vocational high schools is respectively 25,800 and 21,600 students /47,400 in total/;
- For the 2020/21 academic year, the state funded vacancies in higher education institutions is 54 334, of which 43,960 after secondary education;
- Admissions to private universities are not included here, which further aggravates the situation.

The difference between high school graduates and potential first-year students is 3,440. Of course, the solution to the problems should not be absolute and sought in the calculation of specific statistics, however the latter actually point to a problem that has been around for years and which contributes to number of the following ones. For example: there are state funded vacancies approved for specialties - 5, 6, 7 vacancies, which probably has already been decided as individual or some training attached to another specialty. Without analyzing the professional fields, it is stated that the low numbers are usually associated with the technical sciences, despite the emerging deficits in the technical and technological industries. The small number of graduates, even including candidate students from previous graduations, which is a normal process, contributes to the lowered admission criteria so that the vacancies are filled. We are all aware what this phenomenon or process can lead to.

#### **5. HIGHER EDUCATION AND MIGRATION**

The second element is migration to foreign universities. The flow of young people to universities abroad, especially in the middle of the 1990s, is quite serious. In some years, 100% of students who graduate from the so-called language schools, become students at foreign universities. Without imposing restrictions on the freedom of choice of students and their families, we need to look for appropriate models through which this flow can be reduced. There are several elements of this migration - the state loses its human resources and its good resources, given that students who go to study abroad are well prepared; most of the graduates

abroad do not return to Bulgaria at all – i.e. Bulgaria is declining in population; these pupils and students are already working for other economies and, no matter how much we consider ourselves to be in a single European education and single European economic area, this is an economic and in particular financial loss for our country. For this purpose, we have to make our own analysis and compare the level of Bulgarian universities with foreign ones. In other words, to make an analysis to answer the question why this is happening and whether there is an objective reason for it to continue to happen. Obviously, not only good knowledge of foreign languages is a factor that determines this process. There are students who study the language of the respective country during the first year of their studies (requirement of the universities themselves). Here is the analysis of higher education in our country as organization, as quality, as career opportunities after its completion, compared with those of higher education in other countries. The career issue is related to the compliance between higher education and the economy. Even with a very high quality of education, the lack of such compliance will leave many young professionals without a chance to use their potential, and this will inevitably reflect the interest of future generations in university education or at least in some of the universities and certain programs of study. This problem is part of the "brain drain" problem. It is not a Bulgarian patent, but we have suffered greatly from it. No matter how much European specialists try to adjust it to the term "brain circulation", for us it is extremely important, despite our common area (Terziev, Lyubcheva, 2020). This accumulated negativity, which led to a belief that Bulgarian higher education is of low quality, is a serious challenge at the present moment of development.

## **6. HIGHER EDUCATION AND THE QUALITY OF SECONDARY EDUCATION**

The third element is the increased number of bilinguals, i.e. children and students for whom Bulgarian is not their mother tongue, and the quality of secondary education. Probably many people will say that this does not concern higher education, however the answer is unequivocal – it does concern it and to a great extent! The answer to this question is directly related to the quality of higher education, i.e. to the level of knowledge, skills and competences with which the students graduate from our universities. It is true that the problems of this element are concentrated in secondary education, but the increase in the percentage of secondary school graduates (gradual reduction of early school leaving) leads to the inclusion of more and more representatives of this group in the group of secondary school graduates and their transition to the next education level. It is no secret that secondary education does not show particularly successful results, as a number of studies show its level. In this continuous process, higher education must comply with this level and if it does not, it is left without the necessary number of students. The dilemma in this case is quite serious. Comparing to the previous element of migration, this is a very serious challenge for the academic community. Shouldn't this level be associated with the declining requirements for entering certain programs of study, as well as the shortage of applicants to fill university places? All three discussed elements are related to human resource management, both inside and outside universities. The question of today's transformations of social relations is whether and how universities can fit into them and influence policies, incl. those for managing demographic processes (2020a; Terziev, 2020b).

## **7. HIGHER EDUCATION AND ITS USEFULNESS IN THE COUNTRY'S POLICIES**

The modernization of higher education goes through an assessment of the capacity of the teaching and scientific potential of higher education in its participation in the social development of the country. Although there is no unified study on this topic, apart from the existing Act for the Development of Academic Staff and the registers certifying the actual state of this potential, its importance is emphasized at all levels. In the context of the demographic problems discussed above, that affect higher education, it is important to take into account the

participation of academic potential in solving these issues, i.e. the possibility of the country's academic potential to be actively involved in policy and strategies formulation and implementation, that will improve the situation (Terziev, 2020b). In addition to the definition of academic staff, which is usually recognized by the main activities /teaching and research/, another can be added - involvement in economic and social processes in general. This does not diminish, but defines the role of this group as extremely important in these management processes. The higher education sector is key to the transition to a knowledge society and the preparation of human resources to achieve it. In this sense, it is clear that universities have enough resources and capacity to be at the center of strategic solutions of the demographic problem to offer effective and right solutions. On the one hand, because they offer the research methodologies, have sufficient databases, can form complex teams, have contacts on international level to apply good practices. On the other hand, universities deal with the younger generations, know their mentality and mood and so working with them allows to create solutions, to direct the development of young people in a direction that promotes participation in social processes that are not focused only on personal careers. On the third hand, because university staff want young generations to be very interested in working for the development of the country, to choose Bulgarian universities, to fill the banks with staff of Bulgarian science and industry. Representatives of the academic community are not always desired and wanted as participants in the formation of policies, strategies, programmes and projects, but in practice this is the right way. Moreover, in many universities there are programmes of study close to the issue of demography. In a number of universities, it is appropriate to introduce courses or programmes of study related to demography. This can happen on the basis of strong differentiation and horizontal expansion of specializations in higher education, as well as taking into account the fact that higher education depends on the external social conditions in which it operates, including demographic ones (Terziev, 2020b). The European Parliament called for "engaged higher education institutions" back in 2012, in a resolution on modernizing Europe's higher education systems, and encouraged: "higher education institutions to engage more intensively with their regions and establish dynamic collaborative actions with regional governments, local councils, public bodies, non-governmental organizations and small and medium-sized enterprises to enhance regional development;" (2020a). The involvement of the academic staff in the work of a number of state institutions (for instance: the Ministry of Labour and Social Policy), which is of course a bilateral process, can be increased, for instance, by establishing permanent scientific advisory bodies (councils) to rule on all issues related to the Bulgarian demographic development and the relevant specific policies. There are no members of these bodies more suitable than scientists and academic professors - sociologists, economists, educators and others. The problem is multifaceted and needs comprehensive research, analysis and development of strategies in many areas. The role of the state must be taken into account in determining and involving in decision making of the academic community the political, economic and social priorities of the state.

## 8. CONCLUSION

The academic community owes the younger generations on the second issue - migration. Because the decision of young people to study abroad is often made without being well-informed about the state of higher education in Bulgaria, i.e. what programmes and what level of education they offer. The impulsive decision "I want to study abroad" is inefficient and sometimes wrong. Probably it is part of the reasons why many young people who went to study abroad immediately after high school study for a very long time, most of them do not graduate, some return to our country, but few of them continue their education. Only the admission campaigns themselves are insufficient for the secondary education graduates to be informed well enough about the possibilities of higher education in our country.

Also, little do the applicants directories do in this regard, some of which require higher education to be understood. The live connection between universities and high schools is mandatory, but it must be long-term and permanent. It is really difficult to bring up and educate young generations throughout the period of their growing up. In addition to the direct connection between higher and secondary education, the higher commitment of universities to the topic will create an appropriate public environment that can have a targeted impact on this process. Part of this social environment are the parents, who in most cases are promoters of studying abroad, but again without having enough information about the state of higher education in our country. Very often they are guided by the belief that in our country almost everything is bad (Terziev, et al. 2020c). The role of the academic staff is to disseminate and share knowledge, information, to play the role of educator in the most general sense of the word. This will in no way lower, on the contrary, it will increase the authority of the teacher and the scholar. Another important factor is the effort of the academic community in promoting and incorporating democratic values, in providing an environment for achieving inclusive and sustainable growth, which cannot happen without a strategic change in attitudes towards demographic problems. The universities should concentrate their activity to provide physical information and communication access to the university structures, programmes and research, as well as knowledge transfer. Another focus in this direction is advertising. Why is it possible for the Global Education Platform to be advertised in all possible ways, and Bulgarian higher education is satisfied with a short exposition, information about which appears sporadically. It is not good to promote higher education through awards for enrollment in a given university, which is the only information that reaches the public channels. The advertising that works for every university are its achievements. In good universities even internal advertising is at a pretty high level. We often tend to point out the problems, the negative details and this creates conditions for a negative environment in society, hostility and outflow of interest. Local communities do not know the academic community and each university has excellent lecturers and good scholars who can present them to the public. Knowledge is not meant just for the „behind the fence“ of the university. Publicity is mandatory if we want others to like us and in order to be liked - they must know us. There are positive examples in this regard, when, for example, a municipality starts working with the universities on its grounds, when the partnership becomes visible to the community, the interest in receiving education in these universities increases significantly. There is no one else to improve the situation of a lack of interest in Bulgarian universities except the universities themselves. An example of municipal scholarships at a university on municipal territory does a wonderful job. In this regard, student councils would also be of good assistance. They are not just an element of sports or election events, but examples to show that universities can solve municipal problems. It is time to include criteria related to usefulness for society in the evaluations of universities and the quality of higher education. Otherwise, the rating system is becoming a self-service system that will not lead to smart growth or knowledge economy, formulated with the Lisbon Strategy in 2000, but still unattainable. There is no way to quickly overcome the challenges posed by the demographic crisis, at least for now. Let us make more efforts to reach spiritual maturity and elevation and not just focus on survival. So that our movement forward is accompanied not by decline, but by the meaning of successful development!

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## PROCESSES OF GLOBALIZATION - NEGATION OF IDENTITY

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### ABSTRACT

*Cultural tourism is being promoted as an increasingly attractive tourist segment, and thus is becoming more and more interesting, both for researchers and for creators of economic development policies who recognize this area as a significant national economic resource. Even less economically developed nations that continuously lag behind in economic development and national economic competitiveness are developing strategies to attract tourists by promoting their cultural heritage. During the last two decades, intensive scientific and professional activities have been initiated in order to explore the role and authenticity of cultural tourism, and with that its importance in the context of national development strategies. The world is rapidly becoming more integrated, and local developments are increasingly linked to politics and economics. Globalization has had significant impacts on tourism. The dynamics of globalization are also causing continuous changes in tourism (Buhalis, 2001). Therefore, in order to understand the strong link between globalization and tourism, we need to clarify the various concepts we offer through tourism. In fact, the emergence of globalization, provides suitable conditions for promoting tourism. However, along with this fact, a competitive advantage will also be created between more developed countries and the least-developed countries in the race to compete for their share, and will result in an imbalance between supply and demand. Countries that offer recognizable and authentic tourism products are able to benefit the most. A tourism-oriented country like Croatia will, with very little change in terms of globalization, or only a brief globalization-related change, have opportunities for development and will not lose out. In most scientific discussions, it is clear that continual re-examination is taking place regarding the extent and nature of the real share of experience in tourism that is based on the element of national identity. This paper, on the example of the Croatian economic ecosystem that is going through multiple transformation processes catalyzed by transition, globalization and global crises, explores the relationship between national identity, both ethnic and national in the context of defining cultural tourism. In addition, the determinants of different identities in the plural context of today's societies are examined on an interdisciplinary basis. As a result, it offers recommendations on how identities are created and differentiated, what forms them, and which institutions participate in this process. By using the example of globalization in Croatia, we will attempt to establish arguments for globalization and cultural identity being able to go hand-in-hand.*

**Keywords:** *cultural tourism, identity strategies, national identity, globalization*

### 1. INTRODUCTION

In recent decades, many deeply involved debates have emerged, which strive to respect the role of authenticity in the development processes of cultural tourism. In today's mobile world, there



is a strong link between multicultural tourists and multicultural guests. Tourism enables a meeting between multicultural hosts and guests in an always mobile world. In all discussions, constant re-examination is clearly seen, concerning the real share of the experience of the tourism industry, as well as the nature thereof. Why is an orientation towards certain destinations not considered cultural tourism, say a trip to Brussels, while a trip to Paris is considered cultural tourism? It is not good for cultural tourism to be constantly tied to the "symbolism" of tradition. It is a part of a culture and all spiritual forms of culture, whether material or immaterial. Tourism is just that, cultural tourism: "People don't come to America for our airports, they don't come for our hotels or sports or recreational facilities... They come for our culture: high culture, low culture, middle culture, right, left, real or imagined — they come to see America" (Keillor, G. 1995). Therefore, this paper will also explore the topic of ethnicity, including the subtopics of ethnicity and culture. Terms; culture, ethnicity, development: Challenges of identity reconstruction; Culture, myth and ethnicity; The boundaries of *ethnicity*, *culture*, *tourism*, are comprised of the concepts of culture, ethnicity and identity. What we want to emphasize here is the relationship between culture and ethnicity in Croatia, but also in the wider European context, because we are deeply convinced that there is no other form of tourism than cultural tourism. The question of the relationship between the ethnic and the national is also raised, and the determinants of different identities in the plural context of today's societies are also examined on an interdisciplinary basis. How identities are created, differentiated, what forms them and which institutions aid in that process, are just some of the important questions that the text tries to answer. Why does militant ethnicity appear as a choice for an identity strategy in Croatia? How is this going to allow us to be a welcoming country for tourists? We are aware that Croatia has always been a part of Europe, but there is always the question of its cultural and ethnic diversity, its organization, and questions of identity, both within the country and within the larger European market.

## 2. TOURISM

Tourism is like any other industry. Although it offers intangible, short-term services, although it is characterized by global competition, and although it is dependent on political developments, tourism is like any other industry in its most important market feature: consumers have certain ideas about what they require (preferences) and choose the offers that best meet their needs. Therefore, it is crucial to have a detailed understanding of the ideas that consumers have about their dream trip, going to a destination to remember, or an adventure trip, even the memory of which will still give them an adrenaline boost. Governments of tourist countries, tourist organizations or destinations, cities and regions need to understand what the consumer is thinking in order to be able to design offers that best suit the consumer's preferences, and thus increase sales, and preferably satisfaction as well, and with that the likelihood that tourists will return. Why do tourists come to Croatia at all? What are their preferences? Croatia is the country of the European Union that is most dependent on tourism. Revenues from tourism account for a quarter of Croatia's GDP, if direct and indirect revenues are taken into account. Direct revenues are those of hotels and restaurants, and indirect revenues those of suppliers. Revenue from tourism is so important that the government had to take some risks and opened the borders in 2020, not least because tourism accounts for 11 percent of GDP, and indirectly for 16 percent. In Greece, 26 percent of workers are employed in tourism. In terms of absolute numbers, no country in the world receives as many guests from abroad as France (89 million international tourists in 2018). And in second place is a European country, Spain (83 million). In terms of revenue from foreign tourists in absolute numbers, Spain (71 billion euros in 2021), France (58 billion euros), Italy (45 billion euros) and Germany (37 billion euros) may lose the most due to restrictions imposed in the fight against coronavirus.

Even today, we are still spurred on by the difficult situation due to COVID, especially because the decline in tourist traffic in the world could amount to 60 to 80 percent in 2021, according to the estimate of the World Trade Organization for Tourism (WTO, 2020). This has impacted Europe the most, as it accounts for 51 percent of international arrivals. The drop in tourist traffic in the world could amount to 60 to 80 percent this year, according to the World Trade Organization for Tourism. However, although we have the opportunity to read scientific texts in the field of cultural tourism (Buhalis, D.; Richar, G.; Kostanje, M.; MacCannell et al.), only one framework is offered for cultural tourism studies, and is interested only in using the "allegory of culture" to utilize the possibilities of the destination in order to gain further advantages in the world market without offering an understanding of cultural problems and how to truly make a tourism product from cultural resources which every country possesses. Today, in Croatia and beyond, the concept of cultural tourism is used in an ethnocentric sense to mark "the other/different".

### 3. CULTURE

When we find ourselves in the area of culture, this is when economics can mean little or nothing to us. This is because man, his world, the whole of the human world and culture, and his specific human situation cannot be measured or compared at all or even in part. Cultural research is a social activity that must take into account the totality of the social relations of which it is also a part. Today, the way of connecting new research with the existing fund of scientific knowledge already present and demarcated in scientific theory depends primarily on the general theoretical development of a particular science, as well as on the development of the theory itself found in a particular field of research. Culture is a universal human phenomenon (Skledar, 2010), culture is both an anthropological concept and a very important generic feature of man as a social and individual being, as well as a spiritual and creative being. Therefore, we can conclude that no society in history is without a certain degree of culture in the broadest sense of the word, i.e., as an organization and a means of survival, nor an individual as a natural member of a particular society, who has not adopted the basic patterns of associative culture, processes of socialization, and internalization. From the primary meaning of the term culture (lat. cultus, colere) a term that directs us towards cultivation and working of the land (cultus agri, agri-culture), only later does culture acquire the meaning of cultivating and nurturing the spirit, as it is understood in the narrow sense. The famous Roman orator and philosopher Cicero, in part of the debate in Tusculum, gives us philosophy (philo-sophia, from the Greek for love/pursuit of wisdom, understanding the world in its foundations) the role of building up and ennobling the human spirit and soul ("Cultura anima philosophia est"). In the Middle Ages, the term culture acquired the meaning of a religious cult, i.e., a religious rite and worship. But the concept of culture was originally formulated by the philosophy of 18<sup>th</sup> century, when scholars began to rethink the concept of culture to align it with the interests of nation-states. Hence, in the 18<sup>th</sup> century, a new term appeared - civilization. In France and England, the term civilization acquires a higher-level meaning in the development of humanity that occurs after savagery and barbarism (Morgan, H.L., Engels, F.), and is characterized by the appearance of a writing system, monogamy, the discovery of materials, and the like. A collective sense of belonging that was shaped by a biased (romantic) view of history, an ethnic and linguistic homogenization that brought scattered human groups together into just one entity in a common territory. The idea of Eurocentrism, i.e., the understanding of the cultural superiority of the West and its historical obligation to help undeveloped nations rise to the level of civilized ones, dates back to that time. However, the understanding of the concept of cultures and civilizations is not unambiguous (Valčić, M. 2019). In German science, it is understood as the difference between the field of technology (material culture) and political and legal supplementation, and the sphere of spirit, art, religion, philosophy, so-called higher ideational culture, on the other hand.

Also, it is not easy to assign a label to a complex notion of culture. Culture is a set of all processes and creations that have arisen as a result of the material and spiritual intervention of man (the human race) in nature, society, and the human spirit. The basic meaning of culture is the maintenance and progress (humanization) of man, his society and life. To thematize cultural creativity within the possibilities of reflection thereupon, means necessarily to relate it to work as a purposeful and expedient but painstaking activity of a serious man who creates, but also to an inventive game of creative imagination. In the history of culture, the question of a nation is interpreted differently depending on theories employed, but the fundamental realization is that throughout history the notion itself has sometimes been decisive. Going through the Croatian history of art, there is an evident evolution from the medieval communal consciousness (the Gothic painter Blaž Juraj Trogir), but there is also a developed regional affiliation (Juraj Matejev Dalmatinac), to the Croatian regional-national consciousness (Ivančević, R. 1999) (starting from the Baroque, when it developed in northern Croatia and Slavonia, which is symbolically expressed in the phrase Croatia rediviva, in 1700), while the nation has been the foundational determinant of the notion of the individual only since the 19<sup>th</sup> century. In Romanticism, throughout Europe after the French Revolution, the French imposed national symbols on us, from the anthem to the tricolor. In addition to nationalism, chauvinism was imposed on us hand-in-hand. A term first unmasked and determined by the French (a character from a comedy, a fanatical patriot, Napoleon's soldier Chauvin, a supporter of French imperialism, hence the derived chauvinisme-patriotisme exclusive). And now that we finally have a state as well, we are suddenly trying to offer the world a militant identity. Recently, EUROSTAT has been successfully conducting research related to the economic valorization of culture and cultural events. The document <sup>1</sup> shows how Eurostat distributes data related to culture, how it defines the entire area - in Eurobase and - the cultural framework for cultural statistics covers 10 cultural areas:

- heritage
- archive
- libraries
- books and press
- visual arts
- performing arts
- audio-visual and multimedia
- architecture
- advertising
- artistic crafts

And six functions:

- creation
- production / publishing
- expansion / trade
- preservation
- education
- administration / regulation.

Statisticians in the field of culture face many problems and only the first difficulty relates to defining the concept of cultures. The generally accepted definition of "culture" does not exist and will probably never exist.

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<sup>1</sup> STATISTICAL GUIDELINES MANUALS AND GUIDELINES, Guide to Eurostat culture statistics  
2018 edition, Guide to Eurostat culture statistics 2018 edition

Then there is the problem of how to describe culture in numbers. In the development of cultural statistics, EU statisticians also had to face a host of more practical challenges. Following the adoption of a resolution on the promotion of culture and economic growth statistics by the EU Council of Ministers of Culture in 1995, Eurostat (EU Statistical Office) set up a pilot group of national experts (LEG-Culture, the "Leadership Group - Culture") in 1997. The Group has issued the *first European methodological framework* to cover cultural statistics, terms, definitions (including, first, a definition of the area of "culture" for statistical purposes and key indicators in the field of cultural employment, cultural financing and cultural practices. Therefore, the presented definitions and methods refer primarily to the general methodology used for various EU surveys, and are at the same time a kind of cultural aggregates that are specific to cultural statistics, but some (e.g., printing "cultural codes" in different classifications) represent a matrix that is also used to analyze employability in culture.

#### 4. CULTURAL TOURISM

Many authors, believe that "tourism is culture" Urry (1990). For MacCannell (1993) "all tourism is a cultural experience" Valčić, M. (2019) presents a list of types of tourist attractions, which can be created primarily on the basis of the following attractions:

- Socio-cultural attractions (prehistoric and historical attractions, houses, costumes, furniture, social life, etc.);
- Historical personalities (sites and areas where writers and painters lived and worked);
- Art (theaters, street performances, circuses, etc.);
- Parks (arboreta, ornamental parks, historic parks, etc.);
- Museums, galleries, primarily art galleries;
- Festivals and events (historical fairs, festivals related to past events, country festivals, religious manifestations etc.);
- Stylish and old houses (palaces, country houses, nobility castles, etc.);
- Religious attractions (cathedrals, churches, chapels, mosques, ancient Greek, ancient roman, ancient vineyards etc.);
- Cities (historic cities, buildings);
- Villages (rural architecture);
- Valuable areas (national parks, rural areas, gastronomy);
- Coastal cities (old coastal towns, old (ancient) harbors, lighthouses, islands);
- Regions (historical and geographical areas that are specific in their lifestyle).

##### 4.1. The Context of the Cultural Tourism

The main usage of the term cultural tourism involves the consumption of a wide range of cultural manifestations like heritage, art, folklore, festivals, gastronomy and etc. by tourists. One of the most important "components" of cultural tourism and tourism in general is the issue of *national identity*. Only, the path of working on the mantra of identity and merging with cultural tourism is long. In other words, identity is assumed as a:

- Archaeological sites and museums
- Architecture (ruins, famous buildings, whole towns)
- Art, sculpture, crafts, galleries, festivals, events
- Music and dance (classical, folk, contemporary)
- Drama (theatre, films, dramatists)
- Language and literature study, tours, events, myths
- Religious festivals, pilgrimages
- Restaurants, viniculture
- Complete (folk or primitive) cultures and sub-cultures

The main use of the term cultural tourism involves the consumption of a wide range of cultural events by tourists, such as heritage, art, folklore, gastronomy, wine roads, pilgrimages, sports, etc. Cultural tourism can generally be seen as a sociocultural relationship among people that promotes, moderates and mediates among various actors, including governments, citizens, politicians, economists, researchers, marketing professionals, travel agencies, travel planners and the like. There is another approach, called the "conceptual approach" (Richards, G. 1996), which tries to better define cultural tourism by analyzing the practices, experiences and meanings of cultural tourists in contact with other places and cultures (McIntosh and Goeldner 1986). "As with tourism in general, conceptual definitions of cultural tourism attempt to describe the motive and meanings attached to cultural tourism activity" Richards (1996); Definition of cultural tourism by McIntosh, R.W., and Goeldner, C. R. (1986) includes "All aspects of travel, whereby travelers become familiar with the heritage and history of others or their contemporary ways of life or thought". Research into the conceptual definition of culture reveals that culture consists of products (such as heritage, buildings, customs, and art) and processes (lifestyles) associated with culture. The factors that include the emergence of identity in cultural tourism (Richards and Pereira, 2006) are the following:

- The need for regions to distinguish themselves
- The search for new forms of community
- The need to valorize culture
- The shift towards experiential tourism
- Postmodern/postcolonial reification of identity

The author describes the identity itself as "a process of social construction of meanings that utilizes cultural attributes" which occurs in the context of power relations "(Richards, G. 2006). The processes and products of other cultures are what cultural tourism offers to cultural tourists. On the other hand, there is almost no doubt that culture is a crucial component of a tourist "product" and that it can determine the competitiveness and efficiency of tourist destinations. Cultural tourism can play an important role and contribute to all three of these types of identities; for example; promoting the importance of heritage, both tangible and intangible, thus supporting the legitimate national identity, creating new cultural plans of a resilient identity and of course promoting new images of communities for the possibility of working on a planned identity. Therefore, it is obvious that cultural tourism can play a crucial role in building and restoring identity, as well as creating a new one, for tourism consumption. In the case of Croatia, tourism does not have a more significant impact on the transformation of identity. Interculturalism in Croatia has a real and lived foundation, primarily in the fact that the Croatian nation itself was extremely heterogeneous in its emergence, and that this heterogeneity, as well as the awareness thereof, is still evident in some Croatian regions and in the diaspora. All this, as well as all of the fundamental changes and transformation of identity, can add new senses and meanings to people and spaces.

## **5. GLOBALIZATION AND TOURISM**

Furthermore, another factor that reveals the close connection between identity and cultural tourism is the current issue of globalization, along with loosened social ties, the decline of traditional family forms and structures, and individualism. This emerging situation requires redefined "symbolic constructs for communities", where cultural tourism can act as an ideological stimulus to promote a new image and identity in response to contemporary social relations, thus altering boundaries and boundaries between different human groups both locally and globally. Despite different interpretations of contemporary social processes, a kind of consensus has been observed that issues of culture, ethnicity and identity are among the central problems of contemporary societies.

Croatia achieved its dream of nationhood only in 1991, eventually becoming the 28th member of Europe, and the cry "But we are Europe!" is already being imposed on us. This desire - *desire of Europe* (Remy, 1997), if it wants to be effective, must therefore be operationalized. It would have to move from a universe of notions of diversity to a universe of strategies on how to adapt to diversity (Remy, 1997). Because what would be the new culture of Europe? We are united by universality, but we exalt our uniqueness. Strategies of synonymy with Europe have already been developed in the fields of politics, money, the economy, the media, labor, and the associated rights and duties of its citizens. But, as we have said, culture, on the contrary, carries effective symbols and moral norms and exists exclusively and only if the individual identifies with those symbols and norms within the community. European culture is dealing with two legacies. The question is what is sameness, and what is the other who is not like me? Culture is actually like an identity; we are constantly invoking what we are, they are reinterpreted, adapted, their role in communities' changes, and at the same time it is postulated, outwardly, that it should not change, that it should remain the same. Yet every culture is a process, subject to outside influences. Let us say that the European area will not be based on national borders, but will emphasize the factor of belonging. Croatia is in that situation. It has no positive program of national gatherings after the end of the war. Instead, we tread unprepared onto the path of transition. Despite the both historical and class-related significance of culture and cultural differences, cultures of certain relatively homogeneous social communities have something special, something characteristic, so we can speak of ethnic and national cultures and their peculiarities. *National cultural identity* is a synthesis (not an inept sum or conglomeration) of all material and spiritual cultural creations of activity, the totality of given and requested answers to important human questions. It is also a synthesis of the basic needs of a certain socio-cultural and national space, which makes it special, separate, intrinsic and autochthonous. This is exactly what tourism seeks.

## 6. ETHNICITY - NATION

Thus, *ethnicity*, ethnic group, people and nation (*nation, natus*) are complex terms that contain several active but also key components. They reflect the following: origin, space, history, tradition, culture (language, religion), society, political and economic interests. From this, it is already clear that relationships from the layer of cultures and ethnicity are closely interconnected. A nation is formed from ethnic groups when certain historical, social and cultural conditions are met. Just one of the above-mentioned conditions is not alone sufficient to shape a nation, but the cultural one always prevails. The Croatian nation, for example, was formed under the influence of certain political, social and economic factors, but above all on the basis of cultural reasons. These are the basic integrated factors, in addition to a standardized national language, tradition, literature, education, and the Catholic faith. The Croatian identity is not an ethnic concept, but a cultural one, and many ethnicities had a part in its creation (Serbs, Germans, Austrians, Hungarians, Italians, Slovaks, etc.) We could rightly ask ourselves: is there a French cultural identity? What would be left of, say, French culture if we exclude certain artists from their museums, even though these are the very reasons why we visit Paris in such large numbers: the Romanian Brâncuși; the Spaniard Picasso, the Italian Modigliani, the Dutchman van Gogh? In parallel with this statement, we could say that none of them created Romanian, Italian or Dutch art, but rather French and Parisian art. Despite this diversity of artists' nationalities in all fields of art in France, no one is so stupid or uninformed as to believe that there is no French cultural identity because there is no French ethnic identity in the culture of the nation. We correlate ethnicity with culture, but we can also do so with the nation. An attempt is made to present an understanding of the concepts from the title which, although each has characteristics of its own, are intertwined and complementary. We started from the definition of a nation, at the center of which is the political awareness of a specific people.

Special mention should be made of traditionalism, which should be considered bearing in mind the positive side of living tradition and the negative side of conservation and closure, and we should also touch on the effect that the process of globalization can have in the contemporary world, including Croatia. In the study of culture, many authors pay special attention to language, as a symbol by which almost every ethnic and national culture emphasizes its uniqueness, and which can sometimes be a means of preserving endangered cultural and national identity. In any idea of a nation based on a substrate of ethnicity, there are two components: *rural* and *urban*. Thus, in our country as well there are two comparative cultural traditions. However, in our country it is determined that only the rural component can be "*ethnically pure*" - the urban is by definition *multiethnic* and *pluricultural*, and even modern *city, urban culture* cannot be *monoethnic*. All ethnic doctrines about the Croatian nation today are based on *rural* culture, while the *urban* one is neglected. Within the whole of culture, ethnicity, and development: the challenges of reconstructing identity, the text (Katunarića, V. 1999) begins with the statement that in countries undergoing transition there is no longer a political interest in elite culture. The author points out that in countries in transition there is a division of the cultural elite into "traditionalists" ("folklorists") and "modernists" ("pro-Westerners"), and parts of modern high culture (art, science, higher education) are poorly interconnected. Attention should also be paid to the value possessed by creative culture, which is increasingly beginning to be understood as the development potential of society. In this context, the author highlights the example of Croatia as a less developed country that could benefit from culture understood as socio-cultural capital. Culture is all that is man, endowed with reason and faith, man who lives in the here and now, man who has lived before, whether alone or in society, whether active or passive. In Croatia, the concept of cultural tourism is used to mark ways of life in the impression of rich heritage.

## 7. CONCLUSION

The first polemical point in this article is the need to develop a strategy, which means positioning as a tourist country and realizing that everything related to culture is considered worthy of observation. Furthermore, as we tried to connect some factors that reveal the close connection between identity and cultural tourism, we defined the current issues of globalization and nationalism. In Croatia, cultural tourism can also act as an ideological stimulus for promoting a new image and identity in response to the contemporary social relationship, in this way changing borders both locally and globally. Cultural tourism invokes the value of tradition, but the emergence of the future of post-socialist countries takes place on "another stage", on the foundation of the present of globalized capitalism. At the level of mega-trends, for reproducing the construction of "globalized capitalism" the following statement holds: whichever path you go down, if you do not follow the rules of transition along the way, or if you even go so far as to resist them, they catch up with you if your "appeasement" or "pandering" becomes conscious through the circumstance of its reproduction. Tourism and cultural tourism have not only alleviated the burden of underdeveloped parts of the economy in Croatia, but have already happened along with the economic and political changes in our country.

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## **CIRCULAR ECONOMY - A BUSINESS MODEL WHICH LEANS TOWARDS A COHERENT LOW-CARBON ECONOMY FOR BATTERY WASTE FROM ELECTRIC CARS**

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### **ABSTRACT**

*Road transport accounts for approximately one quarter of total global greenhouse gas emissions into the atmosphere, which ranks it second in terms of the rate of emissions into the atmosphere, right behind electricity and heat production. To address this problem, more and more users are choosing to replace their traditional internal combustion engines with battery-powered electric vehicles. The problem in this arises with the increased generation of hazardous waste because of battery waste from electric vehicles. This initiative raises certain issues, among which the one related to the issue of worn-out electric batteries can be highlighted. In the process of battery production, various raw materials and minerals are used which raise the price of the batteries themselves, but also huge amounts of natural resources such as water. Furthermore, after their lifespan, batteries become an environmental issue that requires a great deal of attention because they can cause environmental pollution. The problem that we encounter today with the batteries is that there is the endeavor to create independence from countries rich in raw materials for battery production and reduce the burden on primary production, while on the other hand the complexity of the recycling process makes the whole process questionable, which often requires alternative solutions. One of these solutions is the reuse of worn-out batteries. It is in this segment that the implementation of a new business model is required – a business model which leans towards a coherent low-carbon circular economy that will create a new value chain for its products. The low-carbon closed-loop business model should integrate the threefold goals of positive impact on people, planet and profit. Such a model needs to be developed based on regulation, stakeholder cooperation, research, investment, and incentives leading to global sustainable development goals.*

**Keywords:** *Battery waste, circular economy, electric batteries, value chain*

### **1. INTRODUCTION**

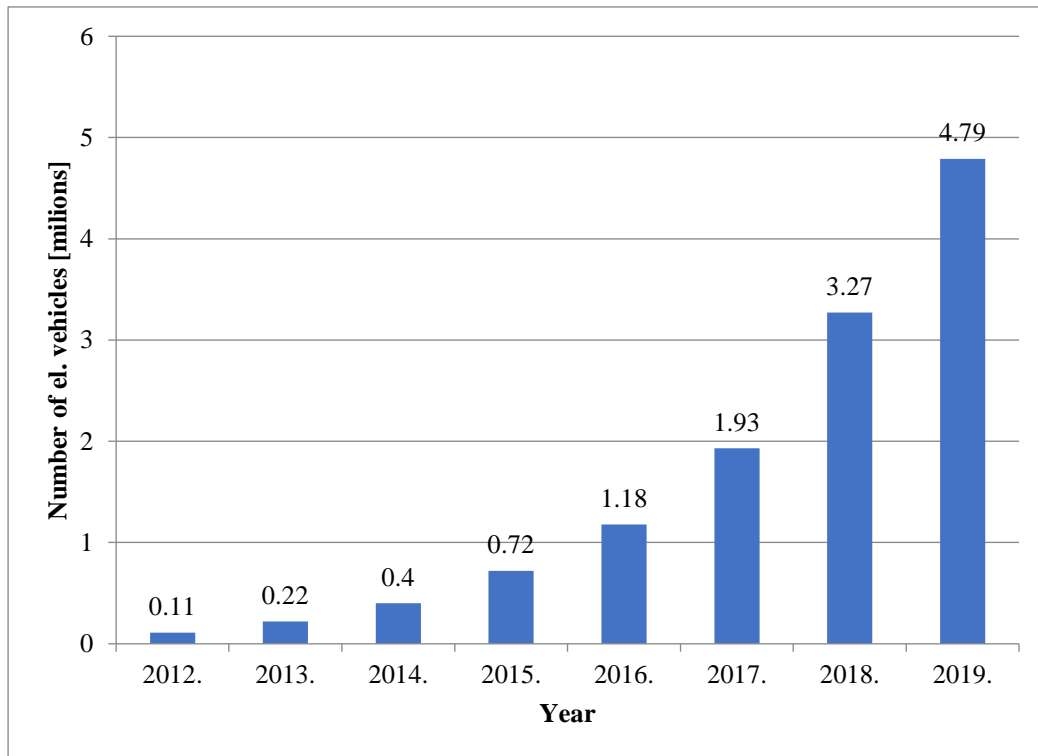
Circular economy is a political-economic strategy devised in the year 1989 by British economists David W. Pearce and R. Kerry Turner. The intention of circular economy is to direct economic development in the spectrum of sustainability by implementing a circular system that includes the 3R concept - reduce, reuse and recycling of waste generated by social activities. In this way, it will contribute to reducing the load on resource sources, waste generation, emissions of various gases, substances and ultimately reduce environmental pollution. In this way, a healthy quality basis for sustainable development is created. This provides certain benefits such as more efficient use of resources and energy which try to mitigate climate change and generate new, so-called "green jobs". Therefore, the principles of sustainable development are aimed at connecting the economic segment of society with the ecological one. Guided by such an example we can mention one of the crucial problems of the today's world - air pollution due to the transport sector. World Health Organization reported that approximately 4,2 million people

died in 2016 because of air pollution, which also indicates societies health problems (J. Lelieveld et.al., 2019.). Precisely with the aim of reducing the mentioned consequences, more and more people are thinking about changing the conventional mode of transport – from fossil fuels to alternative (renewable) solutions. One of these is the electrification of traffic, which at first seems like a very acceptable solution, but a more detailed analysis reveals problems such as those with pollution during the exploitation of raw materials to produce crucial elements of electric cars - batteries. Furthermore, there is the problem of management when they become waste, i.e., after the end of their life. Although there is a possibility of recycling them, such a method is of questionable acceptability from an economic, as well as an ecological point of view. From a financial point of view, the recycling of waste batteries is mostly unacceptable because the costs of the recycling processes are higher than their ultimate benefits. The environmental aspect related to the emission of certain gases into the environment should be considered as well as the risks that arise due to them releasing certain hazardous substances in the process. Following all the above, the question of proper management of the mentioned products is raised. One of the possible answers to this problem could be the use of the circular economy model. This includes the acceptance of waste batteries and their use for other purposes (*reuse*). One impressive example of good practice is „The Reborn Light" project which originated in Japan. In this project, such batteries are used in correlation with solar panels in the “Off-grid” lighting system (W. Gao, et.al., 2018.). Another good example would be „The Smart Island“ project which refers to the Portuguese island of Porto Santo (A. Mahmoudzadeh et. Al., 2017.). The aim of the aforementioned project is to turn it into a maximally sustainable island where most of the population's needs are met from renewable sources such as solar panels and wind farms. The waste batteries that are generated there are used to supply the island's households with electricity. Such an approach to solving the problem of waste batteries from electric vehicles is considered sustainable and shows how the implementation of circular economy as a business model in all segments of society results in the creation of smart cities, islands, lighting and helps other segments contribute to low-carbon economy of sustainable development.

## **2. CIRCULAR ECONOMY ON THE EXAMPLE OF MANAGING WASTE BATTERIES FROM ELECTRIC VEHICLES**

Following air pollution (which originates mostly from the transport sector), health and environmental issues, the electrification of traffic is considered a “hot topic” and the next giant leap in the transport sector. As some researchers indicate, by the year 2030 more than 50% of cars could be electrically powered (A. Das, D. Li, D. Williams, 2018.; W. Lv et.al., 2018.). The graphic overview which was created by the International Energy Agency (IEA) shows the growing trend of electric vehicles which are in use over the last 7 years.

*Figure following on the next page*



*Figure 1: Graphic overview of the growing trend in the number of electric vehicles which are in use over the world in the period 2012-2019.*

*(Source: IEA, 2020.)*

If we look at air pollution, it can be noted that this is a significant step towards the improvement of the quality of the atmosphere on one hand, but on the other the issue of waste batteries is going to raise because of their linear increase. This means an increasing exploitation of resources associated with the production of batteries which are used in electric vehicles. Of course, such processes lead to environmental pollution. Furthermore, there are concerns about resource dependence as the sources of such resources are mostly in countries with questionable democratic standards and policies. Some say that to create independence in the battery sector for electric vehicles it is necessary to invest funds into the recycling technology. Implementation of a circular economy in this field is considered a basic economic model if we want to achieve sustainable development. Battery life depends on mileage, number of charges, performance and quality of production. A few years ago, the average battery life was estimated to be approximately 10 years. By investing in production technologies, the performance of batteries has improved as they have become more robust and environmentally friendly. In 2018 a research published by A. Das et al., shows that new versions of batteries can reach a life cycle of over 20 years (A. Das, D. Li, D. Williams, 2018.) which is a significant upgrade. The moment a battery from an electric vehicle becomes waste, it can be disposed of in 3 different ways - it can be recycled, reused or it can be disposed of in a landfill.

### **2.1. Recycling of waste batteries from electric cars**

When it comes to recycling it should be noted that such a process is performed by accredited and specialized companies that recover valuable metals found in the battery such as cobalt (Co), magnesium (Mg), nickel (Ni) and lithium (Li). These metals are then sold for use in future battery production. In this segment, the question of profitability of such sales or purchases arises, since such recycled metals mostly have a higher price due to expensive recycling procedures which means that the cheaper option is the primary exploitation of raw materials.

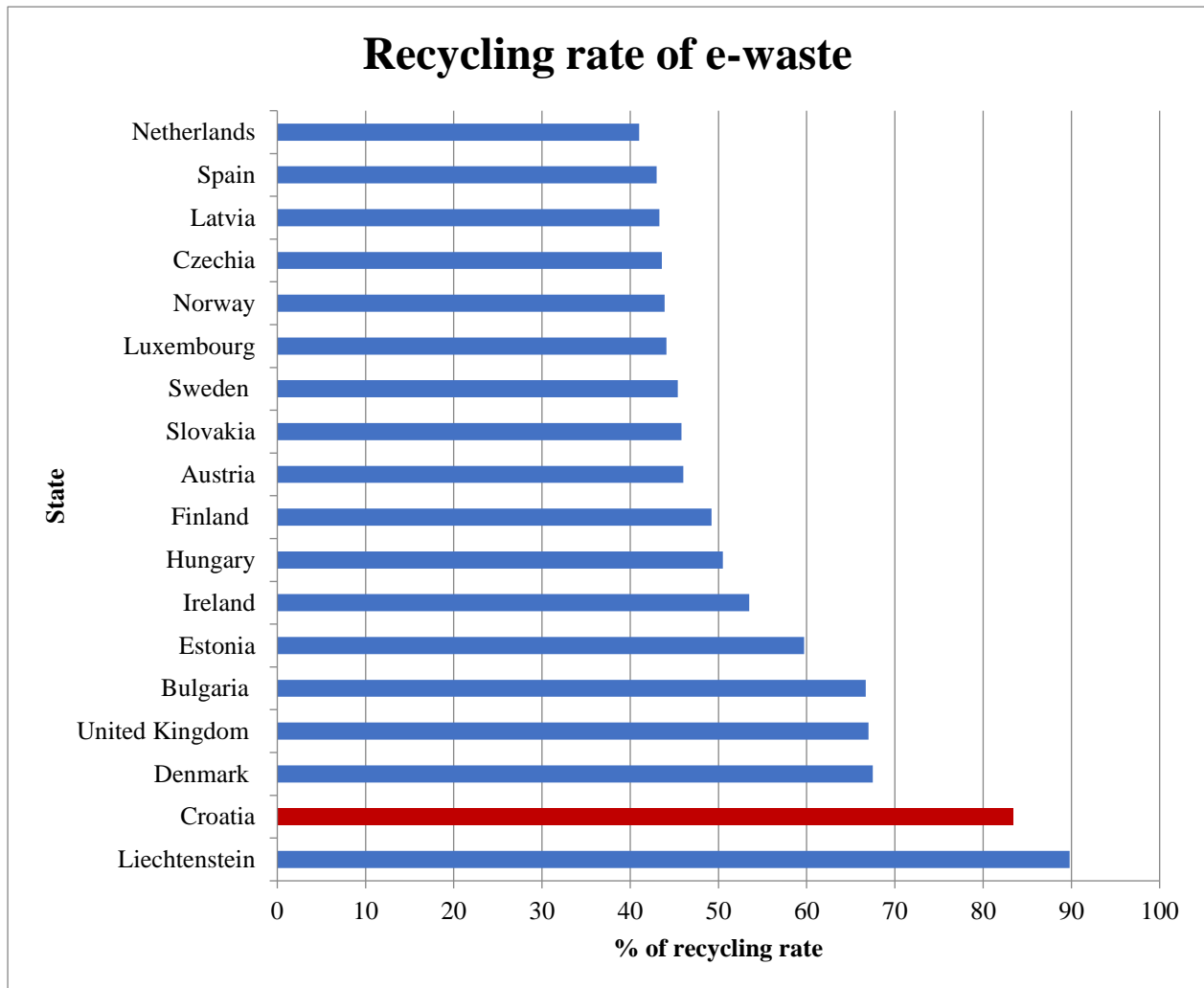


Figure 2: Graphical overview of the percentage of e-waste recycling in relation to countries in Europe  
(Source: Eurostat, 2018.)

To this end, it is necessary to create a strategy on a political level that will stimulate manufacturers of electric batteries to use recycled components. As for the trend of recycling electrical waste in Europe, according to Eurostat data, the Republic of Croatia is doing extremely well in this segment and takes up a high 2nd place just behind Liechtenstein (Eurostat, 2018.). It is also important to emphasize that lithium-ion batteries do not have good results when it comes to recycling because most of them end up in a landfill, which should be the last solution used in the waste management hierarchy. It is for this reason that the End-of-Life Vehicles Directive was launched at EU level, the intention of which is to create a closed loop between all stakeholders who use electric batteries, which would stop them from ending up in landfills and thus contaminate the environment.

## 2.2. Battery re-design as part of the circular economy requirements

To achieve the possibility of a circular economy it is necessary to include strategy guidelines for the design of materials that will contain special, specific requirements aimed at creating a superior design which is aimed at ensuring easier implementation of the circular economy through the reuse, remanufacturing and recycling process of batteries. Each of these processes is categorized by this strategy into a special subgroup in which the main challenges of that group were identified to find the most ideal solution for this issue.

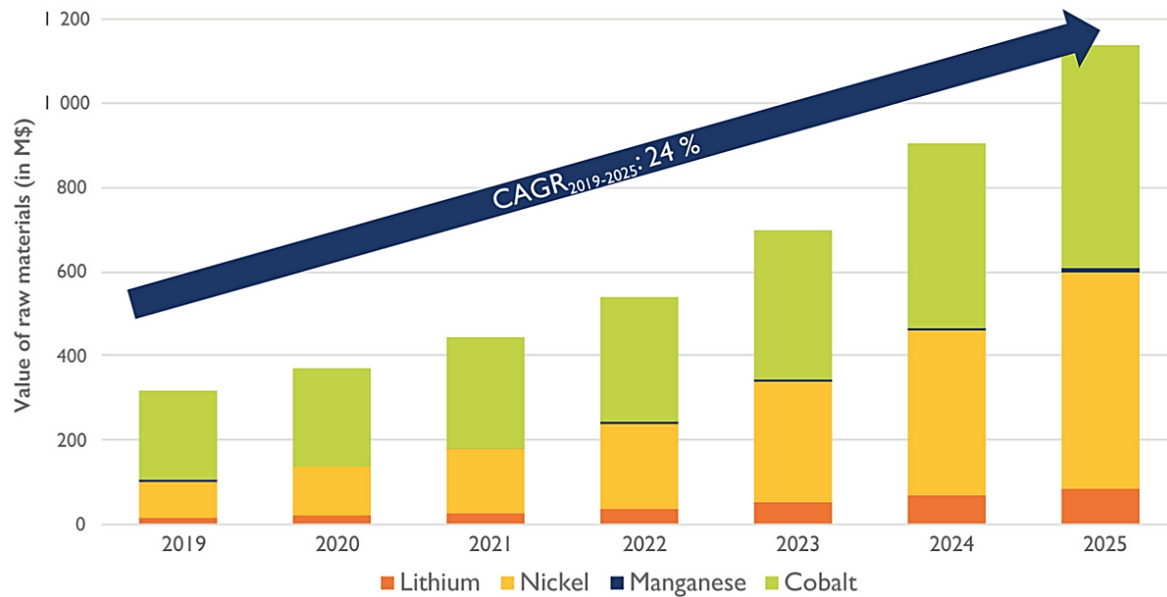


Figure 3: Value of raw materials present in Li-Ion batteries going for recycling  
(Source: [http://www.yole.fr/Li-ionBatteryRecycling\\_MarketUpdate.aspx](http://www.yole.fr/Li-ionBatteryRecycling_MarketUpdate.aspx))

### 2.2.1. Reuse of batteries

Reuse of batteries from electric vehicles is a process that means separating them from cars, testing what their functional state is, which means determining the residual capacity of electricity in them. Thereafter, if such battery meets certain needs it can be used in stationary applications as a power storage system that can supply a less demanding environment. Such systems can be used individually or in combination with other renewable energy sources as shown in „The Smart Island“ project and „The Reborn Light“ project which were mentioned in the introductory part of this paper. Easy and efficient reuse of batteries from electric vehicles is a function in their accessibility. Here we really want to emphasize how the design of the battery affects its accessibility and reuse for another purpose. We want to emphasize the importance of the battery electrode design which should be designed in such a way that can easily and safely establish a connection between the electrode, equipment and the devices that detect battery status at the end of its life cycle.

### 2.2.2. Remanufacturing of batteries

The process of recycling electric batteries from a vehicle involves disassembly into modules or simple battery cells. When such a disassembly is completed, the residual state of electricity within those disassembled components is tested, greatly merging those that are not degraded into a new component or battery pack with a refurbished certain electrical value ready for secondary use (Shedd, K. B., 2017.; Alonso, E. et.al., 2007). The condition for fast and efficient processing of waste electric batteries is the availability of battery module electrodes for fast and safe connection together with test equipment that determines the condition of the batteries. Such a desirable connection is achieved by placing non-destructive links in battery packs having an affinity for easy disassembly and designing module shapes that allow easy handling. This minimizes the risk of short circuits which can lead to potential explosions and environmental hazards, but also compromise worker safety.

### 2.2.3. Recycling of batteries

Recycling of batteries from electric vehicles includes mechanical, thermal and chemical treatment of the same where targeted and available materials of a certain value are separated and reused in the production process, which reduces dependence on primary raw materials

needed for battery production, thus reducing the burden on the entire production process (USGS, 2019). Since the battery pack itself is an extremely complex product in terms of the heterogeneity of the elements, after disassembly into subcomponents, a specific recycling process is intended for each of them. Overall, one of the most important components of batteries in terms of material value are certainly battery cells. Battery cells have a high affinity for recycling. The recycling process is effective only when all elements in the material are easily accessible and with a small number of different elements where we want to emphasize homogeneity. Likewise, such materials must have the properties of easy recycling, easy separation, and it is desirable to identify them through labels. Precisely such properties need to be considered in the production of batteries, but also any other product if the intention is efficient, easy, and cost-effective recycling to reduce environmental impact and contribute to the circular economy. To this end, Joris Baars et.al. have developed four models inspired by the circular economy that can significantly reduce European demand for cobalt (Co) imports, compared to the reference scenario (Figure a.). In the TDS scenario (technology-driven replacement of Co), Co was completely replaced by the year 2050 (Figure b.). In the TDR scenario (reduction of Co by technological implementation) Co was quickly replaced by chemicals with a high nickel (Ni) content, but was not completely substituted (Figure c.), while in the BDR scenario (new business models based on reuse) the batteries are replaced after 8 years in the vehicle, resulting in high collection rates (Figure d.). In the PDR scenario (promotion of policy-driven recycling), improvements were made in collection resulting in a reduction in primary requirements (Figure e.).

*Figure following on the next page*

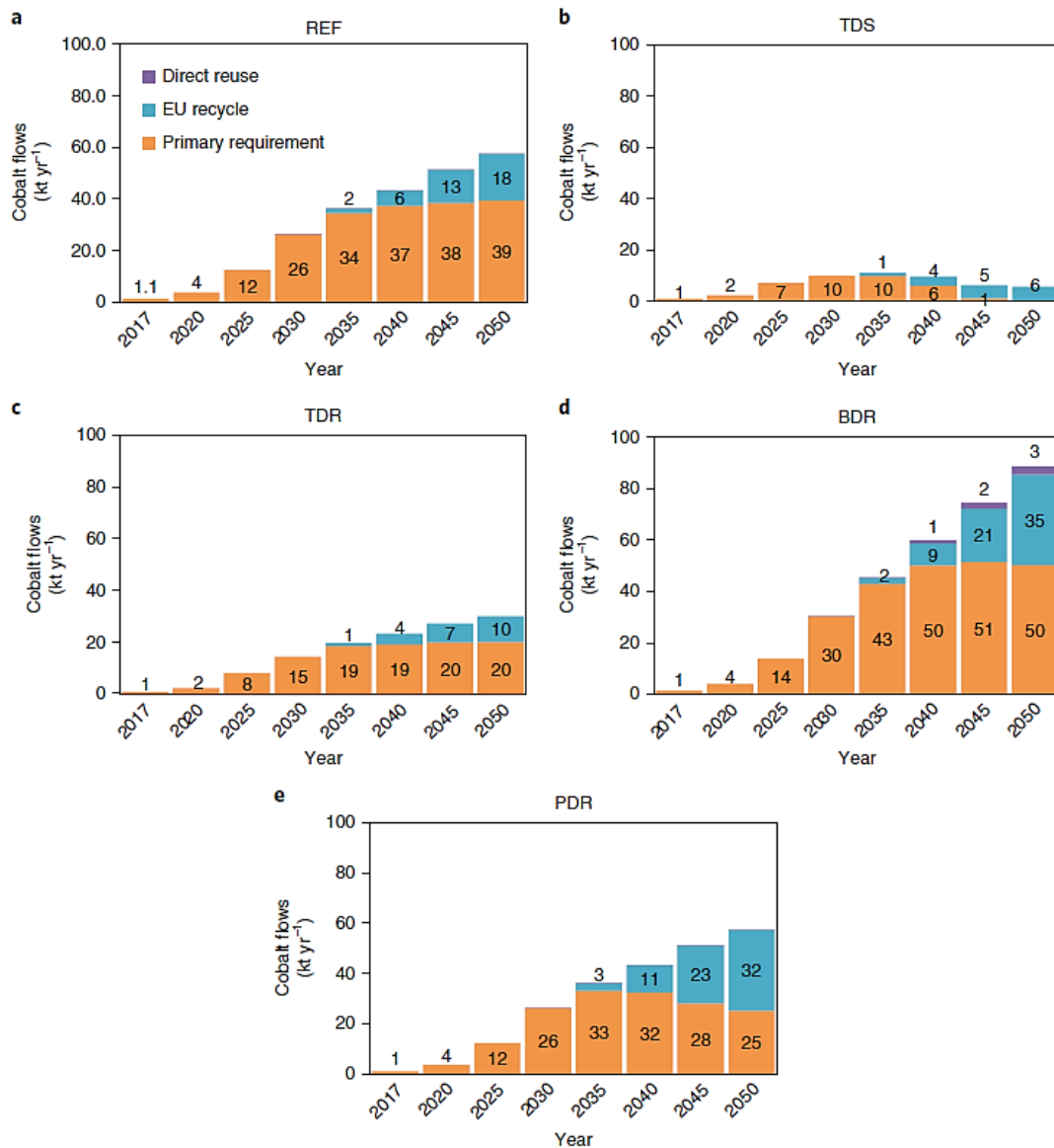


Figure 4: Total demand and supply of cobalt for electric vehicles in the European Union for all strategies (Referent, TDS, TDR, BDR, PDR)  
(Source: Baars, J. Et.al., 2021.)

Reviewing the analyzes made, replacing Cobalt (Co) from lithium-ion batteries with new chemicals looks tempting. Alternative chemicals such as sodium ion cells are proving to be cheaper, more abundant, and less toxic than the technologies used today. However, Baars et.al. consider that the likelihood of these chemistries being fully commercialized within the next decade is rather small considering several technological drawbacks for these new chemistries, despite improved energy density and / or cost. For example, Li-S has a lower lifespan and reduced performance, while sodium ion suffers from low energy density and has a problem of constant stability of substances associated with lithium-nickel oxide batteries. The results of their research show that the replacement of cobalt (Co) with nickel (Ni), which is currently the dominant strategy of manufacturers, could see a greater increase in electric cars in the European Union by approximately 60 times by 2030 (compared to 2017) and up to 190 times by 2050 (Baars, J. et.al. 2021.). An efficient recycling system is a key requirement for reducing primary demand. Achieving a circular economy strategy for batteries will require improving the existing recycling system.

Historically, many lithium batteries were, so to speak, "lost" at the end of the product's life, and thus such batteries did not become available for recycling on the European market. Most of these types of batteries are portable batteries that appear as part of their original devices (such as cell phones, tablets and laptops). Research for the future market for electric car batteries has yet to be conducted, but data suggest that vehicles could be exported and marketed as "second hand" or for the purpose of reusing their components. This could mean that batteries from electric vehicles are "lost" in a similar way as portable batteries and could potentially create concerns about inadequate handling and handling with associated environmental impacts. The business viability of improved recycling will have to be addressed by adverse market conditions and economic uncertainties. Although some scenarios and predictions provide reasonable assumptions based on detailed analyzes, the volatility of primary commodity markets, especially those in the nickel (Ni) and cobalt (Co) markets, has a direct impact on recycling. Given that cobalt (Co) is currently the main driver for battery recycling (Wang, X., 2004.), the shift to high-nickel (Ni) and low-cobalt (Co) chemistries might impact the economic viability of recycling, which may then become more dependent on the price of nickel (Ni). In unfavorable market conditions, policy action may be needed to encourage recycling and ensure minimal negative environmental impact. So far, similar measures and proposals have been proposed to strengthen the circulating flow of yttrium recovered from electronic waste. Such a pro could be extended to batteries from electric vehicles (Baars, J. Et.al. 2021.).

### 3. CONCLUSION

To reduce the environmental impact of the transport sector, which is related to human health, the use of electric vehicles as an alternative drive is becoming an increasing trend. It can be stated that electric vehicles produce less emissions than the conventional ones, which makes them a very acceptable solution, and from a layman's point of view, they do not pose a problem for the environment. However, with a deeper look at the issue, it is worth noting that the „heart“ of an electric vehicle is based on an expensive battery that has its own lifespan. It is considered that in a period of 10 years it gives its maximum. The price of a battery is extremely high since its production uses expensive raw materials that need to be exploited, and this process represents a huge burden on the environment in terms of resource use and emissions that are released during it. Often the territories of countries with questionable democratic standards can be rich in such raw materials, so it is in the interest of countries that consume their services by moving away from them and becoming independent. This can only be achieved by implementing a plan and program based on the 3R concept that is the basis of a circular economy that contributes to the creation of a low-carbon industry. The essence of such an approach is the use or recovery of as many elements as possible that are usable even after the expiration of the battery life. Namely, used batteries need to be recycled, reused or re-produced, and in reuse. „The Smart Island“ and „The Reborn Light“ projects can be cited as glaring examples of good practice, where such batteries in cooperation with other renewable sources are used as stationery supply applications for houses and public electricity lighting. Exactly this kind of ideas support the use of such a technology in smart cities. It can be said that policies such as extended manufacturer liability are feasible and drivers of change that will encourage recycling and increase the collection rate of batteries from electric vehicles. Likewise, efforts are needed on more integrated and resilient supply chains. An example of a scenarios prepared by Baars et.al. would be framed according to a mission-oriented policy approach that promotes the transition to a circular economy. The implications of mineral resources should be crucial for battery research, and new policies should encourage increased accountability and traceability and create favorable market conditions for the establishment of new business models.



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## THE TRADE-OFF BETWEEN INTERNATIONAL ACCOUNTING CONVERGENCE AND IFRS IN-COUNTRY ADJUSTMENTS

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### ABSTRACT

*The problem of reaching international accounting convergence has enticed voluminous research, and evidence suggests that adoption of International Financial Reporting Standards (IFRS) or IFRS-based accounting models, per se, may be insufficient. Institutionalists underline the possibility of decoupling. This has motivated the preparation of this longitudinal and qualitative study using Portugal as an exemplar, to assess the perceptions of tax officials towards the International Accounting Standards Board (IASB) model and, more particularly, the perceived need to adjust IFRS to different national contexts and cultural traditions. Interviews with nine tax officials were conducted at two strategic moments: in 2009, just before formal adoption of an IFRS-based model in Portugal, in force from 1 January 2010 onwards; and in 2017, one year after the IFRS model adopted had already undergone a second round of in-country adaptations. The results obtained in this study suggest high receptivity towards IFRS adjustments when applied to the Portuguese accounting system, despite some individuals surveyed acknowledged a negative impact on the convergence of national standards with IFRS. The perceived need to overcome important national constraints on the adoption of IFRS in Portugal appeared to overpower the pursuit of an ideology of de facto convergence, which is, arguably, compatible with the phenomenon of decoupling.*

**Keywords:** *Harmonization/Convergence, International Financial Reporting Standards (IFRS), Portuguese Accounting System, Accounting Change, Perceptions*

### 1. INTRODUCTION

The IASB leading role in the current landscape of international accounting convergence was reinforced by the change in the European Union (EU) accounting harmonization strategy – outlined in 1995 in Communication 95(508) entitled “Accounting Harmonization: A new strategy vis-à-vis international harmonization.” This set the EU a more interventionist role in the International Accounting Standards Board’s (IASB) harmonization process. This cooperation process between the IASB and the EU culminated in the release of EU Regulation 1606/2002, requiring all EU listed companies to prepare their consolidated financial statements in accord with ‘EU-endorsed IFRS’, from 2005 onwards.

Portugal has not been divorced from the trend towards international convergence (Fontes *et al.*, 2005). Following these developments, in July 2007, the *Comissão de Normalização Contabilística* (CNC - Portuguese accounting standards setter) approved a new accounting standardization model entitled “*Sistema de Normalização Contabilística*” (SNC - Accounting Standardization System) based on the IASB model adopted by the EU, in force from 1 January 2010 onwards. The SNC is an adaptation of IAS/IFRS to Portugal being compatible with IASB standards (Isidro & Pais, 2017). It should be adopted by unlisted companies. While international accounting convergence is pursued, there is literature claiming that adoption of IFRS or IFRS-based accounting models *per se* may prove insufficient to reach improved, fully harmonized, reporting (Ball, 2016; El-Helaly *et al.*, 2020; Fuad *et al.*, 2019; Isidro *et al.*, 2020). It has also been claimed that differences in the national environments justify and require the existence of different accounting standards (Tyrrall *et al.*, 2007). The primary objective of this study is to examine tax officials’ perceptions regarding the need to adjust IFRS at destination (IFRS in-country adjustment). Despite the willingness of the CNC to implement IFRS at the national level, it is commonly accepted that the IASB accounting model is of Anglo-Saxon accounting origin and, therefore, its adoption represents a substantial detachment from the traditionally Portuguese Accounting System (PAS), which is based on the Continental European tradition (Caria & Rodrigues, 2014; Guerreiro *et al.*, 2012). Indeed, the development of financial reporting in Portugal has been mainly influenced by the tax system requirements, which motivated selection of tax officials to be interviewed. Both the interviewed professional group and the country on which this study is based upon, remain under-researched (Silva *et al.*, 2021). The timing of this longitudinal survey is particularly relevant. The first round of interviews took place in 2009, just before formal adoption of an IFRS-based model in Portugal. A second round of interviews was conducted in 2017, one year after the IFRS model adopted in Portugal had already undergone a second round of in-country adaptations. Our core phenomenon does have echoes in prior management change and institutional literature. The gap often found between the formal and the actual organizational structure, has been named metaphorically by the institutionalists as ‘decoupling’ (Meyer & Rowan, 1977). Since the emergence of the thesis suggesting that the national accounting systems are a product of the environment found in different countries, a growing body of research in international accounting is related to the identification and examination of the environmental factors influencing accounting development (e.g. Albu *et al.*, 2011, 2014, 2020; Gray, 1988; Nobes, 1998; Silva *et al.*, 2021; Zeghal & Mhedhbi, 2006). There is a wide consensus that the following environmental factors influence the development of a country’s accounting system: the legal system; sources of external finance; the influence of tax laws in financial reporting; importance of the accounting profession; and culture. This paper proceeds as follows. The next section reviews relevant literature and provides an overview of the Portuguese IFRS-based accounting system. This is followed by the research methodology. Then, there is the results section, and, finally, the conclusion ends the paper.

## 2. ISSUES REGARDING IFRS-BASED ACCOUNTING SYSTEMS ADOPTION

As discussed in earlier research (Silva *et al.*, 2020), the adoption of IFRS-based accounting systems is challenging and may not be enough to achieve global accounting harmonization. Oliver (1991) posited that, when an organization foresees that conformity to institutional pressures will result in economic and legitimacy benefits, it will probably adopt the most passive resistance response (i.e., acquiescence). Accordingly, more favourable perceptions towards the adoption of the new accounting system are expected if individuals believe that its adoption will result in economic and legitimacy benefits, since under these circumstances, they are less likely to develop resistance feelings. In contrast, when organizations anticipate that conformity will result in low legitimacy and economic benefits, they will possibly adopt more

active resistance strategies, such as “attempt to compromise on the requirements for conformity, avoid the conditions that make conformity necessary, defy the institutional requirements to which they are advised to conform, or manipulate the criteria or conditions of conformity” (Oliver, 1991, p.161). In turn, this may result in “*de-coupling*”: organizations say that they are complying with the imposed requirements, but they may be adopting a kind of ostensible compliance (“*window-dressing*”) (Rodrigues & Craig, 2007, p. 753). The concept of isomorphism (a key element of *institutional theory*), as described by Rodrigues and Craig (2007) in the context of accounting research to understand the developments in international accounting, can be used to reflect the intrinsic and affective benefits components of the perceived value of IFRS and the new accounting model. Indeed, this concept posits that organizations adopt certain practices in order to achieve legitimacy and social acceptability from other organizations - regardless of their actual usefulness. Based upon the perspectives of the *new* institutional theory, Rodrigues and Craig (2007) suggested that international accounting standards are chosen not just on efficiency grounds, but often to improve the reputation of an organization for being rational, modern, responsible, and legally compliant. It follows that users and preparers may also support the adoption of IFRS if they perceive that these standards are widely accepted and that they will confer legitimacy to the Portuguese accounting system and, consequently, to Portuguese companies. It is generally argued in the accounting literature that the main significant barriers to IFRS adoption are the lack of technical accounting expertise (*e.g.* Chand, 2005; Kılıç & Uyar, 2017; Sellhorn & Gornik-Tomaszewski, 2006; Zeghal & Mhedhbi, 2006) and the accounting culture (*e.g.* Rodrigues & Craig, 2007; Vellam, 2004; Zeghal & Mhedhbi, 2006). Indeed, the lack of professional expertise will require significantly more efforts by the users and preparers to adopt, to implement and understand the new accounting standards. Similarly, if users and preparers are familiar with the underlying principles of IFRS, the cultural shock will not be as big, and, therefore, its adoption will not require such a substantial effort. Hence, the users and preparers’ preparedness, as well as their commitment with accounting traditions, may affect their perceptions regarding the IFRS adoption. Furthermore, the experience of many countries suggests that IFRS are too complex and costly for SMEs (Kılıç & Uyar, 2017; Rodrigues & Craig, 2007).

### **3. THE PORTUGUESE IFRS-BASED ACCOUNTING SYSTEM**

Despite the IASB issued the IFRS for SMEs in 2009 to respond to the idiosyncrasies of the smaller, the Portuguese SNC is based upon the full set IFRS. Yet, the Portuguese IFRS-based accounting system is characterized by the existence of different levels of standardization. Larger entities must adopt 28 standards, all of which except one are tightly based upon EU-endorsed IFRS/IAS – the so-called ‘general regime’. Furthermore, there is another standard tailored for small entities, which is a simplified adaptation of the different themes addressed in the general regime. In turn, micro entities may choose to adopt an even further simplified standard. For further details of the SNC accounting system see, for example, Isidro and Pais (2017). To align the SNC with the EU Directive No. 2013/34, Decree-Law No. 98/2015 of 2 June 2015 brought some amendments to SNC, in force from 1 January 2016 onwards. Changes implemented include the following: new models of financial statements; reduction in the disclosures required by standards, especially regarding micro entities which were discharged from the preparation of the Annex; extension of the mandatory adoption of the permanent inventory system to small entities; mandatory amortization of goodwill from business combinations; alteration of the thresholds that define the different categories of entities, particularly, enlargement of the thresholds of a small entity. Upon adoption of SNC in 2010, a small entity was one that did not exceed any two of the following limits: 1.5 million euros for balance sheet; 3 million euros for turnover; 50 employees.

Since 2016, the balance sheet threshold was enlarged to 4 million euros, and the turnover ceiling was increased to 8 million euros. The number of employees' limit remained unchanged. As a result, since 2016 many more entities in Portugal could report under the simplified standard for small entities.

#### 4. RESEARCH METHODOLOGY

This is a qualitative study aimed at presenting in-depth contextually rich analysis of tax officials' perceptions regarding the need to adjust IFRS at destination, using Portugal as an exemplar. Therefore, at the outset the leading objective of this research was to generate detailed insights to the detriment of any quest to generalize the perceptions gained. The evidence reported in this paper is part of a comprehensive longitudinal research, which involved semi-structured interviews with tax officials, of an average length of around 50 minutes in 2009 and in 2017. The first round of interviews took place during the year before formal adoption of an IFRS-based model in Portugal. Follow up interviews were conducted in 2017, one year after the IFRS model adopted had already undergone a second round of in-country adaptations. To analyse how perceptions evolved according to the stage of the SNC implementation process, interviewees were the same in both years of analysis. Theoretical saturation (Strauss & Corbin, 1998) delivered a final sample size of nine in each of the years of analysis. For anonymity, tax officials (TO) are identified by the order of their interviewing, followed by the year of the interview. Hence, for example, TO1\_2009 stands for tax official number 1, as interviewed in 2009. Sampling of interviewees was non-probability as it was intended to interview knowledgeable and experienced tax officials to foster extraction of rich data. As a result, they all held a bachelor's degree or above, and in 2017 all but one had more than 15 years of inspecting experience. In 2017, the dominant age group was 35-44 years (n=6), and all but one were male.

#### 5. DISCUSSION OF RESULTS

Respondents were asked to indicate whether they agreed with the need to adjust IFRS when applied to the PAS. Responses are summarised below in Table 1.

	Agreement		Disagreement		Undefined		Total
	Frequency	%	Frequency	%	Frequency	%	
<b>Prior to adoption</b>	5	56	2	22	2	22	9
<b>After adoption</b>	8	89	1	11	0	0	9

*Table 1: Perceived need to adjust IFRS at destination*

Overall, tax officials supported the need to adjust IFRS at destination to account for national environmental specificities. Evidence gathered should be interpreted considering that interviews after adoption took place in 2017, when the IFRS model adopted in Portugal had already undergone a second round of in-country adaptations in the year before. So, we may infer that the experience with in-country adjustments influenced positively the perception of their adequacy (n=5\_2009; n=8\_2017). The single tax official who did not agree with IFRS adjustments in 2017 invoked their negative impact on international comparability and reasoned that adjustments made were the outcome of the misfit of SNC with the national context:

*“If the idea was to achieve the highest degree of comparability, then we should keep what's out there, period! And put it to work in here! If people don't adapt, then it's because the new standards don't really make sense.” (TO4\_2017)*

In the same manner, two other respondents, despite being generally favourable to IFRS in-country adaptations upon initial adoption, shared the view that additional simplifications introduced as of 2016 represented a retrocession in the harmonization. They regarded initial resistance and early obstacles to be time bridgeable:

*"...it was a matter of time; people should be told to come to their senses and move forward."* (TO2\_2017)

*"It remains to be seen if the POC [the previous Portuguese accounting system] would be better than the overly simplified SNC!"* (TO6\_2017)

Notwithstanding, early pleas for IFRS adjustments before SNC adoption, were vividly emphasised in 2017:

*"I do not agree with minor adjustments, but rather with substantial changes."* (TO 7\_2009)

*"There is insufficient simplification of the financial instruments standard."* (TO2\_2017)

*"In many instances, an automatic translation of concepts was made, while they should be adjusted to our reality, which was not considered. For example, the term "perdas por imparidade" [impairment losses] here in Portugal does not make much sense; if you ask experts the origin of the term, they can't associate it with Portuguese."* (TO3\_2017)

Translation issues had already been invoked as problematic modifications prior to adoption:

*"The translations of international standards to Portuguese are made with terms that you read and realize that they do not convey the intended idea, the spirit of the standards."* (TO1\_2009)

*"I have some concerns in terms of terminology... we know of the difficulties that the Portuguese face when translating Anglo-Saxon expressions. And so, sometimes we take the risk if we are not careful and accurate enough in this translation attempts ...it creates some noise, some disturbance in the interpretation of words. This causes me some worries - that the users, the agents involved, cannot make appropriate interpretations of the expressions. Therefore, I clearly share the view of some people who point out paths towards the perfection of language to be employed, in an attempt to use the Portuguese words which may better reflect the reality that you want to convey.... But, I think that these disputes are salutary, as they lead us to think that one needs a rigorous terminology for consistent interpretation of the same reality.... it makes sense to worry ourselves with all of this [the terminological aspects]. And I do not know to what extent this has been given thorough reflection."* (TO5\_2009)

This evidence is supported by some authors' concerns (e.g., Nobes, 2006; Zeff, 2007) that the accuracy of IFRS national translations may impair global convergence and comparability. In this regard, Nobes (2006, p. 237) noted that: "Under the EU Regulation 1606, the various translations of IFRS into European languages have legal status in their various countries. As in any field, there is a risk that the process of translation will change or lose meaning from the original version, in this case English". On the other hand, these observations contrast with Tyrrall *et al.*'s (2007) findings, whose respondents pointed out the lack of national language translations of IFRS as one of the problems of IFRS implementation in Kazakhstan. Similarly, the study of Abd-Elsalam & Weetman (2003) showed that the lack of official national translations increases the likelihood of non-compliance with unfamiliar IFRS requirements.

Likewise, Alp & Ustundag (2009) reported that one of the key challenges in the adoption and implementation of IFRS in Turkey included the IFRS translation issue. The chart of accounts was an in-country adaptation present in all interviewees' spontaneous rhetoric in 2009 and addressed impromptu by only three tax officials in 2017. Furthermore, while in 2009 most of the tax officials disagreed with the maintenance of the chart of accounts, this adaptation was welcomed by the few tax officials who still recalled it in 2017. Early interview evidence gathered in 2009 brought into light several drawbacks attached to the maintenance of the chart of accounts. It was said that it may favour decoupling; (ii) it may limit the spirit of the international accounting standards; (iii) it may hinder the occurrence of a cultural change; and (iv) it may restrict the development of the accounting profession. On the other hand, the tax officials who welcomed the preservation of the chart of accounts in 2017 reasoned it assured less disruption with the previous accounting system and culture (TO2, TO3), and it allowed a better fit with the objectives of financial statements in Portugal (TO8). The following are illustrative statements:

*"Since we've always been used to coding, i.e. we've always used the code and the account designation, I think it [the maintenance of the chart of accounts] was very well done."* (TO3\_2017)

*"It [the maintenance of the chart of accounts] seems to me a good decision considering the stakeholders in our country, that is, those who are the main recipients of financial information. Whether we like it or not, for the great majority of our companies, say 90 to 95% of our companies, the main recipients of financial information are the banks, which are the main financiers, and then the tax authorities. Therefore, these are entities that need codes of accounts in order to be able to treat the information in a standardized manner. And this is an example of an adaptation to the realities proper to our country, that is, the financing of our companies that make great use of banking, and the issue of taxation that is very important whether we like it or not."* (TO8\_2017)

Importantly, arguments put forth by interviewees after adoption to support the chart of accounts as above described, provide support to that its preservation may hinder the occurrence of a true cultural change to implement the true spirit of the international accounting standards, as anticipated by tax officials in 2009. Consistent with this view, arguably, the fact that in 2017 only three tax officials recalled spontaneously the preservation of the chart of accounts reflects a well ingrained, taken for granted, adaptation. One of the adjustments interviewees liked the most prior to IFRS adoption was the existence of different levels of standardisation within SNC. Consistently, on being asked to speak freely about the recent changes as of 2016, the enlarged thresholds for small entities was the most often spontaneously cited 2016 change (TO4; TO5; TO7; TO9; 44%). Such tax officials welcomed the possibility of many more firms being able to abide by the standard for small entities rather than the full set of standards in that it represented an important burden-relief for the resource-constrained smaller firms. Some other amendments made to SNC that became effective in 2016 were spontaneously recounted: (i) small entities (as redefined in 2016) ceased to be exempt from the permanent inventory system (TO8, TO3), and (ii) micro entities were discharged from preparing the Annex (TO4, TO3). The former aspect was seen by both tax officials who cited it as an absolutely disproportionate requirement given the dimension of the companies involved. One of the tax officials even argued it is a misfit with the cost-benefit balance endorsed by the Conceptual Framework.



This is illustrated by the following quotations:

*"I think the limits are far too low for the mandatory permanent inventory: it is unthinkable, today, that a company that exceeds those two limits of the three (700.000 euros for turnover, 350.000 euros for balance sheet, and 10 employees) is required to keep a permanent inventory: if we think, a company that sells 700.000 euros will reach 350.000 euros of balance sheet very quickly just on the basis of its inventories and receivables; if the company is a services provider, then it will also easily fall outside the thresholds of a micro entity, not because of the balance sheet but rather on account of the number of its employees. So, we are talking about very small companies, with no business structure at all! I know several of them making 700.000 euros, where there are only two persons there! They struggle to issue invoices in a computerized system, let alone running a permanent inventory!.. That is, in the issue of inventories, I think this is a total aberration!"* (TO3\_2017)

*"If we take into account the universe of companies that are covered by the permanent inventory system, it is completely disproportionate, it makes no sense; the big problem, in my opinion, of the Accounting Standardisation System and these recent amendments, is the question of the relationship, which is written in the Conceptual Framework - the balance cost-benefit: there is still a lot of cost for little benefit in my opinion."* (TO8\_2017)

Reflecting a quest for IFRS detailed implementation guidance, the SNC also received criticism for not setting any guidelines as to the appropriate periodicity for reporting the cost of goods sold and inventories:

*"Under the permanent inventory system, supposedly at any time you must know the cost of goods sold or materials consumed; well, it is not clear how often it is "any time", how often, for example, you must conduct inventory counts in the warehouse; it is so unclear that, recently, the Tax Administration itself had to rule on this, and it defined a monthly periodicity. Now what do we have? The Tax Administration to define the periodicity with which the permanent inventory is to be made because the CNC says nothing about it."* (TO8\_2017)

The two tax officials who recalled the Annex exemption for micro entities were divided in their views: one tax official welcomed this change by arguing micro entities' businessmen see their information needs amply fulfilled from the balance sheet and income statement alone; another tax official viewed this change as mere window-dressing, not representative of a true burden relief in that the Annex had never been true disclosure, consistent with the claimed relative unimportance of financial reporting to management:

*"But this [the Annex discharge for micro entities] does not represent any reduction of effort for companies because it is a mirage, it is a mirage, it is a falsehood someone, beginning with the certified accountants, who are the executors of this, saying that they have ever prepared the Annex decently so to speak ... There was a formal requirement of disclosure ... but then in practice no one did it! .... So, in practice, having taken away the Annex is inconsequential, truly, because in practice I already had no such company information!"* (TO4\_2017)

Finally, the SNC's internalization of the standard for micro entities (TO4) and the compulsory amortization of goodwill from business combinations (TO3) were also spontaneously recalled as recent in-country adaptations, in both cases welcomed.

## 6. CONCLUSION

As far distant as seven years after formal adoption of SNC, an IFRS-based model in Portugal – a country formerly classified as Continental European – our findings are compatible with the concepts of resistance to change and decoupling. Particularly, evidence gathered suggests tax officials' commitment towards the accounting reform to have been hampered by country-specific factors (institutional contradictions), including, but not limited to, the Continental European accounting cultural background. Such inference, reiterating the role of the existing national culture, clearly conforms to the institutional theory emphasis on the embedded rules and values in a social system as a source of resistance to change. Consistently, IFRS in-country adjustments were mostly welcomed, both just before SNC adoption in 2009, and most evidently, seven years after adoption, in 2017, when a second round of in-country adaptations had already been implemented in 2016. Despite adjustments made, interviewees still perceived instances of what they considered to be IFRS insufficient adaptation to Portugal as there were pleas for further amendments. These amendments were regarded as a strategy to manage IFRS in-country adequacy. Thus, our evidence signs some calls and proposals to adjust the IASB standards to the needs and limitations of the national reality. However, such response is close to one of the manipulation tactics pointed by Oliver (1991) – the influence tactic – as it might mirror an attempt to shape institutional processes, and thereby signal partial conformity to institutional rules (Campbell, 2004; Scott, 2010). Undertaking in-country adjustments as a strategy to overcome institutional contradictions might generate adverse consequences for the adoption and implementation of IFRS or IFRS-based accounting systems, such as: (i) the decoupling - namely, the maintenance of the caution and secrecy approach, and the linkage between taxation and accounting; (ii) the manipulation risk; and (iii) poor adjustment to change. This study remains exploratory in nature. An avenue for future research could be to compare the experience of different countries with IFRS adoption to investigate whether institutionalization outcomes are any different depending on the extent and types of IFRS in-country adaptations. Insights thereof would be of utmost importance to inform national standard setters.

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## DATING PLATFORM TINDER AT THE TIME OF THE COVID 19 PANDEMIC

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### ABSTRACT

*Production capitalism, in the context in which Marx describes it, lasts for almost 150 years and reaches its peak at the end of the 20th century. The development of the Internet and the digitalization of the production system had a decisive influence on the gradual disappearance of production capitalism, i.e. its migration to the east. We associate capitalism with the emergence of modernity and industrialization, post-capitalist society is developing in parallel with postmodern and post-industrial society. The 21st century and post-industrial society are bringing about fundamental changes in social relations in all areas of life. Classic partner-connecting agencies from the analog era have replaced digital platforms from the post-industrial era. Tinder has become the largest global partner merger platform. The aim of this paper is to analyse the financial results of Tinder in the last five years, and to analyse the impact of the Covid 19 pandemic on the trends in the number of users on the platform.*

**Keywords:** Covid 19, dating, platform economy, Tinder, zero marginal cost

### 1. INTRODUCTION

Match Group, Inc., through its portfolio companies, is a leading provider of dating products available globally. Our portfolio of brands includes Tinder, Match, Meetic, OkCupid, Hinge, Pairs, PletyOfFish, and OutTime, as well as a number of other brands, each designed to increase our users' likelihood of finding a meaningful connection (Match Group Annual Report 2020). From personal ads that began appearing in publications around the 1700s to videocassette dating services that sprang up decades ago, the platforms people use to seek out romantic partners have evolved throughout history. This evolution has continued with the rise of online dating sites and mobile apps (MacLeod, McArthur 2019; Anderson et al. 2020). Many traditional dating agencies also found themselves replaced by native digital dating platforms such as Happn, Match.com, eHarmony or Tinder (Reillier, Reillier 2017). In contemporary society, Tinder has become one of the most famous mobile dating applications (Jansen, Beaton 2019). At the end of 2020, Tinder had 60 million active users, 10 million daily active users, and 30 billion matches with approximately 30 million per day (Smith 2021). With 6.7 subscribers, Tinder has become the world's largest dating online platform (Match Group Annual Report 2020). Tinder was not the first dating platform in the online model, but it became the first globally known platform. The platform was launched during the 2012 SXSW conference allowing young people to hook up. Tinder made the task easier and, in the process, achieved critical mass during a live party in a small, contained location (Parker et.al. 2016). After parties, Tinder users told their friends, and this led to a viral growth effect, reaching over 1 million monthly active users within the first year (Reillier, Reillier 2017). Tinder, the dating app, can connect billions, if that many man and woman want to participate (Evans, Schmalensee 2016). The platform operates in the platform economy model (Lozić et.al. 2017; Srnicek 2017; Lozić 2019a), i.e. it develops a network effect on both sides of the platform. In Tinder operating model, both parties have to opt in by swinging right in order to be connected. Tinder's genius was in correctly understanding the double-opt-in nature of dating interaction and building a platform that made the core transaction as easy as seamless possible (Moazed, Johnson 2016).

Doing business in the platform economy model enables the use of the zero marginal cost model (Lozić 2019b, Rifkin 2015). The platform allows user interaction and the cost of revenue is related to the production of the network effect. In addition to revenue and net profit analysis, the analysis will also include trend gross profit as an important factor in the analysis of the zero marginal cost model.

## 2. LITERATURE REWUIV

Tinder is a location-based real time app that came to market in 2012 with the goal of facilitating people to connect via their personal profiles and location-based tracking (Leurs, Hardy 2019). In the only four years since Tinder's launch, the right swipe has become the prevailing signifier of our generation—shorthand for like, lust, and (possibly, hopefully, finally) love. It was no accident of design (Pierce 2016). Computer-based matchmaking technologies first emerged in the 1960s, and one of the first online dating sites kiss.com, was founded in 1994. (MacLeod, McArthur 2019). Mobile dating applications ('apps') have increased in popularity over recent years, with Tinder among the first to break into the mainstream heterosexual market. Since mobile dating intensifies the need to confirm that potential dates are not misrepresenting themselves and are safe to meet in person, Tinder's success indicates that it has allayed these concerns regarding the authenticity of its users (Duguay 2017). Mobile means of identifying sexual or romantic partners have been common among men who have sex with men, using Bluetooth technology as early as 2005 to cruise on public transport (Mowlabocus 2010). Mobile-based dating applications, such as Tinder, dominate the current online dating platform market (Ward, 2017). Tinder is a location-based service, meaning it incentivizes encounters between users in physical proximity (David & Cambre, 2016). Mediated possibilities to connect with others have evolved from newspaper advertisements to teletext to online dating websites, and the latest offerings are matchmaking mobile applications like Tinder (Ward 2017). In addition, compared to previous iterations of online dating platforms, one of Tinder's defining affordances is its focus on user photos accompanied by limited textual information (Ranzini, Rosenbaum 2020). For instance, starting in the 20th century, the automobile and the entertainment industry (i.e., movie theatres, the drive-in culture, dance halls) provided dating couples with inexpensive opportunities to get away from their daily routines and parental control. Towards the beginning of the 21st century, online dating services started expanding an individual's dating pool (Timmermans, Courtois 2018). One part of the reactions to Tinder pointed out that the platform is a place for those who cheat in a relationship, but Tinder very quickly came out with data on the age of users and announced that 93% of users are aged 18 to 23 from which it could not be concluded to be married or in some permanent relationship (McHugh 2015). Integration into entertainment media demonstrates Tinder's movement into mainstream culture in contrast to niche dating apps. This is reflected in the incorporation of Tinder-related terms in vernacular language, with Tindering, Tinderella, and Tinderitis (negative outcomes from Tinder use) featured on urbandictionary.com (Duguay 2017). From 2000 on, researchers noticed a tremendous shift in dating and mating behaviours on the college campus, repeatedly referred to as "hooking up", casual sexual encounters, or casual sexual relationships (Timmermans, Courtois 2018). Geographic-based mobile applications, most notably, Tinder, appeal widely to college students due to the structural constraints often faced by this population (i.e., limited disposable income, restricted time and ability to meet potential partners through historically conventional means, etc.). When coupled with traditional cultural views of college as places of substance use and sexual experimentation, applications such as Tinder have little difficulty attracting users (Fansher, Eckinger 2020). Public discourse on Tinder depicts the dating app as marking the end of traditional as well as healthy notions of love and romance, permeating them with a logic of consumption and commodification (Kruger, Splide 2020).

Mason (2016) points out that Christian Rudder, director of OK Cupid, was the first to argue that the OK Cupid platform was the first dating platform to mine data and use a big-data model to connect users. At the same time, he called Google, Tumblr, Facebook and OK Cupid "demographers of unprecedented truth" because they reveal how people behave when they think no one is watching (Mason 2016). Online dating has become an increasingly popular option for individuals to find companionship virtually, with 30% of U.S. adults reporting they have used a dating application or Web site at some point in their lives (Anderson et al. 2020). The shift from offline to online dating has created new ways to experience and actualize intimacy, both in the context of pre-existing relationships and new relationships with strangers (Lomanowska, Guitton 2016). Herr and Timmermans focus on research into individuals' joviality and sadness (Her, Timmermans 2020). In 2017, 20% of young women in USA reported they had been sexually harassed online, including on dating sites and apps (Anderson, Vogles 2020). Today, 57% of online dating users are concerned about data collection by sites and apps (Turner, Anderson 2020). Researchers of the phenomenon of dating platforms, as well as Tinder, have mainly focused their research on the sociological aspects and consequences of using a dating platform. In this paper, the research will focus on the analysis of financial data and the trend in the number of users on the platform. The research will focus in particular on financial and user trends during the Covid 19 pandemic. The results of the analysis will be presented in the Discussion and conclusion chapter.

### **3. METHODOLOGY AND RESEARCH QUESTIONS**

The Tinder dating platform is part of the Match Group Corporation which publishes the Annual Report as a consolidated report. The research will use the Annual Report Match Group, from which data on the Group's financial operations and Tinder platform revenues were selected. User trend analysis, as with financial items, will be done for the entire Match Group as well as for the Tinder platform. The research is based on two research questions:

- Q<sub>1</sub> - What is the financial stability of the Match Group platform during the Covid 19 pandemic?
- Q<sub>2</sub> - What are the user trends during the Covid 19 pandemic?

The research will use financial data from the profit and loss account of Match Group and will be statistically processed as well as user community trends. The analysis of the regression trend will determine the direction and trend of the selected parameters.

### **4. DATA ANALYSIS**

Research and data analysis will be made based on the financial results published in the Annual Report. Items will be analysed in two separate areas: financial items and numbers of users. Financial items include selected items of the Match Group's profit and loss account, as well as income in the analysed Tinder period from the Group's consolidated report. The regression trend method will be used to analyse the change in the number of active users of Match Group and Tinder.

#### **4.1. Financial analysis**

The Tinder platform is part of the Match Group which publishes a consolidated report for the entire group. Match Group was owned by the IAC, and it was only after 2017 that it began publishing stand-alone annual reports. In the analysed period from 2017 to 2020, revenues increased from \$ 1.33 billion to \$ 2.39 billion, an increase of 79.7%. However, in the same period, the cost of revenue increased by 127.5%, which is above the rate of revenue growth. Gross profit rose from \$ 1.05 billion to \$ 1.75, an increase of 67%. An increase in the cost of revenue above the rate of increase in revenue had the effect of reducing the share of gross profit

in total revenue. The average share of gross profit fell from 79% in the first analysed period to 73.4% in the last analysed period. The average gross profit in the analysed period is 75.8%. Due to the increase in the cost of revenue, above the rate of increase in revenue, the average gross profit decreases and in the last two analysed periods it is lower than the average.

*Table 1: Match Group financial analysis (000; \$)*

	2017	2018	2019	2020
Total revenue	<b>1.330.661</b>	<b>1.729.850</b>	<b>2.051.258</b>	<b>2.391.269</b>
Cost of revenue	279.499	410.000	527.184	635.833
Gross profit	1.051.162	1.319.850	1.524.074	1.755.436
%	79,0%	76,3%	74,3%	73,4%
Total operating expenses	970.144	1.180.381	1.405.804	1.645.554
Operating income	<b>360.517</b>	<b>549.469</b>	<b>645.454</b>	<b>745.715</b>
Net Profit	<b>350.148</b>	<b>626.961</b>	<b>431.131</b>	<b>128.561</b>

*Source: own illustration (Match Group Annual reports)*

Operating costs did not grow at a rate above the revenue growth rate as a cost of revenue. The result of such management is total operating expenses, which increased by 69.6% in the analysed period, which is 10.1 percentage points less than the revenue growth rate. An increase in revenue above total operating expenses resulted in an increase in operating income of 106.8%. Net profit has been declining since 2018 and in the last analysed period is lower by 63% compared to 2017. The results of the analysis are shown in Table 1.

*Table 2: Tinder revenue 2015-2020 (000; \$)*

	2015	2016	2017	2018	2019	2020
Revenue	47.000	169.000	403.000	805.316	1.152.045	1.355.400
	-	259,6%	138,5%	99,8%	43,1%	17,7%
Tinder/Match Group	-	-	30,3%	46,6%	56,2%	56,7%

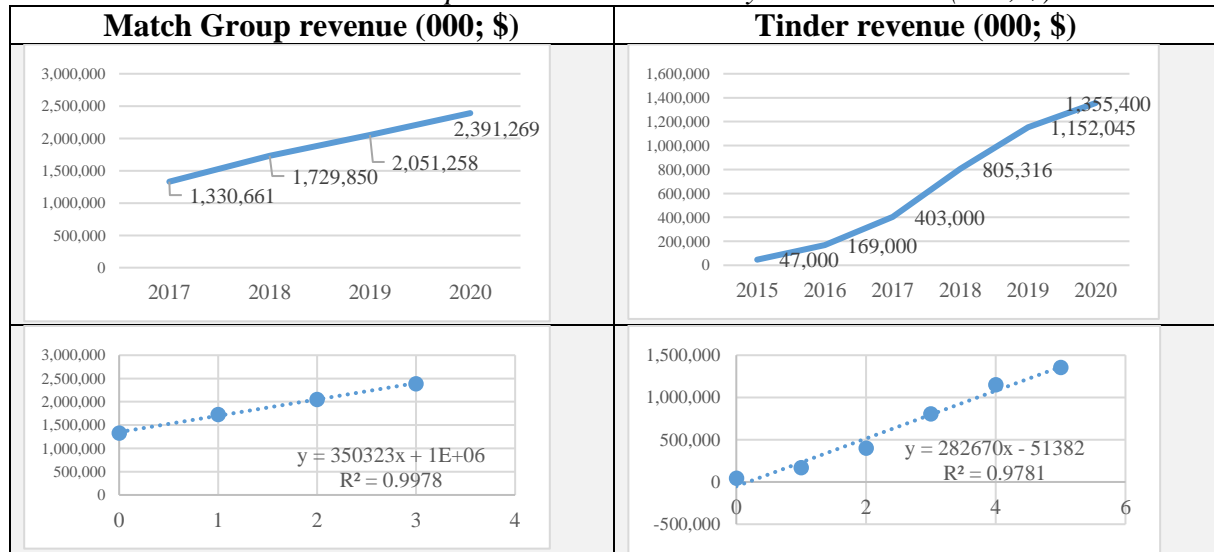
*Source: own illustration (Match Group Annual reports)*

The Tinder platform revenue survey covered a period of six years, from 2015 to 2020. Total revenues increased by 2783.8%. Towards the end of the period, revenue growth slowed from 259.6% at the beginning of the period, to 17.7%, in the last analysed period. Contrary to the increase in total revenues of the Tinder platform, the share of Tinder revenues grows in the total revenues of the Match Group and increased from 30.3% in 2017 to 56.7% in 2020. The results of the analysis are shown in Table 2.

*Table following on the next page*



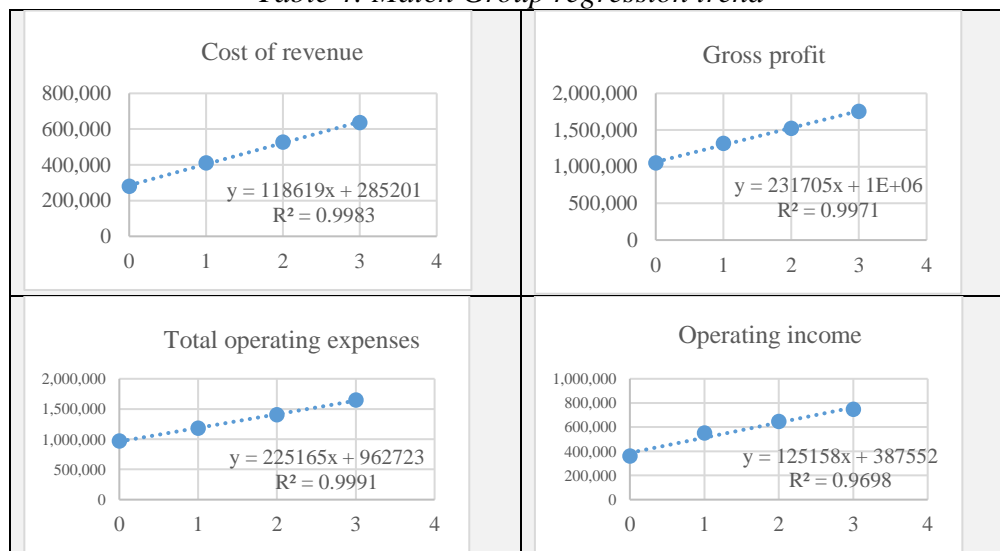
*Table 3: Match Group / Tinder revenue analysis 2015-2020 (000; \$)*



*Source: own illustration (Match Group Annual reports)*

Match Group revenues grew at an average rate of 18.67% ( $s = 18.67$ ) per year with a coefficient of determination of 0.9978. Revenue growth was digressive and in the last analysed period the smallest and amounted to 16.6%. Tinder revenues grew at an average rate of 43.14% ( $s = 43.14$ ) per year with a coefficient of determination of 0.9781. Tinder's revenue grew at a rate more than twice the Group's revenue growth rate. As at the Group level, Tinder's revenue growth is digressive and is the smallest in the last analysed period and amounts to 17.7%. The results of the analysis are shown in Table 3.

*Table 4: Match Group regression trend*



*Source: own illustration (Match Group Annual reports)*

Cost of revenue Match Group grew by an average of 25.6% per year ( $s = 25.6$ ) with a coefficient of determination of 0.9983. Gross profit averaged growth at a rate of 16.4% ( $s = 16.4$ ) with a coefficient of determination of 0.9971. Total operating expenses grew on average at a rate of 17.3% ( $s = 17.3$ ) with a coefficient of determination of 0.9991. Operating income grew at an average annual rate of 21.8% with a coefficient of determination of 0.9698.

Net income is interpreted by the regression equation  $y = -144846x^2 + 348478x + 368443$ . The direction coefficient is negative and indicates a continuous decline in the Group's net profit. The results of the analysis are shown in Table 4.

#### 4.2. Number of user's analysis

The second part of the research is focused on answering the second research question, i.e. what are the trends of the user community during the Covid 19 pandemic. The total number of Match Group users in the analysed period of seven years increased from 3.44 million users in 2014 to 10.93 million users in 2020. The increase in the number of users was 217.81%. The number of users grew on average 4.44% quarterly ( $s = 4.44$ ), with the equation of the linear regression trend  $y = 298.92x + 2683.4$ , with the coefficient of determination  $R^2 = 0.9881$ . The number of users of the Tinder platform, in the period from 2015 to 2020, increased from 97 thousand to 6.7 million, which is an increase of 6,807.2%. The number of users grew on average quarterly at a rate of 9.95% ( $s = 9.95$ ), with the equation of the linear regression trend  $y = 311.47x - 286.55$ , with a coefficient of determination of  $R^2 = 0.99$ .

Table 5: User community Match Group / Tinder (000; quarterly)

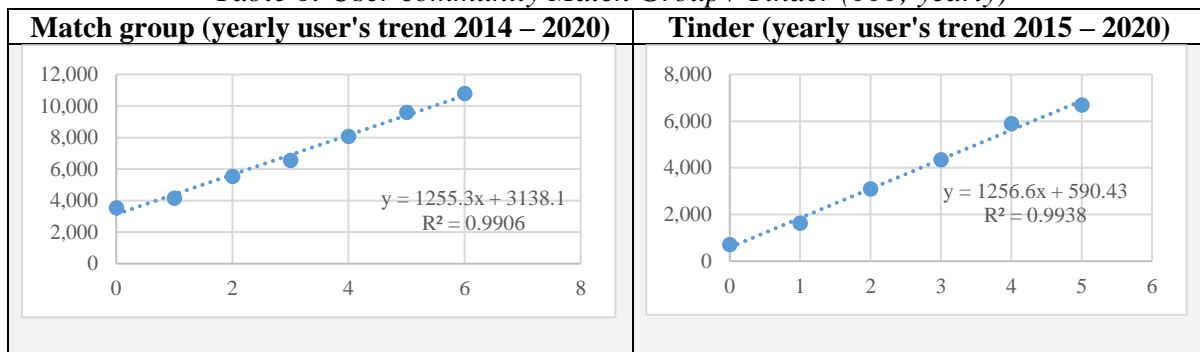
Number of paid subscribers registered to the Match Group (000)			Number of paid subscribers on Tinder (000)	
Q1 2014	3.442		n/a	
Q2 2014	3.447	0,1%	n/a	
Q3 2014	3.558	3,2%	n/a	
Q4 2014	3.556	-0,1%	n/a	
Q1 2015	3.732	4,9%	97	
Q2 2015	4.065	8,9%	376	287,6%
Q3 2015	4.167	2,5%	519	38,0%
Q4 2015	4.613	10,7%	714	37,6%
Q1 2016	5.083	10,2%	915	28,2%
Q2 2016	5.301	4,3%	1.121	22,5%
Q3 2016	5.546	4,6%	1.386	23,6%
Q4 2016	5.697	2,7%	1.631	17,7%
Q1 2017	5.911	3,8%	1.858	13,9%
Q2 2017	6.101	3,2%	2.082	12,1%
Q3 2017	6.559	7,5%	2.558	22,9%
Q4 2017	7.044	7,4%	3.101	21,2%
Q1 2018	7.433	5,5%	3.470	11,9%
Q2 2018	7.723	3,9%	3.769	8,6%
Q3 2018	8.090	4,8%	4.113	9,1%
Q4 2018	8.233	1,8%	4.346	5,7%
Q1 2019	8.613	4,6%	4.700	8,1%
Q2 2019	9.080	5,4%	5.200	10,6%
Q3 2019	9.612	5,9%	5.700	9,6%
Q4 2019	9.809	2,0%	5.900	3,5%
Q1 2020	9.914	1,1%	6.033	2,3%
Q2 2020	10.063	1,5%	6.200	2,8%
Q3 2020	10.796	7,3%	6.600	6,5%
Q4 2020	10.939	1,3%	6.700	1,5%

Source: own illustration (Match Group Annual reports)

The trend of Match Group users has fluctuated from period to period. In the fourth quarter of 2014, the trend was negative 0.1%, and the largest increase was realized in the fourth quarter of 2015 and was 10.7%. With the onset of the global pandemic, the largest increase in the number of users was achieved in the third quarter of 2019 by 5.9% and in the third quarter of 2020 by 7.3%.

The trend in the number of users indicates a significant link between the global pandemic and the trend in the number of users of the Match Group. While the trend in the number of Match Group users fluctuated significantly from quarter to quarter, the growth in the number of Tinder users was continuous but digressive. The largest increase was realized in the initial period of the analysis in 2015 and amounted to an increase of 287.6%, and the smallest increase in the last analysed period, in the fourth quarter of 2020 of 1.5%. Almost the same as for Match Group, there was a sharp increase in the number of users in the second quarter of 2019 of 10.6%, and in the third quarter of 2020 of 6.5%. It can be concluded that the Covid 19 pandemic significantly affected the trend in the number of Tinder platform users. The results of the research are shown in Table 5.

Table 6: User community Match Group / Tinder (000; yearly)



Source: own illustration (Match Group Annual reports)

Regression analysis of the trend of the number of users at the Group level as well as for the Tinder platform proves a strong correlation between the trend of the total number of users and the number of users of the platform. The growth in the number of users is linear with a coefficient of determination of 0.9906 for Match Group, and a coefficient of determination of 0.9938 for the Tinder platform. The average annual increase in the number of Match Group users in the analysed period of seven years was 18.18% ( $s = 18.18$ ), while the average annual increase in the number of Tinder users in the analysed period was 33.67% ( $s = 33, 67$ ). The increase in the number of Tinder users was almost twice as large as the increase in the number of Match Group users. A 1.5% increase in the number of Tinder users in the last quarter, and a digressive increase in the number of users, resulted in a point of the coefficient of determination below the regression direction in the last analysed period. The growth of the number of users of the Tinder platform has slowed down and the number of users is approaching the saturation point with the existing management strategies. The results of the research are shown in Table 6.

## 5. DISCUSSION AND CONCLUSION

The results of the research and analysis indicate several key factors that determine the answers to the research questions asked:

- Cost of revenue is growing faster than total revenue growth at the Match Group level.
- The share of gross profit is declining and is the lowest in the last analyzed period.
- Tinder's revenue growth is almost double the Match Group's revenue growth.
- Tinder revenue growth is digressive.
- Tinder's share of Match Group's total revenue is growing steadily.
- The trend in the number of Match Group users is oscillating, while the increase in the number of Tinder users is continuous and digressive.

- Deviations from the trend in the number of users are common for Match Group and Tinder, which indicates a strong connection between the global pandemic and the behaviour of the Group's users.

The share of cost of revenue grows faster than the growth of revenue, which affects the decline in the share of gross profit at the Group level. In contrast, Tinder's revenues grow faster than the Group's revenues and have an increasing share of total revenues. Tinder is becoming the leading platform within the Match Group, but Tinder's revenue growth is also digressive indicating saturation of existing revenue generation management strategies. The number of Match Group users is constantly growing. Growth is higher at Tinder, but the trend is digressive. The results of the research very clearly indicate the beginning of the saturation of the existing business model and the problems that Match Group will face in the future. The answer to the first research question is that the platform is financially very stable and has not felt the effects of the global pandemic on financial results, other than a drop in net profit. The second research question refers to the trend in the number of users and the results of the research showed that the number of Tinder users continues to grow, but the growth is digressive as well as revenue growth. The impact of a pandemic is much greater on the user trend than on the revenue trend. Revenues continue to grow while the trend of users is variable depending on the situation with the pandemic

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## DEVELOPMENT OF THE PUBLIC RELATIONS MODEL

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### ABSTRACT

*In modern business conditions, when the most efficient information is exchanged via the Internet, public relations significantly changed its role in virtually every company on the planet. Public relations are considered part of the promotion tool within the marketing mix. The development of information technologies has enabled a new role in public relations, which becomes a very important function of management. There are several reasons for this and the most important is the fact that every company is not an isolated island but part of the wider social environment. Public relations, especially in online conditions, are not only important but a regular managerial activity. The public relations department is still the main organizer of all after-sales activities, but in coordination with the management. Hence, the development of the public relations model is analysed. The paper constructs a model that is appropriate to the needs of today's companies that allows mutual education between companies and the relevant environment, called the information-educational model. The further development of the public relations model will depend on the development of the economy and information and communication technology sector (ICT).*

**Keywords:** *Public Relations, Model, Organization, Management*

### 1. INTRODUCTION

Companies, regardless of size, are part of the wider community, so in addition to the market, they must respect and maintain relations with the rest of the public. The general public for the company is not only customers and suppliers but also other relevant sections of the public, such as the state administration and local government, various economic associations, financial institutions, and very importantly, media. The activity of a company that deals with communicating with its environment is known as Public Relations (hereinafter also PR). According to the previously known theory and practice, this activity was part of the promotion tool as an element of the marketing strategy. This paper starts from the fact that PR is not just a marketing tool but one of the important managerial activities. In this sense, the aim of the paper is to explore models of public relations and in particular to set up a comprehensive model appropriate to the online environment. Public relations are especially important because the company is an integral part of the social and economic being of the community, whether local or national, so it is obliged to conduct its business in a way that promotes social and economic progress of the community and not to hinder that progress (Osredečki, 1995, p. 142). In addition, the PR of each firm must address the overall image and reputation of the firm as an

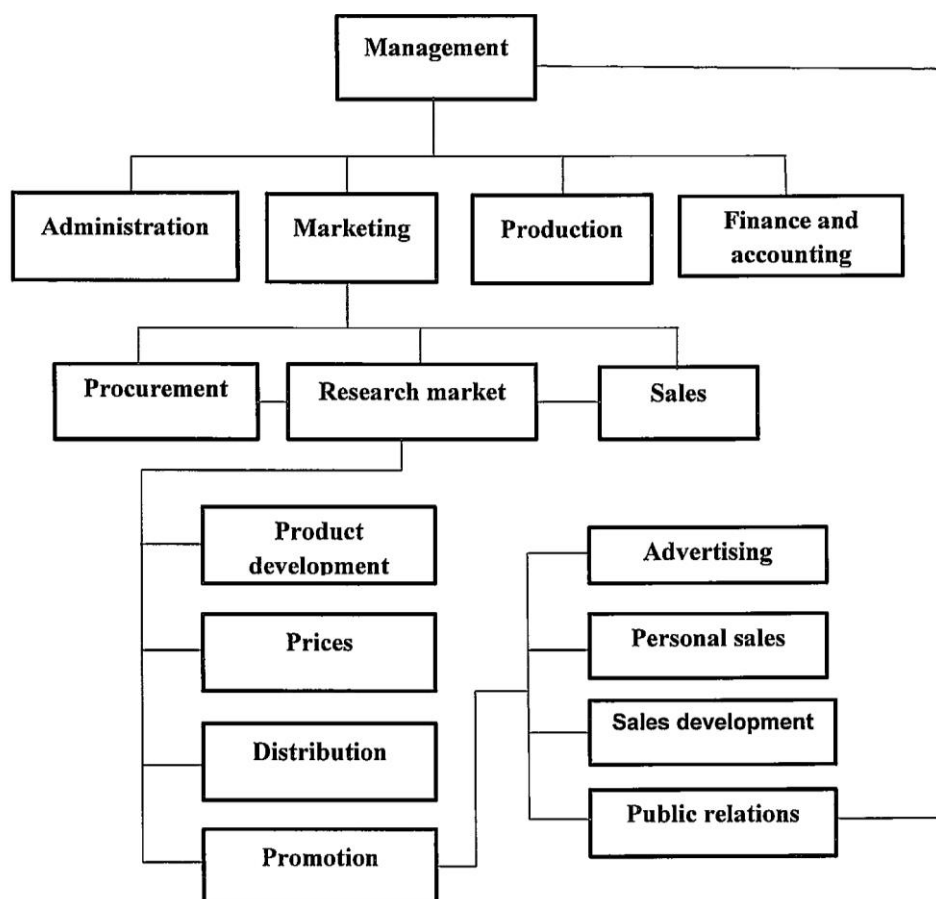
entity in its environment (Jonston & Zawawi, 2009, p. 390). In historical terms, PR became an integral part of the development process of the economy. The first PR department was founded in 1889 at Westinghouse for the purpose of promoting a revolutionary AC system. In addition, the University of Yale secretary's office was successfully converted into an office for relations with former students and the public in 1899 (Tomić, 2008, p. 34). With the development of information technology, PR activities have increasingly taken place on the internet. In most cases, online PR aimed to influence the external image of a company or brand with the aim of gaining and retaining new customers, communicating and informing the public, increasing public attention, improving company's reputation, measuring and managing success, and all of that at a very low cost. A basic feature of the beginnings of online PR is that communication did not take place in real time. In order to provide desirable comments about the company, communication with potential and current customers took place in a way that greatly minimized unwanted comments (Chaffey et al., 2006). Furthermore, public relations can accelerate releasing information to the press, especially in today's global and highly dynamic market (Nwosu, 2000, p. 18). Besides, the Internet can provide interactive two-way and multi-way communication as well as communication mediation (Pavlik, 1996, p. 119). The development of the economy and information technology increased mutual synergy between companies and the public. According to Chaffey et al. (2006), internet marketing can be defined as achieving marketing objectives through the application of digital technologies. This brief definition helps to remind us that it is the results delivered by technology that should determine investment in internet marketing, not the adoption of the technology. Digital technologies have enabled different approaches, so different approaches or PR models were proposed. This paper investigates existing PR models and proposes a model suitable for modern social and information environmental conditions. Namely, it proposes synchronous mutual communication between the company and the relevant public and mutual education with the aim of exchange of useful information for both parties. Therefore, the starting point is in the consideration of the research of the public relations model and in the proposal of a synchronous information-communication and educational model. The discussion with concluding remarks gives an overview of the research and the possibilities that arise from the proposed PR model. Special emphasis is placed on mutual information and education of companies and the relevant environment. In modern conditions, every company should apply new knowledge and experience. In other words, it should permanently strive to learn new things. From the above considerations, it is clear that PR is a strong managerial activity in any company that can be performed in an online environment with minimal loss of time and negligible costs.

## **2. PUBLIC RELATIONS IN MODERN CONDITIONS**

According to the development of marketing so far, public relations has evolved for years as part of the promotion tool which is an element of the marketing mix (Meler, 1997; Smith, 1998; Grbac, 2005). In this case, a different role of public relations in the company is proposed regardless of its size. The explanation lies in the fact that every company is not only a part of the economic environment but shares the fate of the relevant environment which includes customers and suppliers, financial and educational institutions, public administration and local government and especially the media. According to (Nwosu, 2001) public relations establishes cordial and fruitful relationships between an organization and its publics including employees, directors, customers, suppliers, bankers, creditors, shareholders, community leaders, media, top government officials and agencies. The relationship is mutual, because as stated by Hak et al. (2018) the new public management movement was only the latest demand that organizations promote efficiency by adopting new information technology. Maintaining public relations with the above environment in the classical way is associated with high costs and a lot of time spent for which smaller businesses do not have the opportunity.



However, according to Andrić et al. (2020) the development of modern telecommunications and digital technology provide marketers with many new competitive opportunities. Ezeah (2005) states that digital public relations or e-PR or rather dot.com public relations is the latest concept in corporate reputation management. It is the practice of public relations through the new information communication technologies (ICTs). It is an innovative concept that is computer mediated. It is public relations practice in the cyberspace. It is highly creative, strategic, fast, result-oriented and very cheap. Figure 1 proposes the organizational structure of the company in which all activities are represented in marketing, with special attention to the place and role of public relations. The proposed position of the PR department in the organizational structure is more suitable with terms of Internet use.



*Figure 1: Public relations in the organizational structure of the company in online conditions  
(Source: Authors)*

Figure 1 shows the organizational structure of the company in which marketing and PR's role in it are especially emphasized in accordance with the current situation. As already mentioned, each company, and especially large complexes or groups are part of the economic and political environment. That is why PR must be a part of managerial activities. This does not mean that PR has not remained a part of marketing because PR is still a part of after sales activities but in coordination with management. According to Figure 1, the marketing of each company starts from market research, which means finding a group of consumers who will be similar in their reactions to the products offered and identify a group that will behave similarly in buying and consuming (Ružić, 1998). Similar procedures are carried out in the procurement as well as in sales. After determining the market segments of procurement and sales, constant marketing activity or promotion is required. Promotional activities can be performed through various types of advertising, personal sales and sales promotion.

It should be emphasized that PR is a promotional activity, but also part of management activities. This is also confirmed by the findings of the Onyienko (2014) study which indicate that the public relations office should be made a department of its own, must have its own funds and the staff in the Public relations office should be well trained. A large number of authors defined what PR activity means. According to Gruing & Hunt (1984, p. 6) each of public relations activities is part of the management of communication between an organization and its public. According to Jefkins (1992), PR consists of all forms of planned communication outwards and inwards, between an organization and its public for the purpose of achieving specific objectives concerning mutual understanding. Since the public and the environment have changed significantly, the old definitions of PR are not appropriate for modern conditions and the International Public Relations Association (IPRA, 2020) has created a new definition of PR fit for the times we live in: "Public relations is a decision-making management practice tasked with building relationships and interests between organizations and their publics based on the delivery of information through trusted and ethical communication methods". Therefore, every entrepreneur must find ways to maintain common viewpoints with the environment. According to the research (Miočić, 2008, p. 40) 60% of respondents-entrepreneurs inform the top management about the expectations (requirements) of the environment in terms of socially responsible behavior of the organization, which means that PR is an important operational strategic activity. Therefore, the model in this paper proposes that PR in the organizational structure of the company be one of the important activities of managers or management of the company, as they show a higher degree of use of the Internet for two-way communication to create and establish dialogue with the public.

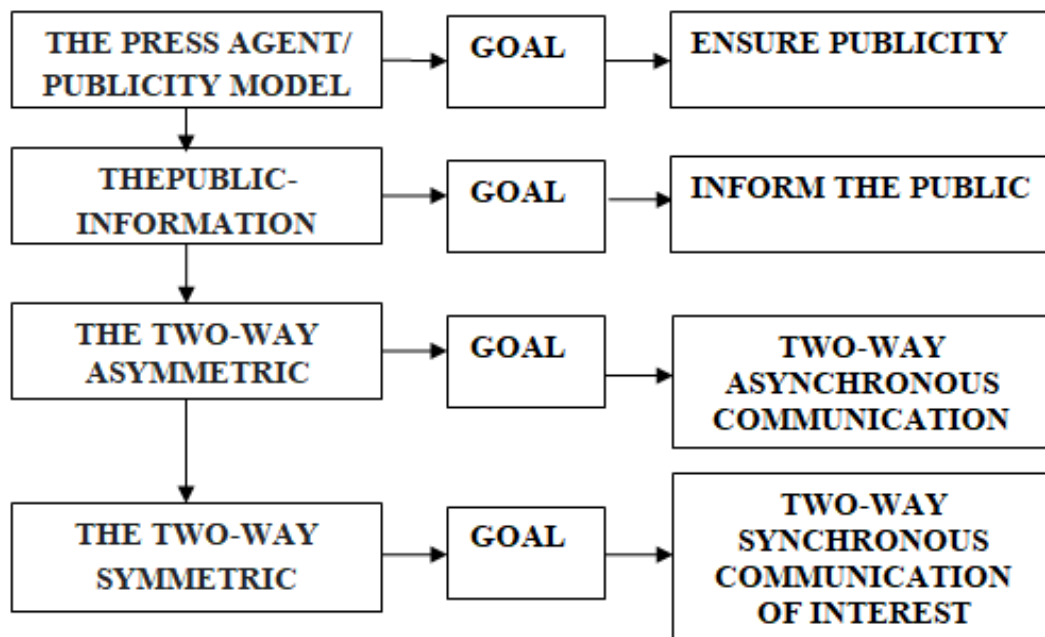
### **3. HISTORICAL DEVELOPMENT OF THE PUBLIC RELATIONS MODEL**

PR as a marketing activity has been established for decades, especially in developed economies. With the development of the economy, PR took new forms and ways of working. In this sense, PR has also become the subject of scientific research, so different approaches or models have emerged (Grunig & Hunt, 1984; Grunig, 2001; Cutlip et al., 2003). Science has defined a model as a set of assumptions used to theoretically describe a system. It consists of a general theory and a description of the object or system to which the theory relates. According to Tomić et al. (2007, p. 225) models as a way of presenting a system or activity such as PR have appeared before and gone through the following three phases:

- 1) *manipulation* - where companies impose selected business information on their own responsibility;
- 2) *information* - a way of conveying relevant information about the company with the possibility for the public to create their own conclusions;
- 3) *mutual interaction and understanding* - where in a two-way approach the company and the relevant public informs each other.

During the historical period (according to Figure 2) well-known Gruing-Hunt models of PR (Gruing & Hunt, 1984, p 13) stand out: 1) the press agent / publicity model, 2) the public-information model, 3) the two -way asymmetric model and 4) the two-way symmetric model. Gruing-Hunt models, as well as models' objectives are shown in Figure 2.

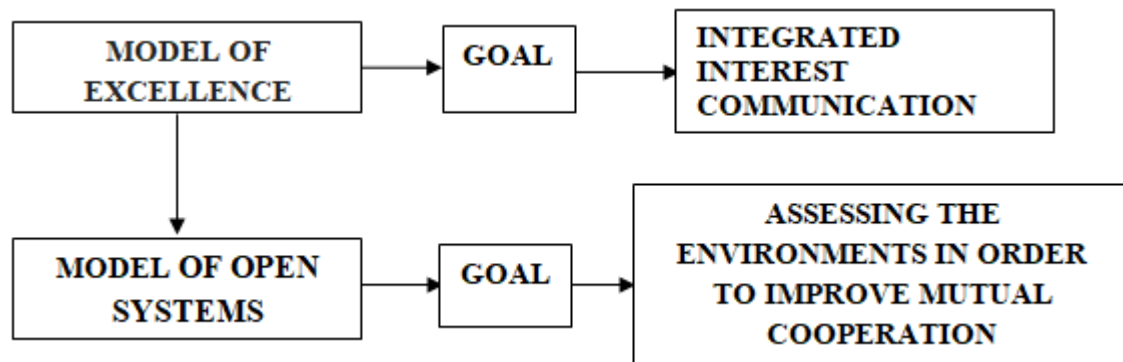
*Figure following on the next page*



*Figure 2: Development of public relations according to Gruing-Hunt models  
(Source: Created by authors according to Gruing-Hunt models)*

According to (Gruing & Hunt, 1984) the press agent / publicity model was applied as early as the early twentieth century in order to attract or distract the public from important information about a company or institution. The public information model is a way of publishing information in one direction where informants take responsibility and there is no feedback. With the development of society and technology, more sophisticated approaches to information and communication between companies and the public are emerging. The model is asymmetric because despite the fact that information technologies enable mutual communication, the public is still in a subordinate position. The further development of science has enabled even more diverse ways of mutual communication between companies and the public, so a symmetrical two-way model has emerged. This model emphasizes the role of the public even more, but also the need for greater efficiency and lower costs. In this case, PR experts are no longer the bearers but mediators between the interests of the company and the public. The results of the research (Miočić, 2008) show that in the Croatian Internet space, all four models of communication (public relations) meet. According to the criterion of the highest grades, the public-information model is used the most (83%). The least used are the two-way asymmetric model (49%), the press agent / publicity model and the two-way symmetric model are equally represented (54%). With the development of science and technology, PR takes all the sophisticated forms where the common interests of companies and the public are maximally intertwined in order to achieve perfection and usefulness. There is a need to improve mutual relations with complete openness, so in modern times, according to Tomić (2008), there is a model of excellence and a model of open systems. The excellence model and the open systems model are shown in Figure 3.

*Figure following on the next page*



*Figure 3: Excellence model and open systems model  
(Source: authors according to Tomić, 2008)*

According to Tomić (2008, p. 124), excellent public relations are mainly focused on symmetrical communication as an “ethical system of relations”, but depending on the circumstances they use different tactics. When it is said that excellent relations are mainly focused on two-way symmetrical communication, this does not mean that only symmetrical public relations are applied. This implies that some organizations also apply an asymmetric communication model when needed to build a win-win relationship between the organization and the public. Kunczik (2006, p. 165) concludes that companies tend to take advantage of all opportunities striving for perfection or excellence in public relations. In addition, the company includes a part of the public during strategic plans, the holders are more and more educated, but more employees are also being involved. According to Cutlip et al. (2003, p. 234), open systems exchange inputs and outputs across permeable membranes. The approach of the open system model in public relations implies a purposeful assessment of the environment in order to anticipate and detect changes that affect the relationship between the organization and its public. This model can also encourage corrective action within the organization and guide programs that influence the knowledge, preferences, and behavior of the internal and external public.

#### **4. INFORMATION-COMMUNICATION AND EDUCATIONAL MODEL**

According to Rupčić (2002, p. 917), knowledge increasingly marginalizes the meaning of material factors of production such as capital, natural resources or physical labour. Man's action is the so-called intellectual capital that creates new products through innovation processes, improves the quality of existing ones and increases productivity, efficiency and effectiveness. Because of the link between individual and enterprise learning and intellectual capital, a learning enterprise can be defined as an enterprise that encourages learning as a strategy to increase a company's intellectual capital. According to Kraiger (2003), successful organizations typically invest more in training than other organizations. This is confirmed by the data presented by Tharenou et al. (2007), according to which companies in the U.S. economy increased the number of training hours by an average of 13.5% in 2009. Businesses invested \$ 48.9 billion in training in 2010, compared to \$ 48.2 billion spent in 2009. According to Milhem et al. (2014) in 2011, 70% of Chinese and Malaysian managers have on-the-job training compared to less than 55% of such training in North America, 45% and in the UK and 21% in France. A large percentage of on-the-job training in Asian countries is the result of the transition to more flexible, cheaper and highly valuable training methods. On-the-job education in the company is a phase within the preparation for educational two-way communication with the environment. The first to communicate with are customers and suppliers because they themselves need to take steps to learn while working. Synchronous and mutual communication with the media, politics and financial and educational institutions implies the exchange of mutually beneficial information.

The development of methods and procedures of PR, and especially information technologies, has created the possibility of defining an appropriate model in which mutual education between companies and the public appears. Figure 4 shows a proposed example of an information-communication and education model.

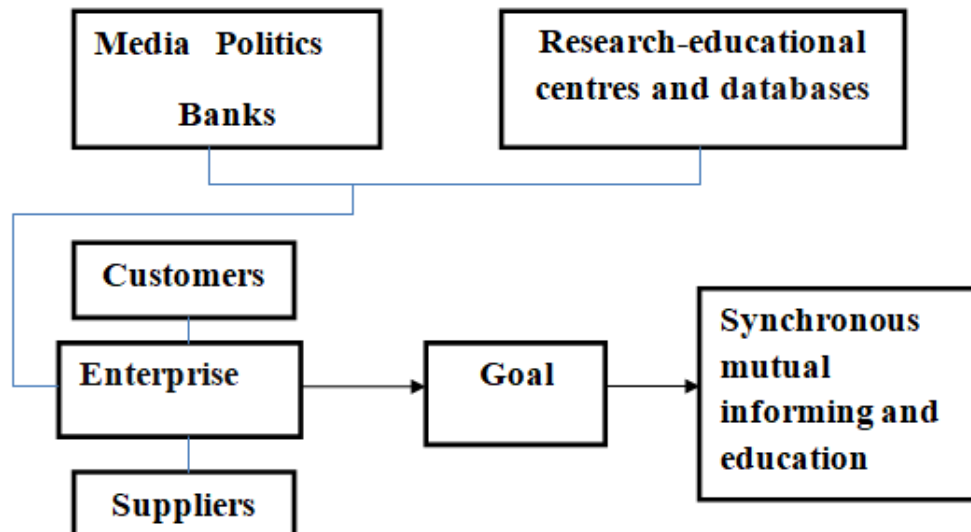


Figure 4: Information-communication and educational model  
(Source: authors)

Further development of science and technology in the early twentieth century and the globalization of economic relations has influenced the need for enterprise activities to create and maintain competitiveness. In every company, the manager should ensure publicity, fair relations with educational and financial institutions, community leaders, governors, the media and especially with customers and suppliers. Given that the development of technique and technology has enabled, but also conditioned new knowledge in many areas of business, it was necessary to find a way for continuing education. In that sense, it was necessary to start the educational process, in addition to working process. The field of PR activity is in such circumstances a fertile ground for the acquisition of new knowledge. Kurian et al. (2019) found that a strong institutional support has a positive and significant influence on the ease of use of technology. The educational process should be a strategic commitment of every company. First of all, it is necessary to approach the collection of information and its interpretation and transmission, as this achieves scanning of the environment and ensures a constant dialogue (Gregory, 2016). Therefore, an approach known as "Step-by-Step" is proposed, which consists of six steps aimed at increasing the effectiveness of learning in the company (Bahlis & Tourville, 2005):

- 1) *Align training with missions / goals.* It is necessary to determine the knowledge, skills and attitudes needed to effectively achieve the goals.
- 2) *Improve human performance.* Most performance deficiencies are due to environmental factors, which may include vague expectations, insufficient / untimely feedback, limited experience, insufficient access to required information, inadequate tools, resources and procedures, inappropriate and counterproductive incentives, etc. After removing such deficiencies, it can be determined whether employee training is required.
- 3) *Reduce time to competency.* As the ultimate objective of a training program should be to develop skills, competencies and / or attitudes needed to solve a performance deficit and in turn attain unit and organizational goals, closing the performance deficit sooner may result in significant added benefits.

- 4) *Select the right blend of delivery options for a training program selected.* Determine how well each option can meet organizational, learning, and learner requirements. Options that do not meet a critical requirement are eliminated since there is no point in considering options that do not close an identified knowledge or skill gap.
- 5) *Consider internal versus external options.* It is necessary to define the goals of education and assess the experience and skills of internal training of staff in relation to foreign educators.
- 6) *Duplicate efficient programs and detect problem areas.* After the training, this procedure can identify problem areas and avoid duplication of unnecessary training and repeat those that are effective.

Previous strategic steps indicate that any company can survive if it applies new knowledge or if it learns. According to Rupčić (2002), a learning company has a special philosophy and attitude towards designing an employee-oriented company and their constant participation in identifying and solving problems, all in order to improve performance, quality and customer satisfaction. First of all, it is about strengthening and investing in intellectual capital. The learning company needs to be maximally motivated to innovate, but it also needs to constantly adapt to the environment. This means that all relevant information should be researched and accepted, but also shared with the environment. In this case, the relevant environment to which the company corresponds means: local government, media, educational and financial institutions, customers, suppliers, databases and centres of excellence, as shown in Figure 4. In the explanation of the mentioned proposal of the PR model, some important facts should be pointed out. Namely, every small entrepreneur must be informed about the basic development plans of the state administration and especially local self-government in order to more easily fit into the established regulations. Special attention should be paid to the media and try to establish cooperation in mutual interest. In order to achieve successful results, it is necessary to have information on the operations and activities of financial institutions and to maintain a constant mutual interest relationship with suppliers and customers. Education is of great importance as it enables the entrepreneur to connect with existing databases and centers of excellence, which also include scientific research institutions. Assuming that all members of the said environment also have research and development tendencies create a basis for mutual exchange of information of mutual interest. This model implies prior educational preparation of entrepreneurs with an emphasis on knowledge of information technology. The proposed model completes the advantages of previous models and proposes a development model (Figure 4) with an emphasis on education. Therefore, the model is an integration of everything effective that has already been offered by the already researched PR models.

## 5. DISCUSSION

The need to define an educational synchronous model stems from several already established attitudes. It is necessary to choose the right way of training and application that refers to the nature of the work goals and organization, as suggested by Kraiger (2003), Tharenou et al. (2007) and Milhem et al. (2014). On-the-job education in the company is a phase within the preparation for educational two-way communication with the environment. Primarily, one needs to communicate with customers and suppliers who also need to take learning steps while working. Synchronous and mutual communication with the media, politics and financial institutions implies the exchange of mutually beneficial information. The company should have a special symmetrical relationship with databases and scientific research institutions in modern conditions. These institutions are a source of opportunities for the application of new methods and concrete innovations in accordance with the needs of the company.

Therefore, the proposed information-communication and educational model enables the application of all the positive achievements of the previous models. In addition, the proposed model enables the improvement of mutual education of companies and the environment.

## 6. CONCLUSION

Public relations are developing along with the development of economic activities. Additionally, PR is becoming an increasingly important managerial activity and not just a tool of promotion within marketing. In addition, it is taking on increasingly complex models in creating information and communication synergies between companies and the environment. Special synergy is achieved with the help of information technologies, but also with the growing need for constant innovation. Innovation processes are the result of acquiring new knowledge of the company and its environment. The researched data show that the companies of especially developed economies, with regular activities, learn a lot as well as their environment. Therefore, the level of quality and thus efficiency and competitiveness are raised. Hence, an information-communication and educational model has been proposed which makes it possible to achieve synergy between the company and the relevant public. The proposed model enables synchronous and efficient information and communication, but also mutual education between companies and the public. The limiting factor in these processes is still insufficient symbiosis of the company and its environment with scientific research institutions, which is certainly a good reason for further research.

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## THE PRINCIPLE OF GOOD FAITH AS LEGAL AND MORAL STANDARD

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### ABSTRACT

*The paper deals with the principle of good faith from a legal, ethical, and linguistic aspect. The existence and application of this principle is compared in different branches of law, legislation, judiciary, and legal practice in general. The concretization of this principle in the provisions of the Civil Obligations Act, the General Tax Act, the Companies Act and some other acts and positive regulations as well as its application in the judiciary is analysed. Some solutions are elaborated from the ethical aspect, and the impossibility and logical contradiction of insisting on this principle in individual cases is commented on. The expression of the principle itself is considered from the linguistic aspect, both chronologically and diachronically, and the nomotechnical analysis of the inclusion of the notion of good faith in Croatian legal terminology is given. A part of the paper gives an overview of the application of the principle of good faith in the legislations of the countries from which Croatia has taken certain legal solutions, as well as the etymology and method of translation from English and German. The paper also looks at the correlation of terms with terms of Roman law, i.e. with translations from Latin. In conclusion, the paper argues on the need to review the adequacy of recent definitions of this principle in modern legal texts and the need for its contextualization in accordance with current codes of ethics and deontological rules on the basis of which it is necessary to redefine the scope of the good faith legal principle. The paper also emphasizes the views of the authors who themselves question the adequacy of the principle of good faith in certain legal provisions.*  
**Keywords:** *bona fides, moral norms, the principle of good faith, civil obligations, fair trial*

### 1. INTRODUCTION

The principle of good faith, although a conceptually undefined and substantively imprecise concept, is a legal standard of international and national law. Historically, we find it in almost all legal orders. The legislator tried to define the meaning of the principle in certain regulations, but in practice it left it to the courts to determine the scope of these terms in each case, guided by the general meaning of these terms as a guideline. However, these are *a priori* ethical concepts that are defined in the philosophy of law rather than in legal rules, i.e. in nomotechnics. According to Klarić (2014)<sup>1</sup>, the principle of conscientiousness and honesty in law means "*defence against the tendencies of abuse of rights, correcting the rigidity of certain norms, the source of some additional obligations for participants in civil obligations relations, in short, enables moralization and humanization of civil obligations.*"

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<sup>1</sup> Klarić, P., Vedriš M., Građansko pravo, Narodne novine, Zagreb 2014.

The principle of good faith is one of the basic principles of mandatory law proclaimed in Art. 4 of the Civil Obligations Act<sup>2</sup> (hereinafter: COA) but also concretized in the context of the regulation of certain institutes of law of obligations. It is a legal standard that is indefinite, but determinable in *casu concreto* which concretizes the main performance in a legal relationship. The fact that the COA in some places emphasizes the obligation to respect the principle of good faith by exemplifying it in some places by stating, for example, what is or is not considered a violation of that principle, should not be interpreted as allowing the principle is not respected in other legal relationships. This also follows from the mentioned general provision, which prescribes that in establishing obligatory relations and exercising the rights and obligations from these relations, the participants are obliged to adhere to the principle of good faith<sup>3</sup>. The principle is also represented in certain institutes in other regulations, but it is derived from the basic application within the framework of obligation law.

## **2. CONCRETIZATION OF PRINCIPLES IN THE PROVISIONS OF THE CIVIL OBLIGATIONS ACT**

In addition to the mentioned general obligation in the general principles of the Civil Obligations Act, which applies to all legal relations, this act prescribes the obligation to respect the principle of good faith when concluding default interest in trade contracts and contracts between traders and public law entities<sup>4</sup>. The legislator stipulates that the default interest rate on relations from these contracts is determined, for each half-year, by increasing the average interest rate on loan balances granted for a period longer than one year to non-financial companies calculated for the reference period preceding the current half by five percentage points, and in other relations by three percentage points. However, in the case of trade contracts and contracts between a trader and a public law entity, the parties may agree on a different rate of default interest<sup>5</sup>. The limit of such freedom of contract is in the provision stipulating that any such contract will be invalid if, based on the circumstances of the case, and, in particular, the trade customs and the nature of the subject of the obligation, it follows that the agreed default interest rate rights and obligations of the contracting parties. The obligation to comply with this principle is also prescribed when agreeing on the deadline for the fulfilment of financial obligations from trade contracts or contracts between a trader and a public law entity<sup>6</sup> when no time limit is provided for the fulfilment of such an obligation. In that case, the debtor is obliged, without the need for the creditor to call him to do so, to fulfil this obligation within 30 days. A provision of the contract which stipulates a period longer than 30 days for the fulfilment of a financial obligation is invalid, if, based on the circumstances of the case, especially on trade customs and the nature of the subject of the obligation, it follows that the term of fulfilment contracted in such way and contrary to the principle of good faith, an obvious inequality in the rights and obligations of the contracting parties has been caused to the detriment of the creditor. Despite the fact that negotiations<sup>7</sup> are not binding prior to the conclusion of a contract (the parties are free to withdraw from the contract at any time and terminate the negotiations, which is in accordance with the principle of contractual disposition and contractual freedom), the party that negotiated or terminated contrary to the principle of good faith it is liable for the damage caused to the other party. Such a legal solution represents a barrier to the abuse of the principle of contractual disposition and contractual autonomy.

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<sup>2</sup> Civil Obligations Act OG 35/05, 41/08, 125/11, 78/15, 29/18.

<sup>3</sup> More in Baretić, Marko: Načelo savjesnosti i poštenja u obveznom pravu, Collected papers of the Law Faculty of the University of Rijeka, No. 1, 2003.

<sup>4</sup> Article 29. COA.

<sup>5</sup> The parties must comply with the restriction from the provision of Article 26, paragraph 2 of the COA that the rate of contractual interest between traders, i.e. traders and public law entities may not be higher than the rate of statutory default interest contractual interest rates, if a variable interest rate is agreed, increased by three quarters of that rate.

<sup>6</sup> Article 174. COA.

<sup>7</sup> Article 251. COA.

The same article explicitly states that it is contrary to the principle of good faith, *inter alia*, if a party enters into negotiations with the other party without a real intention to enter into a contract with that party. This covers cases such as the disclosure of trade secrets, various disclosures of information and data, non-submission of data, submission of incorrect or incomplete data or delays in negotiations. The application of the institute of pre-contractual liability basically starts from Jhering's doctrine of *culpa in contrahendo*, according to which future contracting parties are required to act in accordance with *diligentia in contrahendo*, i.e. with a certain degree of mutual attention, which would lead to liability for damages. In the case of conditional contracts, the condition is considered to be fulfilled if its fulfilment, contrary to the principle of good faith, is prevented by the party at whose expense it is determined, or that it is not fulfilled if its fulfilment, contrary to the principle of good faith is caused by the party in whose favour it is determined<sup>8</sup>. COA<sup>9</sup> also prescribes that the contract may extend the debtor's liability in obligatory relations for cases for which he is not otherwise responsible. However, the fulfilment of such a contractual provision may not be required if it would be contrary to the principle of good faith and honesty. Such a provision is a way of seeking to protect the position of the debtor. The legislator also prescribes the obligation of the court to follow the principle of good faith<sup>10</sup> when deciding on amending or terminating a contract due to changed circumstances, taking into account in particular the purpose of the contract, the division of risks arising from the contract or law, the duration and effect of extraordinary circumstances, and the interests of both parties. It is evident from the norm that the intention of the legislator is to impose an obligation on the judiciary to be guided by this principle in a certain way when deciding. The obligation to respect this principle is specifically prescribed in certain types of contracts. In the case of a commercial agency contract, the agent is obliged to take care of the interests of the principal and to act in accordance with the principle of conscientiousness and honesty and the care of a good business person in all the undertakings he or she undertakes<sup>11</sup>. In addition to the standard expressed in the principle in question, this standard prescribes an additional standard: the standard of duty of care<sup>12</sup>. The standard of duty of care is regulated primarily in general provisions of the COA<sup>13</sup>, which stipulates that the participant in the obligatory relationship is obliged to act in fulfilling his obligation with the care required in legal transactions in the appropriate type of obligatory relationship. Similar to the principle of good faith, the standard of duty of care is concretized by comparison with the behaviour of a particularly caring person of a certain social environment (the care of a good host, the care of a good businessperson or the care of a good expert). The same obligation, on the other hand, has the principal who is obliged in his relationship with the agent to act in accordance with the principle of good faith and with the care of a good businessperson<sup>14</sup>. The contractual provisions to the contrary are invalid. In the case of a mediation contract, the provisions governing the revocation of an order stipulate that the principal may revoke the mediation order whenever he wishes, if he has not waived it and if it is not contrary to good faith<sup>15</sup>. In addition, he is not obliged to enter into negotiations for concluding a contract with the person found by the mediator, nor to conclude a contract with him under the conditions communicated to the mediator, but he will be liable for damages if he acted against good faith<sup>16</sup>. In this context, we are certainly asked why the legislator in this legal norm does not refer to honesty as in the previously cited legal provisions and dictums.

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<sup>8</sup> Article 297. COA.

<sup>9</sup> Article 344. COA

<sup>10</sup> Article 371. COA.

<sup>11</sup> Article 811. COA.

<sup>12</sup> A standard that indicates the due behavior of real subjects in exercising their rights and obligations.

<sup>13</sup> Article 10. COA.

<sup>14</sup> Article 817. COA.

<sup>15</sup> Article 838. COA.

<sup>16</sup> Article 839. COA.

An acceptable solution would be to consider the anticipation of the occurrence of damage, which by its very appearance does not open the question of guilt. The law is therefore limited to the conduct of the principal in connection with his intentions. The criterion of good faith would probably preclude the intent to cause harm, thinking and acting to prevent it if it is perceived that it could occur as a result of third party conduct or force majeure if its action can be modified to prevent or reduce harm. Consequently, it could be speculated that the criterion of honesty cannot be insisted on precisely because the client does not participate in settling the damage and the one to whom the damage was caused bears the consequences, which could be interpreted as a deviation from the criterion of honesty.

### **3. CONCRETIZATION OF PRINCIPLES IN THE PROVISIONS OF OTHER POSITIVE REGULATIONS**

The principle of good faith is especially emphasized in the Consumer Protection Act<sup>17</sup> which devotes its entire head to regulating unfair provisions in consumer contracts. In addition to providing a general definition of unfair contract terms (a contract that has not been individually negotiated is considered unfair if, contrary to the principle of conscientiousness and fairness, it causes a significant imbalance in the rights and obligations of the parties to the detriment of consumers<sup>18</sup>), it also states individually which contractual provisions may be considered unfair<sup>19</sup>. Regarding the general provision, it should be noted that cumulatively three conditions<sup>20</sup> must be met: it must be a provision that has not been individually negotiated (and these are most often found in adhesion contracts, standard or general conditions), there must be a significant imbalance in rights and obligations of the contracting parties and the provision must be contrary to the principle of good faith<sup>21</sup>. The matter of unfair provisions in consumer contracts is also regulated in detail by the acts of the European Union, however, their presentation would go beyond the scope of this paper. It should be noted, however, that this law also regulates unfair business practices<sup>22</sup> in a special chapter (misleading and aggressive business practices). The principle of good faith was introduced in the Act on Financial Operations and Pre-Bankruptcy Settlement<sup>23</sup>, which prescribes the nullity of contractual provisions in business transactions between entrepreneurs as well as the nullity of contractual provisions in business transactions between entrepreneurs and public law entities regarding deadlines for fulfilling financial obligations<sup>24</sup>. The General Tax Act<sup>25</sup> also deals with the principle of good faith<sup>26</sup>. It stipulates that the participants in a tax-legal relationship are obliged to act in good faith, whereby acting in good faith means conscientious and fair treatment in accordance with the law, and that the Minister of Finance will prescribe the manner of acting in good faith. We would like to draw attention to the ethical dilemmas that are justifiably posed by such a provision: acting in good faith, as a merit of decision-making or acting, is a category sustainable only in the context of autonomous and individual ethics. On the other hand, prescribing such behaviour encroaches on the idea of understanding the philosophy of law built on the question of what the idea of positive law is based or should be based on; more specifically about what justifies its commanding and prohibitive character.

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<sup>17</sup> OG 41/14, 110/15, 14/19.

<sup>18</sup> Article 49. st.1. Consumer Protection Act.

<sup>19</sup> In Article 50 of the Consumer Protection Act states which provisions, with the cumulative fulfillment of the stated conditions, could be considered unfair.

<sup>20</sup> More in Pošćić, A., Nepoštena klauzula u potrošačkim ugovorima, Zbornik radova Pravnog fakulteta u Splitu, Vol. 43 No. 2, 2006, 165-190.

<sup>21</sup> More in Slakoper, Z., Nevaljalost pojedinih odredbi općih uvjeta ugovora s posebnim osvrtom na potrošačke ugovore, Collected papers of the Law Faculty of the University of Rijeka, No. 1/01, 181-208.

<sup>22</sup> Regulated by Articles 30- 38a of the Consumer Protection Act.

<sup>23</sup> OG 108/12, 144/12, 81/13, 112/13, 71/15, 78/15.

<sup>24</sup> Article 14 of the Act on Financial Operations and Pre-Bankruptcy Settlement.

<sup>25</sup> OG 115/16, 106/18, 121/19, 32/20, 42/20.

<sup>26</sup> Article 9 of the General Tax Act.

It is this commanding character of the law abolishing any individual (subjective) judgment, even that of acting in good faith. This is so especially when it is prescribed by the authority of the state administration (i.e. the individual, if we read the provision of the law *ad litteram* especially in the part where the minister is given the authority to prescribe the manner of action). The next contradiction arises from the very idea of prescribing the way to act in good faith. Faith (*fides* or, in this case, in fact, intention) refers to something that is *a priori*, therefore, exists before the action itself, and the action itself does not really have to be a concrete result of *good faith*. If *good faith* always resulted in the same conduct, judging whether it was acted in good faith would not only be unnecessary but would be impossible. In other words, if it were possible to prescribe a course of action, a call to act in good faith would be superfluous, and would not even belong to the normative part of the legal text, but could be found only in its general determinants or general principles. Furthermore, the Act on Conciliation<sup>27</sup> stipulates<sup>28</sup> that the principle of good faith and the internationally accepted standards of conciliation expressed in acts of the European Union, the United Nations and the Council of Europe should be followed in interpreting its provisions. Conscientiousness and honesty<sup>29</sup> as a criterion in the conduct of conciliation proceedings is particularly intriguing precisely because the very need for conciliation arises from the fact of acting in accordance with the subjective criteria of application of this principle (which led to a conflict between two or more parties) and conciliation in this segment can actually be reduced to arbitration, i.e. to the application of a new subjective criterion of what is conscientious and fair in accordance with the code of ethics of the conciliator as an arbitrator. The principle is also implemented in the Companies Act<sup>30</sup> for the purpose of protecting the rights of members and acting fairly in societies. Barbić (2008)<sup>31</sup> states that *"it is not just a principle that would have only theoretical significance, but the application of that principle can lead to serious consequences for relations in society."* One of the fundamental obligations of members of society is the obligation to act loyally. This obligation is a concretization of the principle of trust, which arises from the application of the principle of good faith. Furthermore, the application of this principle may result in a rebuttal of the decision of the assembly, a lawsuit against a member of the company, reflected in the right to information and the right to compensation from a member who acted contrary to the rule that, under equal conditions, members have equal rights in the company. Likewise, the institute of the breakthrough of legal personality, according to which one who abuses the circumstance that as a member of a company is not liable for the company's obligations cannot invoke that he is not legally liable for those obligations, is based on the principle of good faith. We can assume here that the legislator in the abstract legal norm did not find an appropriate way to protect the individual interests of members of society in relation to other members of society and all members towards each other. We could also agree with Barbić's statement that the application of principles we are interested in here can have concrete and serious consequences for relations in society because it is quite clear that they cannot be *a priori* based on conscientiousness and honesty but on gaining profit. The principle of decision-making in society is in fact the principle of gaining profit, which can be, and sometimes is, in conflict with the principle of good faith interpreted not only as an objective but also as a subjective criterion of action. Individual members of the company, given their individual and specific interests, investments and business plans, will objectively gain different levels of profit in certain periods based on the same decisions, and the judgment of conscientiousness will depend on the level and type of information at their disposal, as well as the overall knowledge they possess.

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<sup>27</sup> OG 18/11.

<sup>28</sup> Article 4 of the Act on Conciliation.

<sup>29</sup> The Croatian term used for the principle of good faith in the legal terminology is *the principle of conscientiousness and honesty*.

<sup>30</sup> OG 111/93, 34/99, 121/99, 52/00, 118/03, 107/07, 146/08, 137/09, 125/11, 152/11, 111/12, 68/13, 110/15, 40/19.

<sup>31</sup> Barbić, J., Pravo društava, knjiga prva, opći dio, Organizator, Zagreb 2008, 135.

#### 4. APPLICATION OF PRINCIPLES IN THE JUDICIARY

As the principle of good faith is a legal standard that is concretized only in some, *supra* stated provisions of the COA and other regulations, in practice the concretization of this principle takes place in each individual case by the court itself. The court is enabled to bring a specific case, which is not provided by the norm, under a general provision, i.e. a legal standard, and resolve the case fairly and in the spirit of the law, thus achieving the principle of justice at the level of individual cases. This principle is often invoked by the parties in court proceedings, especially in litigation in which the loss of rights from contractual relations is decided. The principle of conscientiousness and honesty is ultimately immanent to the notion of a fair trial, for which the Constitutional Court has established and implemented their views in principle in its decisions. It refers to Article 29 paragraph 1 of the Constitution of the Republic of Croatia<sup>32</sup>, which in the relevant part reads: "Everyone has the right to an independent and impartial tribunal established by law ... to decide fairly on his rights and obligations." In one case, the principle of good faith was also the subject of the constitutional review of the Civil Obligations Act before the Constitutional Court of the Republic of Croatia. A group of lawyers submitted a proposal to initiate proceedings to review the constitutionality of the provisions of the COA<sup>33</sup> about the consequences of the risk of changes in the value of money. The Constitutional Court ruled that the proposal was unfounded because the said legal provision left the contracting parties to freely contract various means to protect themselves from the risk of changes in the value of money when the contractual obligation arises. The Constitutional Court also carried out a concrete review of the court decision, emphasizing the principle of good faith in the famous decision "Swiss franc"<sup>34</sup>. Interpretation and application of the principle of conscientiousness as an open legal rule in court practice is visible in many cases of multiple contracting of alienation of property rights when the later buyer took possession of the property and (or) obtained registration of property rights in the land register. It is evident from judicial practice that this principle is still applied more often in situations when the obligation to comply with it is additionally prescribed, than when it is a general rule whose concretization should be performed by the court. The reason for this is the fear of violating the three divisions of power by encroaching on the judiciary into the legislature. However, this fear has no solid foundation because courts cannot create a *contra legem* practice anyway. In this regard, there are authors who believe that this principle is not applied in Croatian case law to the extent that would be expected and that the use and interpretation of the principle of conscientiousness and honesty in case law is not sufficient to concretize this legal standard<sup>35</sup>.

#### 5. INTRODUCTION OF THE CONCEPT OF SAVJESNOST I POŠTENJE<sup>36</sup> IN CROATIAN LEGAL TERMINOLOGY

Interestingly, in reviews of the professional terminology of legal science and practice, we rarely come across definitions of the notion of *savjest i poštenje* as professional terms, either as a syntagm or as constituents. When they are mentioned in various, more or less popular legal manuals, they are most often explained by circular definitions, i.e. by themselves, with examples of their application.

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<sup>32</sup> OG 56/90, 135/97, 08/98, 113/00, 124/00, 28/01, 41/01, 55/01, 76/10, 85/10, 05/14.

<sup>33</sup> The provision reads: when the obligation has the amount of money for performance, the debtor is obliged to pay the number of monetary units to which the obligation refers, except when the law determines otherwise, by contracting a currency clause (Article 22, paragraph 1 of COA/05), index clause (Article 23 of COA/05) or sliding scale (Article 24 of COA/05). In addition, the provision of Article 369 of the COA prescribes the action due to changed circumstances.

<sup>34</sup> Number: U-III-2521/2015, U-III-2536/2015, U-III-2547/2015, U-III-2565/2015, U-III-2603/2015, U-III-2604/2015, U-III-2605/2015 from 13th December 2016.

<sup>35</sup> More on this in Baretić, Marko: Načelo savjesnosti i poštenja u obveznom pravu, Collected papers of the Law Faculty of the University of Rijeka, No.1, 2003, 587.

<sup>36</sup> In English: *conscientiousness and honesty*; the principle of good faith is also called *the principle of conscientiousness and honesty* by some authors.

We conclude, therefore, that the profession itself actually relies on the meaning of these words in general language. It is worth mentioning that the word *poštenje*<sup>37</sup> was considered a technical legal term from the very beginning of the scientific approach to law, so that the word *poštenje* was already included in his Legal-Historical Dictionary by Vladimir Mažuranić (p.1047). In addition to the old Croatian form of *počtenje*, he mentions the Latin translation of the words as *honorificentia*, *honor*, *honestas*, *bona aestimatio*, and finds confirmation in Old Croatian legal texts, which did not have the character of a legal norm but represented legal practice; they were compiled as a confirmation of the performed legal work (grants, contracts, orders, etc.). The term *savjesnost*<sup>38</sup> at that time could not be applied in legal practice and especially not as an expression of a moral principle since we can understand it only within the concept of autonomous ethics, which recognizes responsibility for actions to the individual, his will, independence, and individual ethical concept. The meaning of the word *savjesnost*, based on insights into a number of older and newer Croatian dictionaries, could be defined as a characteristic of one who is conscientious, and conscience simply by *the sense of moral responsibility of an individual arising from his ability to evaluate his actions as good or bad*. The word *savjest*<sup>39</sup> itself is etymologically related to the Proto-Slavic and Old Slavic word *vede*, which has the meaning of the verb *vidjeti*<sup>40</sup>, *znati*<sup>41</sup>, and we find it in all Slavic languages. Even from this short linguistic analysis, the subjectivity of the expression we are talking about and its rootedness in the principles of autonomous ethics are imposed. Conscientiousness, therefore, cannot exist without the activity of an individual who must himself assess the moral value of his conduct. Let's go back to Mažuranić's inclusion of words *poštenje* in Croatian legal terminology, we must note that in his interpretation he included a Latin translation, or rather an additional explanation, *aestimatio*, a word that we still translate as *cijenjenje*<sup>42</sup>, *procjenu*<sup>43</sup> or *priznanje*<sup>44</sup>, which is close to the concept in scope and reach of the concept *savjesnost*. After this brief linguistic analysis (a more detailed one would go beyond the scope and character of this paper), the question arises as to why our positive legislation, as a rule, always invokes both honesty and conscientiousness. For, in the system of autonomous ethics, if an individual acts conscientiously, his act is at the same time fair since he himself judges what is good and the judgment about it cannot be imposed on him from outside. If we accept, however, that the criterion of fair treatment is imposed from the outside, that it does not have to be an autonomous decision of the individual, we open a potential question of treatment (and judgment) in the event of a possible conflict between conscientious and fair treatment. According to Osrečak (2014)<sup>45</sup>, some authors consider it not the most appropriate. The very name of the principle in Latin is *bona fides*, in English *good faith*, and in German *Treu und Glauben*. While in Latin (*fides*), English (*faith*) and French (*foi*) the word *faith* (in Croatian *vjera*) is recognized, in German, the terms *faith*, i.e. *trust* and *conscientiousness* appear. The Croatian name of the term is *načelo savjesnosti i poštenja* and was established on the model of the German term for the principle *Treu und Glauben*, where *Treu* in German in this form does not exist as a noun, but as an adjective *treu*. The monolingual dictionary of the German language Duden Deutsches Universalwörterbuch (2003) defines *treu* as *zuverlässig* (reliable), *unbeirrt* (decisive), *beständig* (stable), etc. The term *Glauben*, i.e. its more commonly used form *Glaube*, is defined in the same dictionary as *Gewissenheit* (conscience) or *Überzeugung* (belief or faith).

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<sup>37</sup> In English: *honesty*

<sup>38</sup> In English: *conscientiousness*

<sup>39</sup> In English: *conscience*

<sup>40</sup> In English: *to see*

<sup>41</sup> In English: *to know*

<sup>42</sup> In English: *appreciation*

<sup>43</sup> In English: *estimation*

<sup>44</sup> In English: *recognition*

<sup>45</sup> More in Osrečak, Jadranka: Comparative legal overview of the principles of fairness and diligence, Zagrebačka pravna revija, Vol.3, No.1, 2014, 55

The origin of the Croatian version of *conscience*, i.e. *savjest*, is visible here, but the question arises as to whether a translation from Latin, English or French would still be more appropriate for this principle. According to Osborn's Concise Law Dictionary (2009)<sup>46</sup>, the term *bona fide* is defined as "in good faith, honestly, without fraud, collusion or participation in wrongdoing. This could be translated into Croatian as *poštenje*, i.e. *honesty* or *fairness* in English. It can therefore be concluded that the term *poštenje i povjerenje* (*honesty and trust* in English), also used in the past, would better represent the meaning of the principle itself, as by Osrečak (2014). Vidaković Mukić (2015)<sup>47</sup> defines *bona fides* as follows: "*bona fides* (lat. *dobra vjera*) - *dobra vjera, poštenje, ispravnost, vjera i poštenje u pravnom prometu, u opreci prema zloj veri, nepoštenju i prevari* (la *fides, dolus, dolus malus*) (...)"<sup>48</sup> According to this explanation, the term *ispravnost* emphasizes the basic idea of the principle and should also be taken into account. Furthermore, there are numerous versions by various authors, such as *the principle of good faith, the principle of good faith and fair dealing, the principle of conscientiousness and honesty, the principles of fairness and diligence*, etc. This paper opts for the term *the principle of good faith*, whereas in the provisional English translation of the Civil Obligations Act on the homepage of the Supreme Court of the Republic of Croatia the principle is referred to as *the principle of good faith and fair dealing*. This shows a need for a unique term when the principle is being translated into the English language to avoid confusion.

## 6. CONCLUSION

The principle of *conscientiousness and honesty*<sup>49</sup>, although conceptually undefined and substantively imprecise, is a legal standard of contemporary Croatian law, but it is also found in the legal systems of many countries from which Croatia has taken certain legal solutions. Although it is in fact the same principle, precise translations, as well as the wider linguistic context, nevertheless suggest differences in the scope and reach of the terms used in individual legislations. The basic logical, and thus ethical problem of invoking this principle is basically the problem of subjective judgment which relativizes its meaning, and consequently leads to the inaccuracy of the legal rule in which it is used. It turns out that the difference is also important in whether this principle is applied as an expression in the legal norm itself or it is referred to as a principle of decision-making and conduct in the conduct of the judiciary. The analysis showed that the term *poštenje* as a component of the syntagm that expresses the principle, as a legal term, has been present in the Croatian legal tradition since its very beginnings with an acceptably clear and defined meaning and has confirmation in a number of legal branches. On the contrary, *savjesnost* is a newer component and has not yet confirmed the undoubted scope and reach of the professional term in legal practice. If we try to find a solution taking into account the fact that we have taken certain legal solutions (and according to nomotechnical criteria!) from legislations with a longer tradition, i.e. that we have actually adopted some legal terms by translating from other languages (German) or following the legal tradition (Latin), we conclude that the word *savjesnost* does not maintain the true content of the legal rule in which, as part of the syntagm referred to here, it is used. All the more so because, from the ethical aspect, *savjesnost* belongs to an autonomous ethic that would in no way belong to the discourse of the coercive legal norm we are discussing. Because of all this, we might agree with the authors who question either the legal principle of *conscientiousness and honesty* itself or its expression.

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<sup>46</sup> *Bona fide*. In Osborn's Concise Law Dictionary, Sweet & Maxwell, 11th edition, London 2009, 62.

<sup>47</sup> *Bona fides*. In Vidaković Mukić, Mirjana: Opći pravni rječnik, 2.izmijenjeno i dopunjeno izdanje, Narodne novine, Zagreb 2015, 86.

<sup>48</sup> In English: *bona fides* (Lat. *good faith*) - good faith, honesty, correctness, faith and honesty in legal transactions, as opposed to evil faith, dishonesty and deception (la *fides, dolus, dolus malus*) (...).

<sup>49</sup> The literal translation of the principle of good faith from Croatian: *načelo savjesnosti i poštenja*



If we add to their argument the practice of modern ethical principles and rules of recent deontological codes of professions involved in the application of legal solutions mentioned here (although they, due to the limited scope of this paper, could not have been specifically considered here), we conclude that both in application and definition of the *principle of conscientiousness and honesty* in Croatian legislation and legal practice, it is necessary to find more modern and consistent solutions.

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## ENERGY CRISIS MANAGEMENT IN THE 21ST CENTURY

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### ABSTRACT

*It is not a common phrase nowadays to state that we are in an energy crisis, which creates panic and chaos. Nevertheless, state of the art brings to the public knowledge that we can talk of an energy crisis since the beginning of this century. The energy crisis, despite some attempts, is something that persists and gets worse. The explanation for this might be that there is no broad understanding of the complex causes and solutions for the energy crisis. Therefore this research attempts to address this matter and work on the causes of the energy crisis and look for potential solutions to survive the climate change battle, enhanced by the COVID-19 pandemics. The literature on this subject is limited and sometimes scarce or difficult to obtain. This paper aims to focus on the management of the energy crisis in the context of recent events, taking into account the limited capacity of the traditional sources of energy or the expensive utilization of "unconventional" sources of energy. It also considers their resilience, reliability, and accessibility in the context of climatic, security, technological, geopolitical or social challenges.*

**Keywords:** *Innovation, Energy Crisis, Climate Change, COVID-19*

### 1. INTRODUCTION

Innovation in the next generation of fossil fuels and advanced technologies in renewable energy will offer new options for diversifying energy sources. It can lead to a more secure, more sustainable, and cheaper energy union worldwide, which will allow the free flow of energy beyond national borders. It will provide greater security in the supply of all people. However, the global energy market is undergoing continuous fundamental and profound structural changes resulting from deregulation, privatization, and consolidation. With the evolution and progress of companies, the pressure of market competition forces them to make improvements in technologies and processes, which almost always result in greater energy efficiency. Over time, emerging economies become less energy-consuming, requiring less energy as they begin to use alternative energy sources or consume less (Sioshansi, 2013, p. 106). In an increasingly globalized economy, a country's energy strategy is aligned with the context of global developments and changes. Therefore, the energy sector should be a dynamic sector, which actively supports the development of the world economy and helps reduce the disparities between countries. In this respect, the general objective of the global energy strategy is to meet current and medium and long-term energy needs at affordable prices, suitable for a modern market economy and in decent living conditions, ensuring quality and food safety, taking into account the principles of sustainable development. Thus, the general objectives aimed at ensuring security, maintaining a balance between the import of primary energy resources, and the rational and efficient use of national reserves based on commercial and economic factors are a priority to continue developing safe and competitive energy sources.

## **2. CLIMATE CHANGE AND ENERGY CRISIS HISTORY**

From one type of energy to another, transitions highlight the preponderance of fossil fuels through the light of the last 150 years as well as the importance of energy for national and global security. As the world becomes more industrialized, the interest in energy is experiencing significant growth. Dependence on fossil fuels is dangerous for countries in their attempt to secure suitable amounts of energy, but also for the entire world in the fight to solve ecological and social problems related to energy consumption (Schumacher, 1985). Currently, the problem of global warming becomes a measure of considerable importance. Extreme events can occur if measures aimed at attenuating the rise of global temperature are not taken. Fossil fuel dependence changes the global climate, and these changes harm the population and the environment. All energy sources affect nature to some extent. However, suppose sources pollute the air people breathe (such as the burn of coals to produce energy). In that case, even a harmless energy source, hydropower, damages the ecosystem the most through dams built to store water. Even though the construction and use of dams can be beneficial for some people, it is having disastrous influences on the ecosystem. However, without omitting the various aspects described above related to energy exploration, production, and processing, worldwide energy consumption raises several social concerns. Therefore, the issues in the social sphere incorporate the decline of fossil fuel sources, conflicts that arise due to concerns about energy security, and imbalances regarding accessibility to energy sources. It is essential to remember that many of these problems are unpredictable and have multiple facets. The context of current developments requires an analysis of the natural/decisive impact of climate change, the spread of terrorism, and, more recently, various factors arising from the evolution of the political situation or changes occurring in the international economic architecture. An increase in global energy consumption has led to competition for access to resources, while the limited number of suppliers has, in some cases, created monopolies and oligarchs. For this reason, energy security has become a strategic and political issue, and the matter of energy is of paramount importance. As the global warming crisis has progressed, the connection between greenhouse gas emissions (as can be seen to rise in the last decades, Figure 1) and the use of fossil fuels has gained prominence (as can be seen in Figure 2). To address global warming, the giant oil and coal firms learned that they needed to deal with national pollution. They went with an environmentally-friendly strategy, a coal-power-reduction plan. This measure was nearly unavoidable, as it is implemented in the transportation sector after introducing measures to minimize gasoline and diesel fuel consumption in the sector. It is not what the coal and petroleum industries had in mind when they planned for the future. The companies saw an energy landscape where coal, oil, and natural gas would gradually play an important role, at least until the middle of the next century. There was no solar power, wind, or geothermal energy, just coal, oil, natural gas, and hydroelectric.

*Figure following on the next page*

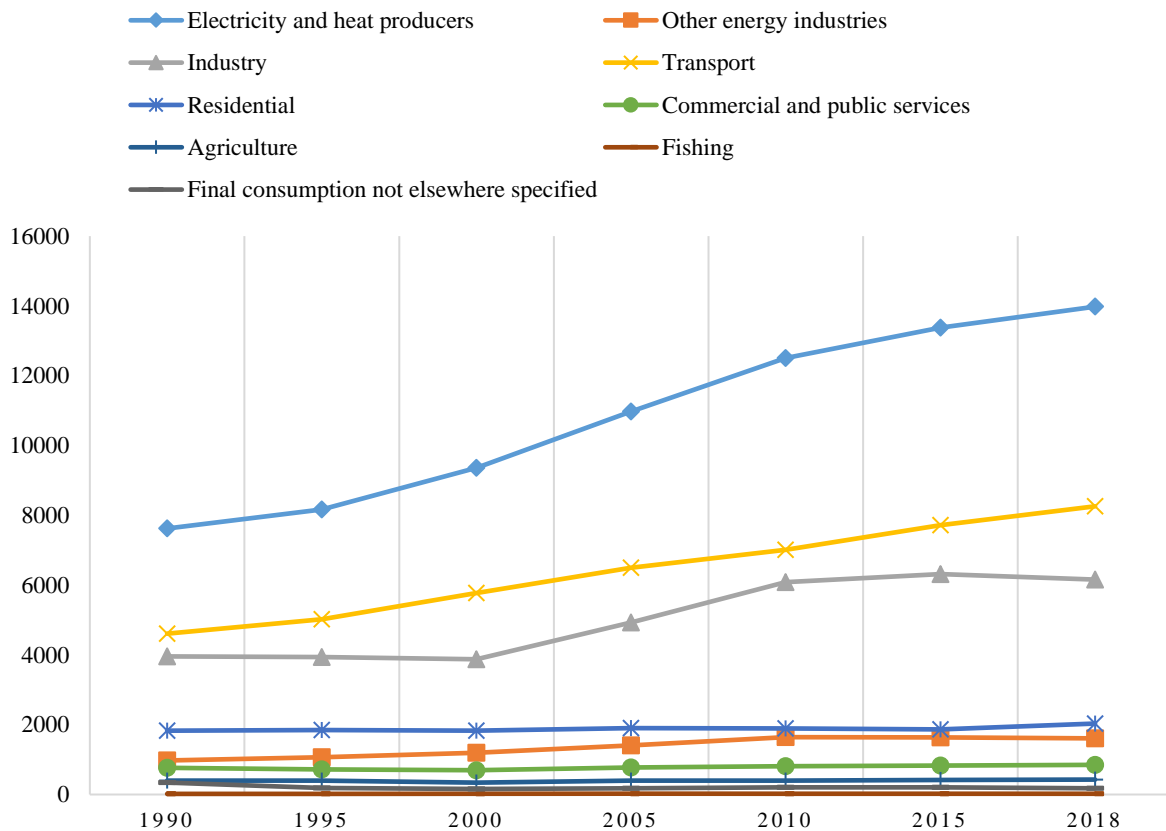


Figure 1: CO<sub>2</sub> emissions (in Mt) by sector, World 1990-2018  
(Source: IEA (2021))

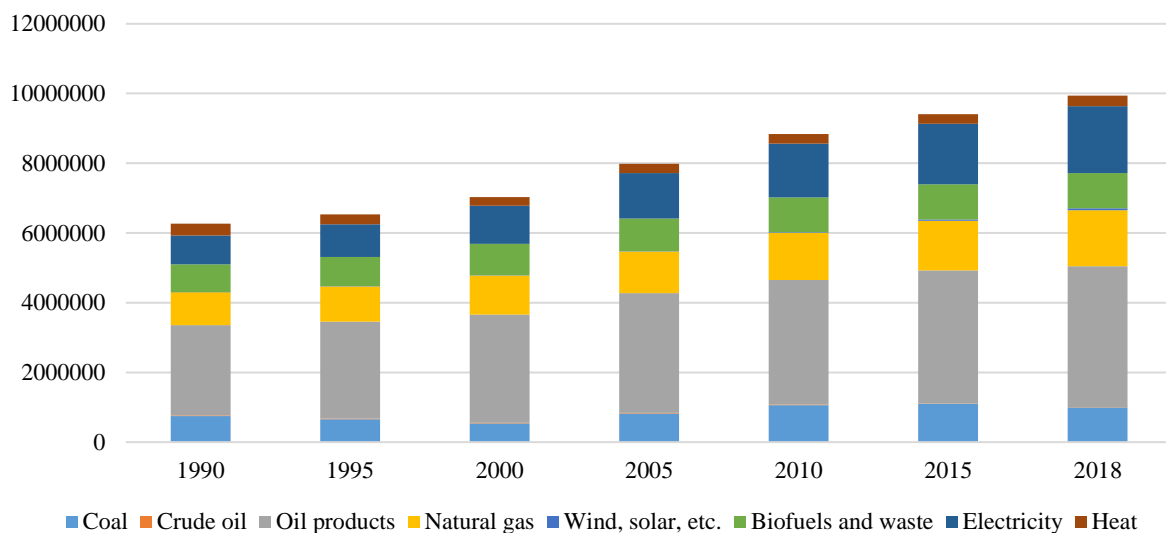


Figure 2: Total final consumption (in ktoe) by source, World 1990-2018  
(Source: IEA (2021))

Modern science may for now, be able to describe phenomena that are so far as to be scientific; fossil fuel companies accepted that it was futile to dispute the evidence-based reality. What was occurring was also evident to the scientists themselves: the emissions of carbon dioxide and hydrocarbon fuels caused the global temperatures to rise steadily. It is not a common phrase nowadays to state that we are in an energy crisis, which creates panic and chaos.

Nevertheless, state of the art brings to the public knowledge that we can talk of an energy crisis since the beginning of this century. Either there is the subject of *traditional sources of energy*, Eerkens (2010) and Crane et al. (2010), *green energy*, such as in the works of Sioshansi (2013), Gupta et al. (2013) or Woodrow (2017), or focused researches on the *energy crisis*, such as McKillop and Newman (2005), Newman (2015), Chevalier and Geoffron (2013) or Coyle and Simmons (2014), to name a few. There is acknowledged the existence of an energy crisis worldwide, as while the need for energy rises, the world's limited natural resources used to industrial power society are decreasing. The energy crisis is a complicated and complex issue. Many people do not feel it linked to their life unless the pump's gas price increases or the gas station has queues. The energy crisis, despite some attempts, is something that persists and gets worse. The explanation for this might be that there is no broad understanding of the complex causes and solutions for the energy crisis, therefore this research project attempts to address this matter and work on the causes of the energy crisis and look for potential solutions for us to survive the climate change battle. The literature on this subject is limited, and moreover, the available are scarce sometimes or difficult to obtain. Therefore, to overpass this limitation, this paper aims to broaden the knowledge on this topic.

### **3. THE COVID-19 EFFECT ON THE ECONOMY AND ENERGY**

The COVID-19 epidemic has caused a severe global economic recession, which has affected economies worldwide (IEA, 2020). From a government perspective, attention must first be on healthcare with simultaneous emergency efforts to assist and aid people. The companies and financial necessities used to offset and forestalling a financial collapse are being put in place. The energy sector has had a vital role in dealing with the global COVID-19 crisis, especially electricity. The uninterrupted supply of energy has allowed hospitals to provide care, food, essentials, and many other tasks while providing social interaction between the people who had to work and stay at home. Without access to dependable and sustainable energy power, lockdowns would have done much more economic harm than they did. This economic downturn is unprecedented in both size and duration, forcing policymakers to formulate long- recovery strategies that will affect infrastructure and industry for decades to follow. They provide substantial opportunities for national and global growth, with a long-term horizon focus. Projects in the regions, if well-planned, can provide employment as well as a renewable, resilient, and more cost-effective energy system. In this respect, the COVID-19 crisis is unique because governments have had to implement controls that suppress the economy's usual flow for an unspecified time. The economy has also seen a significant reduction in CO<sub>2</sub> emissions over the past decades, associated with less business activity. However, since the economy is getting stronger, sustainable development related to climate and health targets may become more challenging to achieve decades ahead. Investing in renewable energy transitions at the core of recovery (Buchan, 2010) puts the world in a better position to build long-and-sustainable economies and safeguard public health while decarbonizing CO<sub>2</sub>. Based on data for the first four months of 2020, IEA's projections indicate that global primary energy demand will decline and contract by 6% in the same magnitude by the end of the year (Figure 3). That will be the equivalent of a seven-time correction in the stock market crash of 2008 and 2009 combined (IEA, 2020).

*Figure following on the next page*

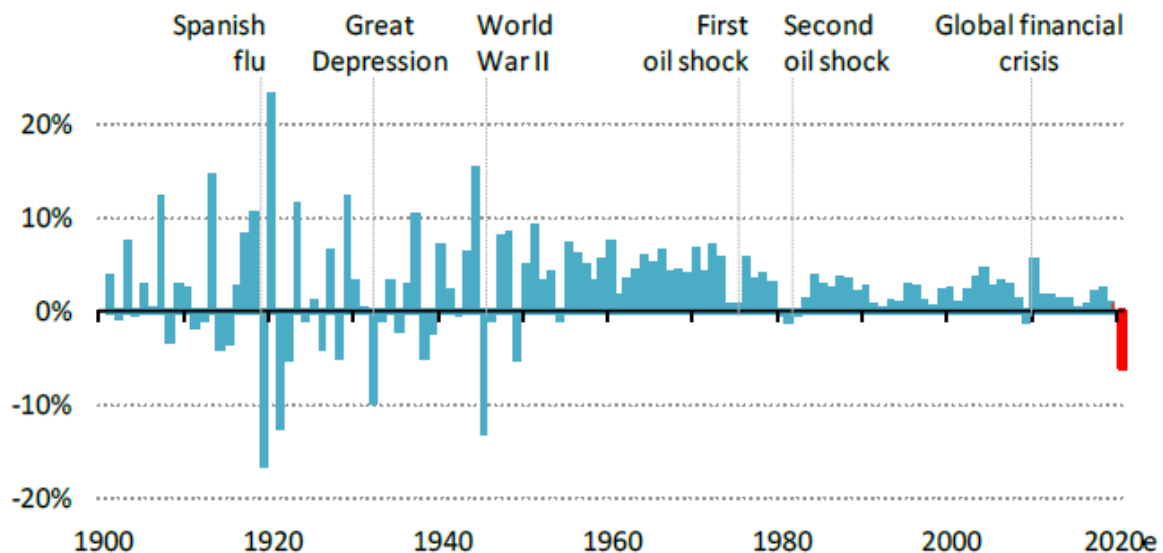


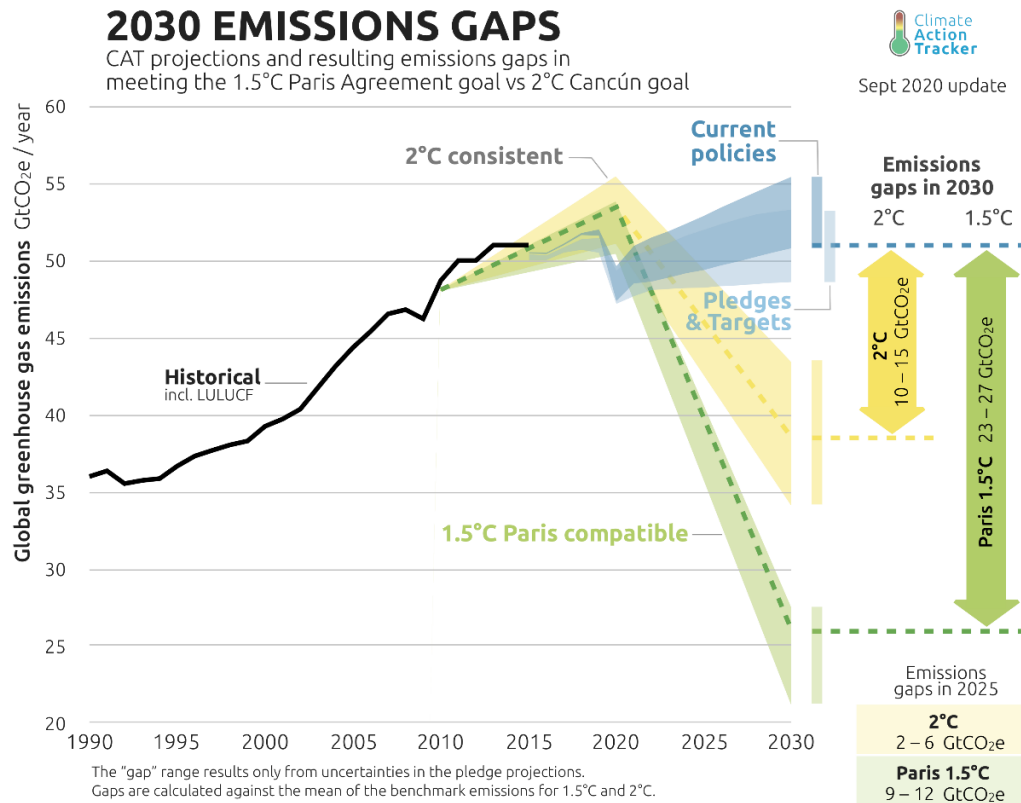
Figure 3: Change in global primary energy demand, World 1900 to 2020e  
(Source: IEA (2020))

Unprecedented in scale, governments all over the world are instituting fiscal and monetary stimulus. For the most impacted, the current plan is focused on providing cash assistance and investing in businesses to reduce social and job impacts. In the long run, it is imperative to have total financial leverage. One thing that adds uncertainty to the economic picture is whether the pandemic will worsen or improve, how long the virus will be kept under control, how the reopening plans will work, and how the economy will change in the face of a pandemic recovery. However, on the positive side, a brief time of lockdown, followed by an aggressive and targeted macro-financial and microeconomic strategy, will lead to a V-shaped economic turnaround.

#### 4. POSSIBLE RESPONSES TO THE CRISIS

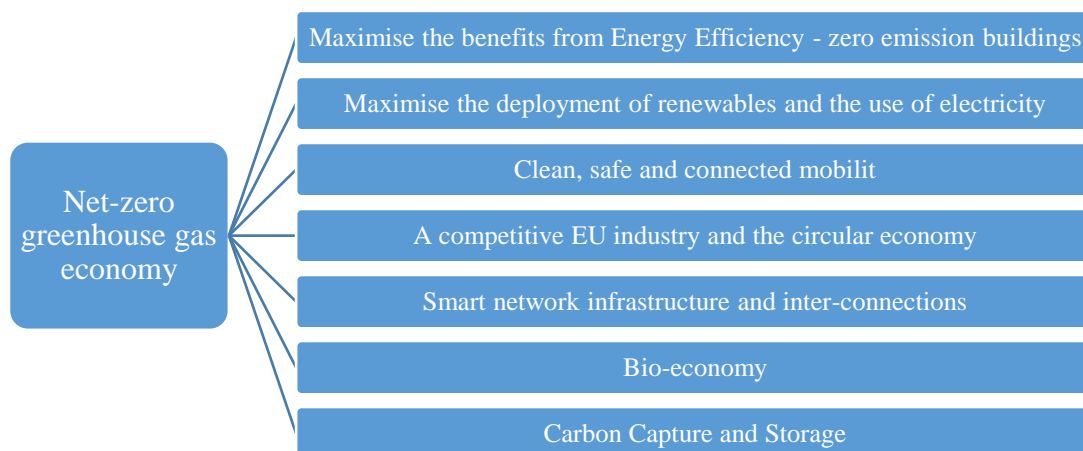
To better understand the position, we should look at the Climate Action Tracker's map, which shows how the global emission differences relate. Global CO<sub>2</sub> emissions were measured at 36 billion tonnes of carbon dioxide equivalent in 1990, roughly equal to where the planet will be in 2030. In order to ensure the 2 degree Celsius target, the emissions need to be at 39 GtCO<sub>2</sub>e. Figure 4 below shows the approximate value of global warming that would require to stay within the 2°C limit (Climate Action Tracker, 2020). A governmental action to curb global warming and climate change pollution could be capable of bringing them down to the rate they were in the 1990s. The United States of America and the European Union have already launched and are committed to meet their target for emissions reduction.

Figure following on the next page



*Figure 4: Change in 2030 Emissions Gaps  
(Source: Climate Action Tracker (2020))*

As an example of how a log frame might be used to solve the climate crisis, we discuss how the European Union is planning to hit its proposed goal of reducing CO<sub>2</sub> emissions by 2050. It is the aim of the EU: “greenhouse gas emissions neutrality by 2050”. Achieving this aim is in the 1.5°C context suggested in the Paris Agreement. The European strategy, in Figure 5, incorporates seven interlocking components that work together to form the seven strategic goals to be developed to achieve carbon neutrality (European Commission, 2018). These are the seven primary goals of the EU greenhouse gas reduction strategy that need to be fully implemented. This bundle of priorities includes a global heating hold of below two degrees Celsius while keeping the EU out of the energy crisis (Grimston, 2016).



*Figure 5: The seven strategic objectives of the EU to a net-zero greenhouse gas economy by 2050  
(Source: European Commission (2018))*

Furthermore, as we consider the current crisis triggered by the COVID-19, it varies in various ways from the financial crisis of 2008-09, as will the responses of countries. Despite this, some valuable insights will be learned from examining the outcomes of energy-related investment and funding for renewable energy infrastructure in recovery plans undertaken in the aftermath of the 2008-2009 global financial crisis. Although definitions of what constituted clean energy in the 2008-2009 packages varied, policies aimed at renewable energy generation, energy efficiency in buildings, scrappage payments for low-fuel-efficiency vehicles, clean technology development support, mass transit, nature conservation, and water resource management. They were then estimated to account for about 16 percent of the total global stimulus (Agrawala et al., 2020). Energy investment will help maintain and fuel jobs while both deliver sustainable and efficient energy and improve the resilience of energy grids. It, in particular, continues to promote higher levels of jobs and investment throughout the economy. Investing in energy efficiency programs will thus result in indirect economic gains that reach well beyond the energy market. Furthermore, energy investment is needed if the global energy market undergoes a systemic reorientation that allows countries to achieve their long-term targets for climate change, energy supply, and sustainability. Because of the lead period involved in getting solutions to market, renewable energy technological advancement will continue to be a near-term priority to meet long-term sustainability goals. The transition to new, renewable, and resilient energy systems will be jeopardized without creativity. Governments may play a significant role in fostering innovation, especially in areas where the private sector perceives it as too dangerous.

## 5. CONCLUSION

The need for renewable energy solutions has never been greater. Although technology is not the only ingredient to a renewable energy future, there is no real road to net-zero pollution without a substantial and rapid ramp-up of renewable energy technologies through the entire energy market. As part of the program, energy grids will become more robust. Investment in better power grids and reliability will increase electricity stability by lowering the risk of outages, increasing resilience, lowering losses, and assisting in integrating more outstanding shares of variable renewables. Energy consumer bills will also be lower around nations, freeing up money for investment in other areas. The new energy crisis introduces new constraints as well as new growth prospects for the industry. Under rising pressure from public opinion and governments, the industry in rich countries can face increasing constraints for reducing carbon emissions: reductions from existing operations and reductions in the goods they produce and buy. In more significant numbers, companies are being asked to identify and calculate their 'carbon footprint', which means the amount of pollution for which the organization is responsible. These kinds of restrictions distort global competition. They highlight a significant conflict, especially in Europe, between productivity and emission reduction. The Covid-19 crisis has the potential to escalate these issues. Since industrial assets have a long lifespan, today's investment decisions will dictate pollution levels for decades to come. When interest is concentrated on keeping businesses financially afloat, there is a danger that the urgent (short-term financial stability) will take precedence over the meaningful (developing and deploying near-zero emissions technologies).

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## IMPACT OF MACROECONOMIC VARIABLES ON PRIVATE EQUITY INVESTMENTS IN CROATIA

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### ABSTRACT

*Private equity is an alternative source of finance which is provided outside of public markets to start-ups, young companies at an early stage of development and companies with high levels of growth potential. Furthermore, private equity and venture capital funds represent an important link and integration with the real economy and the financial system. They are growing significantly due to investment diversification and yield potential. The positive effects of private equity and venture capital investments on the economy are visible through the impact on innovation, creation of new companies, economic growth, corporate governance, employment etc. Despite the significant growth of private equity investments in the last decade in Europe, there are huge differences in private equity activities in European countries, particularly in countries of Western, Central and Eastern Europe. One of the main reasons for this is the shorter presence of the private equity industry in CEE countries. Many authors have addressed the impact of various factors, economic (GDP, inflation, interest rates, unemployment, market capitalization) and non-economic (corruption, economic freedom, investor protection, property rights index) on private equity investments in the US and Europe. The research about the impact of different economic and non-economic factors on private equity investments in Croatia does not exist. Due to this, the aim of this paper is to explore which variables affect the private equity investments in Croatia for the period from 2007 to 2017. The research results show how gross domestic product and corruption have a statistical significant impact on private equity investments in Croatia, while interest rate and inflation do not show statistical significance.*

**Keywords:** *Croatia, Economic variables, Non-economic variables, Private equity, Private equity investments*

### 1. INTRODUCTION

Private equity is a form of equity investment into private companies not listed on the stock exchange (Šimić Šarić, 2015). It refers to long term investments into small, medium and large companies with the goal making them more profitable and stronger (InvestEurope, 2021). Despite the significant growth of private equity investments in the last decade in Europe, there are huge differences in private equity activities in European countries, particularly in countries of Western, Central and Eastern Europe. In 2019 the total value of private equity investments in Europe were €94 billion (Invest Europe, 2020a, while the CEE region reached the value of € 2.95 billion. This is the second best annual result for CEE to date and the best ever for Europe. The private equity investments for Croatia for 2018. and 2019 amounted €175.908, while for the period from 2007 till 2017 the amount were equal €320.842. The private equity investments as a percentage of GDP for CEE amount 0,175%, which is similar to Croatian ratio of 0,174% (Invest Europe, 2020b). Furthermore, private equity and venture capital investments have a positive effects on the economy which is visible through the impact on innovation, creation of

new companies, economic growth, corporate governance, employment etc. Due to that many authors addressed the impact of economic (GDP, inflation, interest rates, unemployment, market capitalization) and non-economic factors (corruption, economic freedom, investor protection, property rights index) on private equity investments in the US and Europe. The research about the effects of economic and non-economic factors on private equity investments in Croatia is lacking. Due to this, the aim of this paper is to explore which variables affect the private equity investments in Croatia for the period from 2007 to 2017.

## **2. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT**

Investments are key for all economies. They are crucial for economic growth models and represent an essential component of aggregate demand. Fluctuations in investments have a significant impact on economic activity and long-term economic growth (Assa and Abdi, 2012). Furthermore, economic activity is one of the most important indicators of economic condition of an individual country, which shows in which state is an individual economy.

### **2.1. The impact of GDP on private equity investments**

Gross domestic product (GDP) is a fundamental macroeconomic indicator which is used to measure the economic activity. The higher the economic growth in a country is, it is more attractive for venture capital investments. Research from Gudiškis and Urbšienė (2015) Rehman (2016), Gatauwa and Mwithiga (2014) and EVCA (2013) emphasizes the positive impact of economic activity on private equity investments. Gudiškis and Urbšienė (2015) conclude in their paper that private equity can stimulate economic growth through the commercialization of technological innovation, while the impact of private equity on economic growth is not highlighted. In Europe, some studies have analyzed the relationship between private equity and economic growth such as EVCA (2013) and Stromberg (2009), with the results indicating a beneficial effect of private equity on productivity and innovation which has had a positive impact on economic growth. Furthermore, Gatauwa and Mwithiga (2014) note that private equity can stimulate growth by fostering technological and industrial innovation, job creation, and better corporate governance. However, the impact of private equity on economic growth is not significantly highlighted as argued by Stromberg (2009), what according to authors Gatauwa and Mwithig (2014) indicates that no study has analyzed whether private equity affects a country's GDP growth. The economic growth is measured using the real gross domestic product (Gudiškis and Urbšienė, 2015), and as a GDP growth rate (Rehman, 2016). On the other hand, EVCA (2013) measures economic activity as a share of private equity investment and the number of patents expressed as a percentage of GDP. Accordingly, to the above we propose that: *GDP affects private equity investments (H1)*.

### **2.2. The impact of inflation on private equity investments**

Every investor wants to achieve an appropriate and stable return from their investment, including the management of PE/VC firm. They undertake investments by investing in the equity / share capital of companies with high growth potential or investing with the aim of taking ownership in the future (Šimić, 2018). Therefore, investing in a period of inflation is more demanding than in a stable environment due to the decreased value of money. The impact of inflation on private equity investments is twofold. According to Suhendra and Anwar (2014) the inflation has a negative and significant impact on private investment, while according to Fortune and Ugochukwu Okoro (2019) the inflation rate has a positive effect on private investment. Bosco and Emerence (2016) concluded the same, but for the short period. Therefore, the second hypothesis is: *Inflation affects private equity investments (H2)*.

### **2.3. The impact of interest rates on private equity investments**

Wuhan, Li Suyuan and Khurshid (2015) in their research conclude how interest rates have a negative effect on investments in the long run, while in the short run there is a positive impact. Bosco and Emerence (2016), also, claim that an increase in the real interest rate has a positive effect on private investment and vice versa. According to Fortune and Ugochukwu Okoro (2019), interest rates have a negative and insignificant effect on private equity investments, while Suhendra and Anwar (2014) conducted research for Indonesia and concluded that interest rates and inflation have a negative and significant impact on private investments ( private investment). Precup (2015) statistically confirmed in his paper that there is a negative relationship between private equity investment and short-term interest rate. Furthermore, Bernoth and Colavecchio (2014) argue that the short-term interest rate does not significantly affect private equity investments. As an explanation, they state that the level of interest rates has an ambiguous effect on private equity depending on the supply or demand of entrepreneurs for private equity investments. One theory is that the level of interest rates should negatively affect the supply of venture capital because a high level of real interest rates reduces the attractiveness of risky investments. Consistent with this theory, Bonini and Alkan (2009) find a significant negative effect of interest rate levels on early-stage investments. On the other hand, the level of interest rates also affects the cost of bank financing and when bank financing becomes more expensive, private equity may be a better and more flexible alternative to fundraising (Bernoth and Colavecchio, 2014). Hence, we propose that: *Interest rate affects private equity investments (H3)*.

### **2.4. The impact of corruption on private equity investments**

Research conducted by Asieda and Freeman (2009) shows that corruption has a negative effect on investment growth in transition countries, but has no significant effect on Latin America and the Caribbean and sub-Saharan Africa. According to these authors, corruption is the most important determinant of investment growth for countries in transition. Also, Schachtner and Jacobus van Nes (2016) note that higher levels of corruption negatively affect private equity activity as well as Precup (2015). According to Mauro (1995), corruption reduces investments, thereby reducing economic growth. He argues that richer countries are less corrupt than poor countries. The research from Rahman et. al (2000) expands the work from Mauro (1995) to see whether the relationship between corruption and growth and between corruption and investment has changed compared to previous decades. The survey results suggest that countries that are seriously considering improving governance and reducing corruption need to redefine the role of government, review the incentive system, and strengthen domestic institutions to ensure the necessary checks and balances. The approach to reform would attract more investment, both foreign and domestic, and consequent lead to reduction of poverty and growth of economic. Therefore, the last hypothesis is: *The corruption affects private equity investments (H4)*.

## **3. METHOD**

The research about the impact of macroeconomic variables on private equity investments in Croatia refers to the period of ten years, ie the period from 2007 to 2017. In this part of the research, annual secondary data were used. The data were collected from various sources:

- the amount of private equity investments in absolute amount according to Invest Europe (EVCA) data,
- GDP growth rate according to World Bank data for economic activity,
- short-term interest rates and inflation rates according to EUROSTAT data,
- data for unemployment according to the data of the Croatian Employment Service,
- Corruption Perception Index will be used for corruption according to Transparency International and for

Data processing and statistical analysis was performed by using the multiple linear regression. For this purpose the IBM SPSS 25 program was applied.

#### 4. RESULTS

Table 1 shows the values of the correlation coefficient, the determination coefficient, the corrected determination coefficient, and the standard error of the estimated regression. The value of the correlation coefficient is  $R = 0.936$  which shows a strong and positive linear relationship between the predictor variables. Furthermore, the coefficient of determination (R Square) is  $r^2 = 0.877$  and shows high representativeness of the model because these four predictor variables explained 87.7% of the variability of investment in private equity, ie with this regression model 87.7% of the sum of squares of total deviations of the dependent variable from its arithmetic means. The corrected coefficient of determination (Adjusted R Square) is  $r^2 = 0.713$  and the standard error of the estimated regression is  $\sigma = 15526,42576$ . The Durbin-Watson coefficient with value 2.194 does not significantly exceed the critical limit of 2 hence it is not characterized by the problem of residual autocorrelation.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,936 <sup>a</sup>	,877	,713	15526,42576	2,194

Table 1: Model summary  
(Source: own calculation)

a. Predictors: (Constant), GDP\_eur, Inflation (%), Interest rate (short-term, %), Corruption index

b. Dependent Variable: Private equity (000 €)

Based on the F test of the significance of the model as a whole, it is observed that the empirical significance is 0.100, ie 10%, and it is concluded that the model is statistically significant.

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5146771635,029	4	1286692908,757	5,337	,100 <sup>b</sup>
Residual	723209690,971	3	241069896,990		
Total	5869981326,000	7			
a. Dependent Variable: Private equity (000 €)					
b. Predictors: (Constant), GDP_eur, Inflation (%), Interest rate (short-term, %), Corruption index					

Table 2: ANOVA  
(Source: own calculation)

Confirmation of the absence of collinearity problems (multicollinearity) is given by the values of variance inflation factors (VIF) and their reciprocal values (TOL) (Table 3):

$$VIF_1 = 2,712 \rightarrow VIF_1 < 5 \quad i \quad TOL_1 = 0,369 \rightarrow TOL_1 > 20\%$$

$$VIF_2 = 2,869 \rightarrow VIF_2 < 5 \quad i \quad TOL_2 = 0,349 \rightarrow TOL_2 > 20\%$$

$$VIF_3 = 2,057 \rightarrow VIF_3 < 5 \quad i \quad TOL_3 = 0,486 \rightarrow TOL_3 > 20\%$$

$$VIF_4 = 2,081 \rightarrow VIF_4 < 5 \quad i \quad TOL_4 = 0,481 \rightarrow TOL_4 > 20\%$$

Furthermore, according to the results in Table 3 at a significance level of 10%, the predictor variables GDP ( $p = 0.08 < 0.01$ ) and corruption index ( $p = 0.10 < 0.01$ ) are statistically significant. On the other hand, the predictor variables: *inflation* (%) and interest rate (short termn) are not statistically significant ( $p = 0.955$  and  $p = 0.462$ ).

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1019792,752	355044,844	-2,872	,064		
	<i>GDP_eur</i>	,017	,007	,869	,2606	,369	2,712
	Inflation (%)	371,117	6000,925	,021	,955	,349	2,869
	Interest rate (short term, %)	3002,950	3569,582	,244	,841	,486	2,057
	<i>Corruption index</i>	5986,016	2537,900	,689	,100	,481	2,081
a. Dependent Variable: Private equity (000 €)							

Table 3: Unstandardized and standardized coefficients, test values, empirical levels of significance, and multicollinearity indicators (Source: own calculation)

## 5. CONCLUSION

The aim of the research was to analyze the impact of macroeconomic variables on private equity investments in Croatia for the period from 2007 till 2017. For this purpose, according to the theory, following economic variables were chosen: economic activity (GDP), inflation, interest rates and corruption. The research results show how the variables gross domestic product and corruption statistically significantly affect private equity investments in Croatia, while the variables inflation and interest rate (short term) do not show statistical significance. Hence, the hypotheses H1 and H4 are accepted, while the hypotheses H2 and H3 are rejected. High inflation rates and interest rates during the financial crisis, which lasted in Croatia for a longer period than in other countries, created an unfavorable entrepreneurial climate, which in turn led to reduced PE investment in Croatia. Furthermore, the obtained research results indicate those factors that significantly influenced private equity investments in the observed period, what provides insight into the reasons for the poorly developed private equity market in Croatia. In further research, it would be useful to include more institutional variables, as well as to divide the observed period into pre-crisis, crisis and post-crisis period. Also, conducting an analysis of the most successful countries from the CEE region in attracting private equity could reveal which variables are most important for the private equity country's attractiveness.

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## ANALYSIS OF TOURISM MOTIVES AND PREFERENCES CHARACTERISTICS OF GENERATION Y

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### ABSTRACT

*Tourism is undergoing significant changes, primarily due to changes in the habits of tourists who require innovative experiences of traveling and staying in a particular destination in accordance with their own affinities and preferences. Generation Y, people who were born from 1986 to 2002, make 40% to 50% of the world travels. Because of it, the purpose of this paper is to find out their motives and preferences before they choose some destination to travel to as well as when they once arrived in it. Research problem was to answer questions about how often and for how long members of generation Y travel, with whom they travel, why they travel, what they do at their destination, how much they spend, what affects their choice of destination, how do they get information about the destination, and how do they reserve individual travel items. Research was conducted in 2019, before coronavirus changed tourism all over the world. The data was collected through the social networks. The results have shown that Croatian citizens of the generation Y travel most frequently within their country, and are the most usually motivated by gaining new experiences and the cost of arriving to a destination. One of the main suggestions for the future researches is to do this research again during COVID-19 crisis because travelers motives and preferences are different now than they were when this research were made a year before coronavirus.*

**Keywords:** *tourist destinations, tourist demand, travel motives and preferences, generation Y*

### 1. INTRODUCTION

In the world of tourism and travel, changes are getting faster and it is necessary to timely and adequately respond to the tourist demand. Global tourism trends have been influenced by the generation of post-industrial society through a strong process of changing the needs and habits related to accommodation, food, drink, entertainment, amusement, transportation, etc (Gračan, 2020). Tourism is characterized by constant changes in tourist demand trends and the development of new travel motives. Tourists are no longer satisfied with a uniform tourist offer or exclusively with a quality accommodation, but they are looking for an experience while quality accommodation and services are implied. Accordingly, there is an increasing individualization and differentiation of tourist needs, which require an individualized approach to their satisfaction by the destination suppliers (Gračan, et. al., 2021). In accordance with the aforementioned behavioral trend and visitors' requests, it is necessary to follow motives and preferences characteristics of different generation groups.

The Interbellum Generation (people born in the early 20<sup>th</sup> century), The Silent Generation (people born between two world wars – 1918 - 1938), The War Baby Generation (people born between 1939 and 1944), Baby Boom Generation (people born between 1945 and 1964), Generation X (people born between 1965 and 1985), Generation Y (people born between 1986 and 2002), Generation Z (people born from 2003 to today). This classification was presented by the author Solomon and co-authors in 2003 (Barkidija Sotošek, 2019), and there are other classifications, but the characteristics of generations are very similar from author to author. Since the research of this paper is based on the characteristics of members of Generation Y, the general assumptions about them are presented below. So, this generation is characterized by education, intellectual work, optimism for the future (Jorgensen, 2003; Barkidija Sotošek 2019). The following Generation Y names fully reflect their character and way of life: Non-Nuclear Family Generation, the Nothing-Is-Sacred Generation, the Wannabees, the Feel-Good Generation, CyberKids, the Do-or-Die Generation, the Searching-for-an Identity Generation (Martini, 2005). Regardless of the different names, there are two challenges in defining this generation - the lack of a clear definition of the set of circumstances that define them and the trend of extending the transition period from adolescence to young adulthood (Barkidija Sotošek, 2019). However, the fact is that highly educated members of this generation will become leaders, managers and tourism consumers within the next decade. The latter is interesting for this research. Namely, generation Y makes up 40 to 50% of tourist consumers (<https://www.cbi.eu>) and it is necessary to follow their preferences in order to maintain the trend of their travels even when they are in higher purchasing power.

## **2. EMPIRICAL RESEARCH**

This research was conducted during October 2019, before the coronavirus pandemic. The research was conducted through an anonymous survey questionnaire posted on the social network. Before presenting the research results, this part of the paper defines the research problem. Based on the problem, research questions are presented as well as hypotheses. By conducting this research, numerous opportunities and possibilities of further marketing activities were identified, which will be listed in the last part.

### **2.1. Setting research problem, questions and hypotheses**

The problem of the research is to answer the questions about how often and for how long members of generation Y travel, with whom they travel, when and where, why they travel, what they do at the destination, how much they spend, what influences their choice of destination, who finances their travel, how they get information about their destination, how they book individual travel elements. The main goal of the research is to determine the motives and preferences of young people when making travel decisions and to determine the importance of generation Y in the formation of the tourist offer. The purpose of this study is to confirm the presence of the following hypotheses:

- H1: Prices at the desired destination influence generation Y's decision to travel.
- H2: Free time during schooling allows for more flexible travel decisions.
- H3: Friends' experiences influence generation Y's travel decisions.
- H4: Destination safety affects the choice of the same for generation Y travel.
- H5: The offer of sports and adventure activities influences the choice of travel destination of generation Y.

### **2.2. Research methodology**

The paper use a survey method using a questionnaire of 31 questions related to the experience of respondents in travel (within the Republic of Croatia, in Europe or abroad), travel planning (importance of certain segments in decision making, booking travel elements via the Internet,

booking travel elements through travel agencies, the importance of sources of information and the frequency of using online sources when deciding on a destination), travel time (average amount spent on last trip, company on last trip, reason for last trip, most frequent stays and travel services) and sociodemographic questions (age, gender, marital status, children, personal annual income and county of residence). Data were collected via the Internet, ie the social network (Facebook). Thus the data collection technique is online. The survey was conducted among adults belonging to Generation Y (born from 1986 to 2002).

### 2.3. Research results

The results of the research will be divided into two parts, sociodemographic data and the main part of the questionnaire. There were 145 respondents to the questionnaire and research was conducted during October of 2019.

#### 2.3.1. Sociodemographic data of the respondents

According to the analysis of socio-demographic data, there were 83,4% of female and 16,6% of male participants. Speaking of age groups, the questionnaire used the following categories: people who are 17 to 20 years old, from 21 to 24 (the most of the respondents, 47,6%), from 25 to 27, from 28 to 30 (the lowest number of participants, 4,8%), from 31 to 33. To the group from 28 to 30 belong The highest number of participants (37,2%) finished college, that is, university, while anyone of the participants attained a Ph.D. and M.A. More than half of the participants were pupils and students (51,7%). Most of the participants are unmarried (70,3%), while there were any widowed respondent.

#### 2.3.2. Data of the main part of the research

First question of the second part of questionnaire was about frequency of traveling for several days. The most of the participants (65%) responded they travel inside Croatia, 26% of them travel outside Croatia, but inside European Union and only 9% travel outside European Union.

	A.M.
<b>Duration of holidays / vacations</b>	3,99
<b>Destination distance</b>	2,83
<b>Destination security</b>	4,13
<b>Prices of arrival to the destination</b>	4,19
<b>Prices in the destination</b>	4,01
<b>Diversity of the offer</b>	3,98
<b>Natural beauties</b>	4,16
<b>Cultural sights and events</b>	3,69
<b>Sports offer</b>	2,43
<b>Night life</b>	3,51
<b>Wellness</b>	2,47
<b>Shopping</b>	3,03
<b>Local cuisine</b>	3,69
<b>New experiences</b>	4,45

*Table 1: Impact of elements to make a decision for traveling  
(Source: Authors' research)*

The previous table shows that the average ratings of the importance of the elements for going on a trip range from 2.43 to 4.45. As an element of least importance in the process of making a decision to go on a journey is "sports offer" and because of it fifth hypothesis isn't confirmed. As an element of paramount importance in the process of making a decision to go on a journey is "new experiences". Poorly rated elements are "destination distance" and "wellness".

Answers to the questions about 'Duration of holidays/vacations', 'Prices in the destination' and 'Destination security' have shown that first, second and fourth hypotheses are confirmed. The following table shows the frequency of self-booking of travel elements via the Internet before the journey.

	<b>A.M.</b>
<b>Hotel accommodation</b>	3
<b>Hostel accommodation</b>	2,28
<b>Camp accommodation</b>	1,70
<b>Private accommodation</b>	3,39
<b>Travel insurance</b>	2,77
<b>Plane transport</b>	2,77
<b>Train transport</b>	2,24
<b>Car transport</b>	3,52
<b>Bus transport</b>	3,45
<b>Boat transport</b>	2,37
<b>Restaurants reservations</b>	3,16
<b>Events tickets</b>	3
<b>Attractions tickets</b>	3,18
<b>Museums and galleries tickets</b>	2,95

*Table 2: Elements of self-booking travel via the Internet  
(Source: Authors' research)*

From the previous table there are the elements of independent travel booking via the Internet. The highest score of 3.52 was given to the element "car transport". This is immediately followed by the elements "bus transport" (3.45) and "private accommodation" (3.39). The element "accommodation in the camp" was rated with the lowest score of 1.70. Next table shows the frequency of booking certain elements of travel via travel agencies before the journey.

	<b>A.M.</b>
<b>Hotel accommodation</b>	2,61
<b>Hostel accommodation</b>	1,97
<b>Camp accommodation</b>	1,62
<b>Private accommodation</b>	2,11
<b>Travel insurance</b>	2,43
<b>Plane transport</b>	2,05
<b>Train transport</b>	1,69
<b>Car transport</b>	2,05
<b>Bus transport</b>	2,52
<b>Boat transport</b>	2,03
<b>Restaurants reservations</b>	2,04
<b>Events tickets</b>	2,24
<b>Attractions tickets</b>	2,31
<b>Museums and galleries tickets</b>	2,21

*Table 3: Elements of travel booking via travel agencies  
(Source: Authors' research)*

The table shows average scores ranging from 1.62 to 2.61. To book a trip through travel agencies, respondents reserve the least "camp accommodation", while "hotel accommodation" book the most. Table 4 will show the importance of information sources in destination selection and travel planning.

	A.M.
<b>Internet</b>	4,34
<b>Family, friends</b>	4,25
<b>Travel agencies</b>	2,94
<b>Newspapers, magazines and other print media</b>	2,88
<b>Tourist guides (in printed form)</b>	3,07
<b>Tourism brochures</b>	3,10
<b>Tourism fairs</b>	2,57

*Table 4: Elements of information sources  
(Source: Authors' research)*

In the previous table, the highest average rate, as an element of information sources when choosing a destination and planning a journey, was "Internet". The element "Family, friends" is the only one with "Internet" rated with an average rating higher than 4. On the other hand, "Tourism fairs" are rated with the lowest average rating. Third hypothesis is about the importance of family and friends experiences for choosing their destination and because of the high rate, that hypothesis is confirmed. The following table lists the results of the assessment of the frequency of use of online resources used by respondents when traveling.

	A.M.
<b>Facebook</b>	3,70
<b>Twitter</b>	1,27
<b>Instagram</b>	2,45
<b>Booking.com</b>	3,35
<b>TripAdvisor</b>	2,71
<b>Blogovi i/ili forumi</b>	2,66
<b>Destinations web pages</b>	3,66
<b>Tourist agencies web pages</b>	2,75
<b>Accommodation web pages</b>	3,55
<b>Tourist attractions web pages</b>	3,34

*Table 5: Frequency of using online resources when planning a journey  
(Source: Authors' research)*

When planning a trip, participants use the social network Facebook the most (3.70) and the least Twitter (1.27). Transportation, accommodation, food and baverage, events and attractions, souvenirs, clothing are the most common forms of spending money while traveling. The following table shows the average amounts (in Croatian kuna, HRK) for all of these groups.

	A.M.
<b>Transportation</b>	1052,63 HRK
<b>Accommodation</b>	1091,56 HRK
<b>Food and baverage</b>	2078,03 HRK
<b>Events and attractions</b>	365,86 HRK
<b>Souvenirs</b>	147,83 HRK
<b>Clothes</b>	272,21 HRK

*Table 6: Frequency of using online resources when planning a journey  
(Source: Authors' research)*

Speaking about other research results, members of Generation Y on the last trip most often had family and / or friends for the company, the trip lasted an average of 6 days, and the reason for the trip respondents most often marked vacation and then a visit to family and / or friends.

In addition, as the most common form of accommodation during their travels, respondents indicated apartment accommodation.

### 3. CONCLUSION

According to the presented results, it is concluded that apart from the last hypothesis, they have been confirmed. However, the survey was conducted only during one month and only on one social network, which is a limitation of this research. It is proposed that the survey be conducted over a longer period and that it cover equally all age groups within generation Y, and that the survey be conducted in other ways. Since the epidemiological situation is currently completely different than it was in 2019, it is assumed that it will be difficult to compare the responses of the then and current research. Namely, during a coronavirus pandemic, it would be necessary to include in such research several questions about the importance of destination safety, ie individual elements of travel. Respondents rated the importance of destination safety with high marks, which goes without saying, but during a coronavirus it would be very helpful to check what all they think the destination should allow them to currently decide to travel there. In addition, it is assumed that the importance of some other elements would decrease in the pre-pandemic period.

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## A PROPOSAL OF SPECIALISED PORTFOLIO ALLOCATION MODELS AT THE VOLUNTARY PENSION FUNDS IN CROATIA

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### ABSTRACT

*Many of today's non-financial professionals search for liquidity, security and growth in personal wealth and investments. More than ever, it is important to divide competition and security when promoting optimal long-run net returns at an acceptable level of risk. The voluntary open-end pension funds in the Republic of Croatia, as one of the most suitable options, are necessary for a sustainable and balanced fiscal and monetary system that help individuals choose the frequency and the amount of payments for the personal account in funds to overcome the cost of inflation. From the authors' point of view, high capitalisation of personal accounts at the age of fifty-five plus should not be just a flexible upgrade towards the non-consumed retirement benefits. It should be respected and treated as a long-term investment with the annualised risk related to historical returns from the issued securities and assets on domestic and international markets. The securities and debentures' major distribution issue under the asset classes with a net worth of almost five billion HRK yield beneficiary effects primarily for Croatian government bondholders. While considering perception from the acts on voluntary pension funds data of the Croatian Financial Services Supervisory Agency, the authors propose alternative ratio analysis as scenario analysis for a different type of domestic and foreign managed assets. They point out the importance of proper interpretation of the Croatian government bonds relative to other asset classes. In the discussion part, the authors provide insight into the scenario model for separate capital gain tax as an option for capital market developments with beneficiary effects on blue chips in the funds' portfolio. In the final part of the paper, the authors will highlight the relevant quantitative and qualitative impact of data for voluntary pension funds in the Republic of Croatia.*

**Keywords:** voluntary pension funds, ratio analysis, capital gain tax, securities

### 1. CHARACTERISTIC OF CROATIAN PENSION FUNDS SYSTEM

During the last two decades, the transition from introducing a three-pillar pension system (2002) set the foundations of today's pension finance framework on capital markets (Social & Network, n.d.). As a result, the Croatian systematic reform of pension insurance has been achieved through the objectives in the mixed public-private pension system with intergenerational solidarity (Nastale, n.d.). From the first pillar towards the third pillar, the insured person's contributions are collected to maintain social security and deploy well-functioning reciprocity and social justice (Social & Network, n.d.). More than ever before, from today's perspective, planning in terms of Croatian national budget execution contains pension payouts carried out through pension insurance companies regulated by the Act on Compulsory Pension Funds, Act on Voluntary Pension Funds, Act on Pension Insurance Companies and

other relevant legislation (Report et al., 2019). The reciprocity in the current pension system has several issues subject to the institutional framework of actuarial calculation appropriate for pension insurance companies and their fund members. While identifying agency problems and co-relationship within the scenario models and intra-industry trend analysis (Bezić et al., 2011), the authors are motivated to develop compensation measures. The authors have proven that using innovation in the distribution and technology channel as statistical tools or software can lurk similar results as best practices for public and private voluntary or specialised funds (Draženović et al., 2019). While moving forward, the authors' work proceeds as follows. The authors define the domestic retirement system's pros and cons along with the personal pension income model (PPIM) in section two. Section three provides a proposition for Smart PLS3® for a two-stage pension fund industry model. In section four, the authors suggest a variable in the Smart PLS3 model to directly contribute to knowledge and practice. Section five refers to the conclusion, while section six lists the relevant bibliography.

## **2. PERSONAL PENSION INCOME MODEL (PPIM)**

Since 2017, the newly established Croatian National Reform Programme indicated market-oriented standards as platform rules to a penalised acceleration of early retirement (Vlada RH, 2017). The new reform's core idea was to optimise total control of the national pension costs while supporting proactive labour policies to create a more competitive labour market. To secure positive demographic changes as the pension system's initial sustainability, the contribution to pension funds deficit in the first pillar should be lower than EUR 2.2bn (Government, 2018). Moreover, the broad detected why support ratio decreased by 13.3% in 17 years (Social & Network, n.d.). As an effort to reduce the unhealthy ratio between the workforce and the pensioners, the modification of retirement pensions should address more cost-cutting. The authors have proven that positive effect on increasing the value in minimum insurance periods produces similar results as limiting pensions of privileged groups, which pensions are weakly associated with the contribution paid during the period of work. A similar conclusion was reached by specialised programmes that help workers find a job or part-time job beyond retirement age. This implies that raising the pension age to 67 years by 2038 is associated with diminishing incentives as penalties for early retirement as part of the maximum pension cap (Hess, n.d.). Assumptions based on these promising findings provide a good starting point for the development of low-cost transactional charges or fees (Roche, 2019). Future research could continue to explore agency problems, product imitation, information development, transmission, securitisation, and legislation as growing opportunities for fund management professionals, institutional investors, and wealthy individuals (Inderst, 2020). Since 2015 the voluntary pension funds have been showing a growing potential from membership acquisition for 38%, respectfully. The greatest deal of increase in membership refers to the greater public representation of monetary incentives in the maximum amount of HRK 750 for investment in a personal account in the voluntary pension fund. As previously reported in the paper, these measures motivate the investors to overcome domestic capital market risk while achieving the prescribed longer-term returns. For that purpose, the authors' personal pension income model (PPIM) describes the importance of planning in the short, middle and longer-term horizon (see *Table 2*). As a model, it maintains long-term stability from private investment through pension fund vehicles.

*Table following on the next page*



*Table 1: Variables as inputs in personal pension income model (PPIM) for the Croatian employee*

Current Age	30
Age of Retirement	65
Gross salary in HRK (monthly)	9.500,00
Expected average increase in salary	5,00%
Expected returns in the next three years ( $AR_{n+1}$ )	3,25%
Personal contribution (yearly)	2,00%
Employer's maximal contribution (yearly)	2,00%

*Source: data analysis in Excel made by the authors*

The variables as inputs in the model are current age, planned age of retirement, current gross salary, the expected average increase in salary, expected returns in the next three years, personal contribution in percentages and employer's maximal contribution in percentages. According to the Croatian Pension Insurance Institute, by 2038, the average retirement will be at least 65 years for women and 67 years for men (*Croatia Country Fiche on Pension Projections*, 2018). The 9.5k HRK was taken as gross salary median value. In net terms, without any tax benefits on the salary, it is around HRK 6.5k. To obtain a more realistic picture of the model for the first five years of employment, the expected increase in salary represents the median increase in salaries by 5% for the three ongoing years. Moreover, the diminishing returns on domestic government bonds and the decreasing value of domestic stocks on capital markets defend the expected return value of 3.25% yearly. The authors have chosen for this model the same percentage factor for personal contribution and employer's maximal contribution to stay more realistic. Due to market and personal consumption uncertainties, it is hard to predict contribution factors relevant for the model's longer horizon. The starting point in the personal pension income model refers to the closing balance, where:

$$\sum_{i=1}^n PPIM(CB)_{n+1} = (OB_{n+1} + EYC_{n+1} + EYC_{\max(n)}) \times (1 + AR_{n+1}) \quad (1)$$

The key contribution of this work is the solution that takes all independent variables as mentioned above into the closing balance calculation  $PPIM(CB)_{n+1}$  at each year (1).  $N$  ( $n$ ) stands for the successive year in the personal pension income model, while  $OB_{n+1}$  represents the opening balance at the beginning of each year. The total contribution explains the power of the employee's yearly contribution  $EYC_{n+1}$  and employers' maximal contribution  $EYC_{\max(n)}$  for each year on the independent base.  $AR_{n+1}$  represents expected returns in the next three years in ceteris paribus state through the entire model (for all 35 years).

*Table following on the next page*

*Table 2: Variables as inputs in personal pension income model (PPIM) for the Croatian employee's yearly contribution*

Personal pension income model (PPIM)									
Age (Start)	Year	Opening Balance	Gross salary (monthly)	Employee Yearly Contribution	Employer's Yearly Contribution	Total Contribution	Annualized Expected Returns	Closing Balance	Closing Age
30	1	-	9.500	2.280	2.280	4.560	3,25%	4.708	31
31	2	4.708	9.975	2.394	2.394	4.788	3,25%	9.805	32
32	3	9.805	10.474	2.514	2.514	5.027	3,25%	15.314	33
33	4	15.314	10.997	2.639	2.639	5.279	3,25%	21.262	34
34	5	21.262	11.547	2.771	2.771	5.543	3,25%	27.676	35
35	6	27.676	12.125	2.910	2.910	5.820	3,25%	34.585	36
36	7	34.585	12.731	3.055	3.055	6.111	3,25%	42.018	37
37	8	42.018	13.367	3.208	3.208	6.416	3,25%	50.009	38
38	9	50.009	14.036	3.369	3.369	6.737	3,25%	58.590	39
39	10	58.590	14.738	3.537	3.537	7.074	3,25%	67.798	40
40	11	67.798	15.474	3.714	3.714	7.428	3,25%	77.671	41
41	12	77.671	16.248	3.900	3.900	7.799	3,25%	88.248	42
42	13	88.248	17.061	4.095	4.095	8.189	3,25%	99.571	43
43	14	99.571	17.914	4.299	4.299	8.599	3,25%	111.685	44
44	15	111.685	18.809	4.514	4.514	9.028	3,25%	124.637	45
45	16	124.637	19.750	4.740	4.740	9.480	3,25%	138.475	46
46	17	138.475	20.737	4.977	4.977	9.954	3,25%	153.253	47
47	18	153.253	21.774	5.226	5.226	10.452	3,25%	169.025	48
48	19	169.025	22.863	5.487	5.487	10.974	3,25%	185.849	49
49	20	185.849	24.006	5.761	5.761	11.523	3,25%	203.787	50
50	21	203.787	25.206	6.050	6.050	12.099	3,25%	222.902	51
51	22	222.902	26.467	6.352	6.352	12.704	3,25%	243.264	52
52	23	243.264	27.790	6.670	6.670	13.339	3,25%	264.942	53
53	24	264.942	29.179	7.003	7.003	14.006	3,25%	288.014	54
54	25	288.014	30.638	7.353	7.353	14.706	3,25%	312.559	55
55	26	312.559	32.170	7.721	7.721	15.442	3,25%	338.661	56
56	27	338.661	33.779	8.107	8.107	16.214	3,25%	366.408	57
57	28	366.408	35.468	8.512	8.512	17.025	3,25%	395.894	58
58	29	395.894	37.241	8.938	8.938	17.876	3,25%	427.218	59
59	30	427.218	39.103	9.385	9.385	18.770	3,25%	460.482	60
60	31	460.482	41.058	9.854	9.854	19.708	3,25%	495.796	61
61	32	495.796	43.111	10.347	10.347	20.693	3,25%	533.275	62
62	33	533.275	45.267	10.864	10.864	21.728	3,25%	573.041	63
63	34	573.041	47.530	11.407	11.407	22.815	3,25%	615.221	64
64	35	615.221	49.907	11.978	11.978	23.955	3,25%	659.950	65
65	36	659.950	52.402	12.577	12.577	25.153	3,25%	707.368	66

*Source: data analysis in Excel made by the authors*

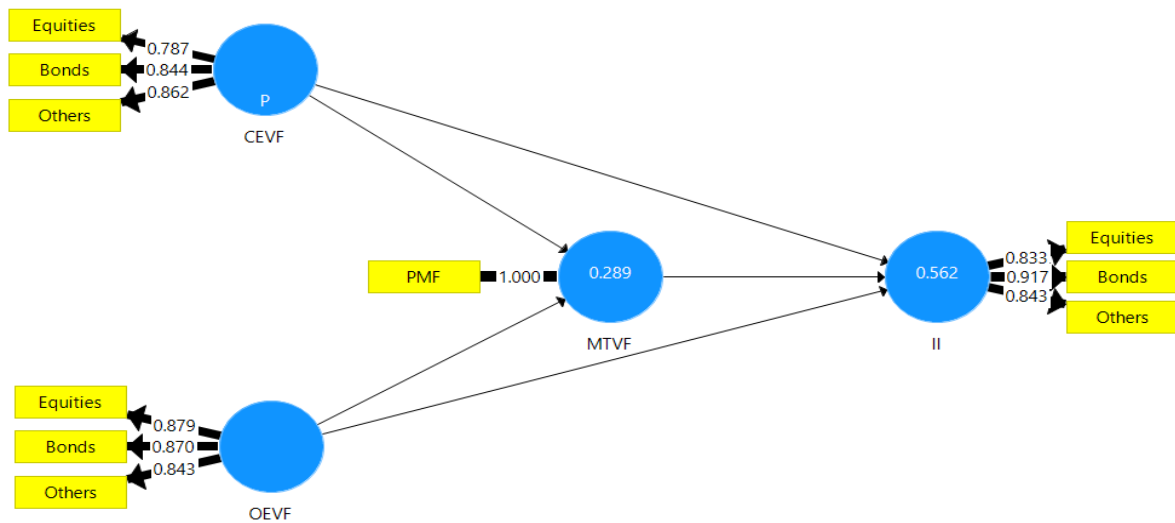
This model's primary benefits (Table 2) stand for several beneficiary outcomes from self-contribution in voluntary funds with a modest amount of money allocated on a yearly basis. Secondary effects reflect through the improvement of financial education of the new generations that are not professional investors. Third, non-professional investors or employees could achieve greater returns in less-risky but more liquid assets than they would probably have from the income on a vista account or money market instruments. Generally, on the initial investment of HRK 660k, a closing balance identifies HRK 707k on the bank account at 66. The main advantage this model proclaims is the explanation of simplified pattern as a personal contribution to the generating personal income. Potentially higher yield may be achieved if the financial products' investors could deal with the offerings on a larger scale. That way, they will have an opportunity to re-sell assets for a stipulated price on organised or private markets. To test whether this model is equivalent for the domestic financial industry, the authors will introduce an application of Smart PLS3 for a two-stage pension fund industry model.

### 3. FUNCTION OF SMART PLS3 FOR A TWO-STAGE PENSION FUND INDUSTRY MODEL

As a proactive conceptual framework, the authors address context-specific challenges in Smart PLS3 software. Potentially positive outcomes in testing peer validation as performance indicators for domestic voluntary funds could be a benchmark in real case studies. A similar conclusion provides an elegant solution to various practical problems of the decision-making process (Sarstedt et al., 2017) and other financial intermediaries (Oaks, n.d.). The software-integrated model successfully establishes a set of variables relevant to the mixed methods analysis for non-parametric data tests in the statistical analysis of voluntary pension funds. At this stage, the authors believe that the partial least squares path modelling equation (PLS-SEM) can be implemented as a decision-making factor for the new ordered model while estimating the complex cause-effect relationship in the pension funds industry. Furthermore, the model addresses several objectives as opportunities for understanding the increasing complexity by exploring the theoretical extensions of established theories, financial ratios or similar types of data inputs, latent variable scores for follow-up analyses and a theoretical framework from a prediction perspective (Hair et al., 2019). The implications of these findings are discussed in the authors' mixed-methods analysis for non-parametric data tests in the statistical analysis, which prescribes the use of the PLS Algorithm as a form of two different stances. Firstly, software directly measures variable, such as performance indicator in the voluntary fund. Secondly, short-range predictions in the Simple PLS voluntary model stand for short-term causality mechanism in which all variables aren't always directly observed (i.e. trend analysis) (Prado & Ph, 2020). Another promising finding was that that type of mechanisms includes many economic models based on inflation, forecasting and liquidity. In practice, these models identify the cause-effect mechanism, which develops an innovative approach towards the self-realising mechanism (Prado & Ph, 2020). For that purpose, the authors have shown Smart PLS Simple model as a peer towards peer (P2P) reflective model in the cascade moderator analysis. The two-stage construct (diagram) elaborates the position of participants in a simple model, such as closed-end voluntary funds (CEVF), open-end voluntary funds (OEVF), management team of the voluntary fund (MTVF) and institutional investors (II). The authors have implemented three leading positions (equities, bonds and others) in the net assets value (NAV) of five consecutive periods (2015-2019) for eight Croatian open-end and twenty closed-end funds on 31<sup>st</sup> December of each year within the model. The voluntary fund management team (MTVF) is explained through a mediating effect for which the professional management team defines favourable outcomes towards the institutional investors.

*Figure following on the next page*

Figure 1: Two-stage construct (diagram) for Simple PLS of Croatian voluntary pension funds



Source: authors' analysis in Smart PLS3 software, Boenningstedt: SmartPLS GmbH,  
<http://www.smartpls.com>

The model's result has shown that all four indicators have cross-validated commonality with the original latent scores. Reflective relations in terms of decomposition of equities, bonds and others refer to outer models of the exogenous latent variables closed-end voluntary funds (CEVF) and open-end voluntary funds (OEVF). These results provide important evidence for the correlation of indicators of different participants while measuring the phenomena.

Table 3: Application of Path Coefficient as a two-stage construct for Croatian voluntary pension funds (extract from the table with 343 Samples)

	CEVF → II	CEVF → MTVF	MTVF → II	OEVF → II	OEVF → MTVF
Sample 0	-0,103	0,278	0,547	0,352	0,367
Sample 1	0,017	0,220	0,469	0,365	0,395
Sample 2	0,027	0,146	0,562	0,285	0,484
....					
Sample 170	0,065	0,196	0,491	0,321	0,409
Sample 171	0,127	0,285	0,480	0,177	0,395
Sample 172	0,082	0,145	0,452	0,306	0,450
....					
Sample 341	-0,065	0,147	0,515	0,397	0,457
Sample 342	0,128	0,106	0,431	0,361	0,437
Sample 343	-0,019	0,180	0,500	0,416	0,475

Source: authors' analysis in Smart PLS3 software, Boenningstedt: SmartPLS GmbH,  
<http://www.smartpls.com>

The overall results have shown that PLS simple model generated by the model mechanism assesses the specific indirect effects of equities, bonds and others that are significant for our sample size (343) as case model (Table 4) for five periods (2015-2019).

Table following on the next page

*Table 4: Specific indirect effects of Mean, STDEV, T-Values and values*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	p-values
CEVF → MTVF → II	0,082	0,080	0,033	2,482	<b>0,014</b>
OEVF → MTVF → II	0,214	0,212	0,034	6,221	<b>0,000</b>

*Source: authors' analysis in Smart PLS3 software, Boenningstedt: SmartPLS GmbH,  
<http://www.smartpls.com>*

In Table 5, bootstrapping effects show the power of the direct impact of partial mediation. The immediate impact described by **p-values** of full mediation of the closed-end voluntary funds and institutional investors shows low significance (CEVF → II; 0,873). It could mean that they are internally more independent than other variables in the model from a practical standpoint.

*Table 5: Path coefficients for indirect effects of Mean, STDEV, T-Values and values*

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	p-values
CEVF → II	0,009	0,010	0,057	0,160	<b>0,873</b>
CEVF → MTVF	0,162	0,159	0,064	2,519	<b>0,012</b>
MTVF → II	0,504	0,500	0,041	12,235	<b>0,000</b>
OEVF → II	0,342	0,346	0,058	5,868	<b>0,000</b>
OEVF → MTVF	0,424	0,423	0,059	7,124	<b>0,000</b>

*Source: authors' analysis in Smart PLS3 software, Boenningstedt: SmartPLS GmbH,  
<http://www.smartpls.com>*

Future research on the effects of exogenous variable partial mediation might extend the explanations of model significance and dependency within the allocation of different asset classes. As stated earlier, the case of Croatian voluntary pension funds might be improved with more data findings or indicators relevant for the analysis in Smart PLS3 software.

#### 4. PROPOSAL FOR FUTURE ENDEAVOURS IN SMART PLS3 MODEL

The most significant limitation from the voluntary funds' vehicles reflects a limited transmission mechanism in terms of the nowcasting management fee for the voluntary fund's management team. The most significant number of arguments in the model refers to the unit price value as the voluntary fund's net asset value. On the one hand, Croatian voluntary funds in 2019 represent a majority shareholder structure in minority positions in shares, GDRs and blue-chip stocks while representing 24% of the assets in open-end voluntary funds. On the other hand, more than 64% of the open-end voluntary funds and 58% of the closed-end voluntary funds remain under the transfer regime of domestic and international corporate and government bonds. In that case, it shows a negative correlation of domestic and foreign government and corporate bonds with other types of assets' class in the voluntary funds. Regarding public acceptance for concerning experience before 2015, it is not easy to match the satisfactory return on invested capital with multiple limitations on the domestic market. Contrary to the case, forecasting could only tackle the limited frequency of data between lagged observations with the future outcome, i.e. financial derivatives (Bland, 2018). While taking these into the concrete scenario model for the Smart PLS3 software, future endeavours could target financial institution with larger data sets, i.e. compulsory pension funds.

Thus, the transmission mechanism will have enough time to self-adapt and react to the indicators linked to the operational, liquidity, credit and market risk. The authors will give their final remark in the last section, based on their own practical and personal experience with voluntary pension funds.

## 5. CONCLUSION

The authors are familiar with the domestic voluntary pension system's financial concept and business aspects, which supports the importance of long-term individual contribution as semi-public initiatives. Due to the current situation with a global pandemic, previously mentioned profound initiatives could become a legal framework and a realistic Croatian pension system strategy. The integrated regulatory strategy in terms of market offerings via private initiatives or privatisations could render even more domestic voluntary funds in terms of country-specific characteristics and sustainable institutional setup. These findings are consistent with several conclusions that have been drawn in the light of fine-tuning measures of the domestic voluntary pension funds for the last five consecutive periods. Participation in redistribution between Croatian obligatory and voluntary pension funds would not lurk benefits in terms of current returns and industry benchmark. It will adjust the possibility of privatisation as a trigger for the growth of valuation and consolidation of domestic listed and unlisted companies, as many Central and South-East Europe peers did. The innovative approach in detecting correlations between the current assets of closed-end and open-end funds with the presented and adopted debt and money market instruments could have multiple beneficiary outcomes. Future developments in these innovative models prove that new software packages (i.e. Smart PLS3) can contribute respectfully towards academia and business. More research is needed to apply and test private pension models with a different scope of independent variables in addition to application scenarios. These models' only limitation deals with new data sets and variables defined in favour of the simulation study or validity assessment.

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## **PARTICIPANTS' ATTITUDES ABOUT AUGMENTED REALITY AUGMENTATION OPPORTUNITIES IN ORIENTEERING**

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### **ABSTRACT**

*There are more and more participants in the orienteering movement who use new technologies' 'smartphones' during the activities. Orienteering as a sporting event increases the attendance of tourist destinations in Međimurje and throughout Croatia. Geographical diversity, the configuration of the soil with different vegetation, Međimurje offers runners participation in the orienteering movement unique and special. With the help of a topographic map and compass, runners try to find all the checkpoints in the shortest possible time. New applications on mobile phones make it easier to move and navigate in space, and it is possible to solve the given activities while moving. The past ten years have seen an increasing number of fans of the orientation movement from primary school students to late years, so we can freely say that this is an activity for all from seven to late years. Competitions are defined by the annual calendar, but one part of the respondents deals with orienteering movements from recreation and leisure in the natural environment. The increasingly advanced racing tracking technology and sports equipment used by runners enables the organizer and runners to have an interesting and exciting sports competition with themselves or in pairs and in groups. New augmented reality technologies add value when conducting competitions. The aim of this paper is to determine the attitudes and opinions of the participants in the orientation movement on the introduction of innovative multimedia content. Orienteering is practiced by almost all age groups of both sexes, so the survey was set to determine the attitudes of respondents regarding the recognisability of orienteering and whether a new innovative way would contribute to the popularization and recognition of orienteering. The paper presents a possible solution of the application and gives ideas for the further development and its application in orientation running, as well as its application in other segments of orientation movement. The attitudes of the survey participants who are familiar with the functioning of innovative multimedia content were analysed.*

**Keywords:** *questionnaire, orienteering, augmented reality, analysis*

### **1. INTRODUCTION**

Orienteering involves moving with the help of a topographic map and a compass (Picture 1) in unfamiliar racing terrain with preset checkpoints drawn on the map. (I. Gobec, D. Gobec, 2003). The maps are usually drawn on a scale of 1:5.000, 1:10.000, or 1:15.000 and contain many details for ease of reference in this area. (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020).



*Picture 2: Topographic map and compass*



*Source: <https://campingcooks.com/how-to-properly-use-a-compass-while-camping/>*

At each checkpoint, there is a three-sided prism flag (Picture 2). Confirmation of arrival can be of the simplest form by filling in a checkbox with a certain colour located at the checkpoint, a perforator with which the competitor perforates the control card, thus proving that he has visited a given point or electronic chips, thus registering the passage of the competitor electronically. (Gobec D, Gobec I. 2005). The layout of checkpoints is mostly not defined and the competitor himself chooses which order to go to checkpoints. The result depends on the ability to read the map and physical fitness. The time spent on the course is measured, and the competitors who have passed the course in a shorter time and find all the checkpoints are considered better. (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020).

*Picture 3: Orientation flag*



*Source: <https://3sporta.com/orijentacijsko-trcanje-tvoj-rezultat-ovisi-koliko-precizno-citas-zemljovid-i-kompas-a-ne-samo-koliko-brzo-trcis/>*

The benefits and advantages of orienteering are, above all, the availability and acceptability of engaging in sports activities for all ages, regardless of prior knowledge and their psychophysical readiness (fitness) in the open. Orienteering can be used as part of physical education and health education and other sports-related courses at higher education levels, but also in physical education and health in secondary and primary schools. (Jenko, 2008).

## 2. PRECISE ORIENTATION

Precise orientation is a sport that involves interpreting the map and terrain. Competitors visit the checkpoints marked in the field in the order or according to their choice. The checkpoint is marked with a set of flags, but only one flag is located exactly as described in the middle of the circle on the map and the description of the control, and other flags are placed somewhere nearby. (Gobec and Gobec, 2013). From 1 to 5 flags can be placed at one control point, and they are denoted by letters A, B, C, D and E. From left to right map (the so-called "zero" or "Z" answer). (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020). Using a map with the help of a compass and interpretation of the terrain, the competitor solves the task: which of the flags is placed in the correct place, exactly the one in the middle of the circle on the map as described in the control descriptions. The only division into categories is by competitor experience: E (elite), A, B and N (beginners). All tickets at all stations must have the same shape and size. The map scale must be 1: 5000 or 1: 4000 (Giljanović, Jurić 2014), including those for time controls. The time that the competitor measures between goal and start is irrelevant to the result. The winner is the one with the most correct answers and the least measured seconds on special time controls that measure the competitor's time to make a decision. (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020).

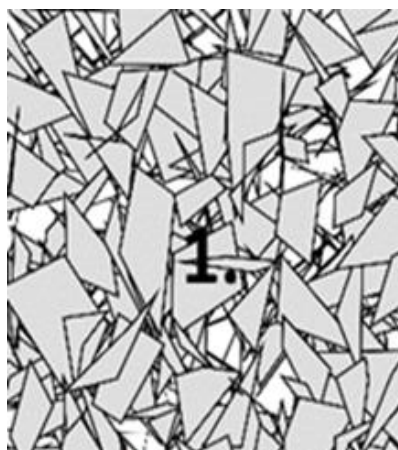
## 3. APPLICATION OF EXPANDED REALITY

Augmented Reality is the integration of digital information with a real-time user environment (<https://blog.lucidea.com/the-future-of-augmented-and-virtual-reality-in-museums>). An existing physical framework is added to a layer of multimedia data over a real-world layer. A web of multimedia data can be projected in real time on the user's screen digitally supplementing isolated real-world image. (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020). Augmented reality devices are usually based on four different approaches: marker-based devices, marker-less, projection-based and superimposition-based devices. (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020). The paper concentrates on the approach used by the marker since flags at each control point are used in orientation running to which a marker can be added to augment augmented reality. Marker-based augmented reality software solutions can be implemented with equipment such as cell phones and tablets (Kukec M., Breslauer N., Jovanovska D., Škrlec J., 2019).

### 3.1. Expanded reality applications with possible application in orientation

The application seeks to demonstrate the possibilities of augmented reality in orienteering by using two markers, Marker 1 (Picture 3) and Marker 2 (Picture 4).

*Picture 4: Marker 1*



*Picture 5: Marker 2*



By scanning the Marker 1 with a cell phone or other smart device that supports the camera, additional extended content to a realistic environment is presented. By scanning the number one marker, the user will be shown the map / map required for orientation running. The marker can be carried by the user and scanned as needed or markers can be placed on his route to invite additional content to the current real environment. (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020).

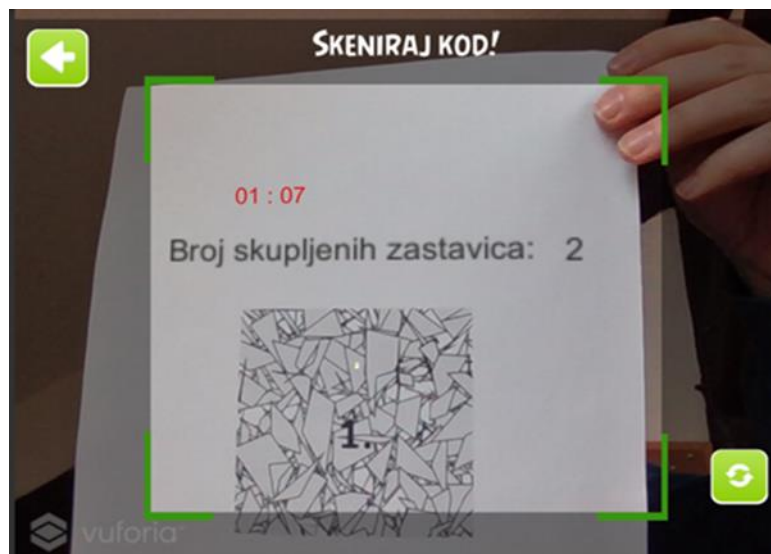
*Picture 6: Example of augmented reality*



By scanning another Marker, they can get instant route information or share a notification with the user that is relevant to the participant. It is possible to add augmented content to each of these two markers as desired or to the need of the race itself, one possibility is to collect points at checkpoints through the augmented reality application and to show the time spent in the race (Picture 6) (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020).

*Picture following on the next page*

Picture 7: Review code scan



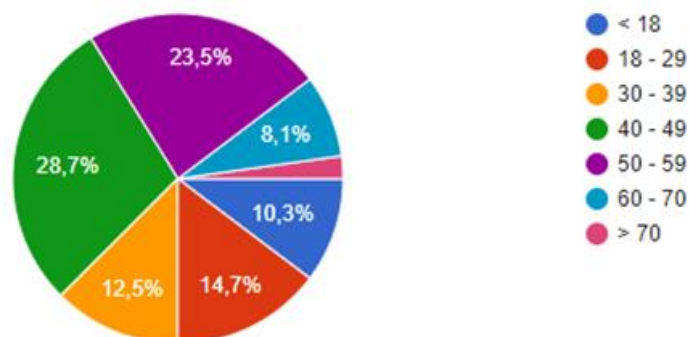
By creating a smartphone app, augmented reality becomes mobile, and as long as one has a device with the app and have a marker, it is possible to perform augmented reality at any time, which is perfect for orienteering. (Breslauer N., Hublin T., Breslauer N., Zeljko I., 2020).

#### 4. SURVEY AND ATTITUDES OF RESPONDENTS ON THE USE OF MOBILE APPLICATION BY SMARTPHONE

A five-question questionnaire was used to conduct the survey. The questionnaire was sent to target respondents who are in some way engaged in orienteering. The sample consisted of subjects engaged in orienteering running 136 of them of both sexes and ranging from <18 to> 70 years. Orienteering is practiced in three proposed ways: coaching and competition, competition or just training. The first question referred to one of the offered age group categorizations.

Figure 1: Age of respondents

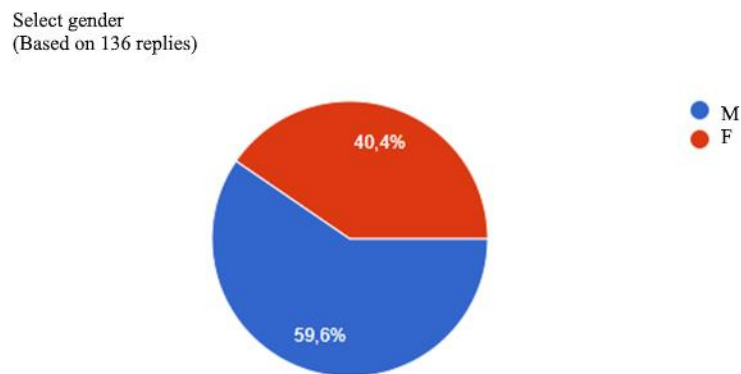
How old are you?  
(Based on 136 answers)



It can be concluded from the survey that most respondents are between 40 and 60 years of age, more than 50%, which confirms the previous research that middle-aged people have the greatest interest in orienteering / movement. The second question was about gender.

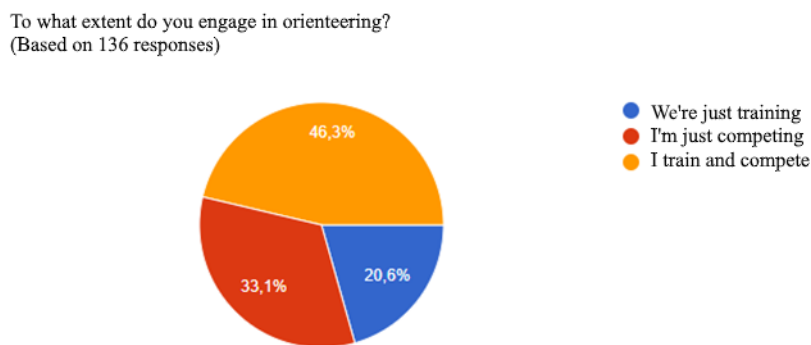


*Figure 2: Gender of respondents*



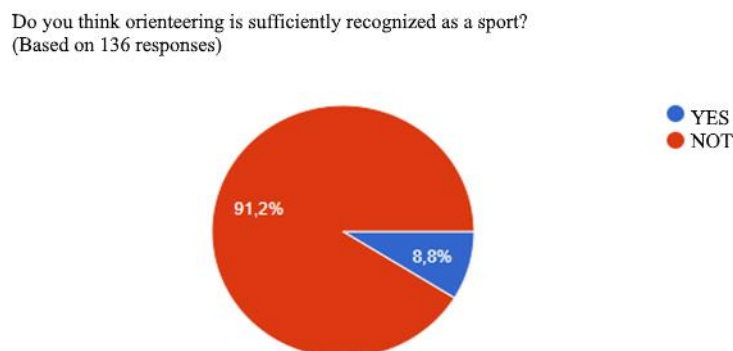
The analysis of the results established that among the respondents who took the survey and are engaged in orienteering, 10% more of the male population is 60%, and the respondent is 40%. This result shows that there are slightly more male respondents engaged in orienteering. The third question was how they were involved in orienteering.

*Figure 3: To what extent do you engage in orienteering?*



An analysis of the offered answers in three categories found that the highest percentage of 46.3% of respondents train and compete, 33% of respondents only compete despite not training, while 20% of respondents train for recreational reasons without competing. It can be concluded that among the respondents as many as 80% of them compete. The fourth question refers to their opinion on the recognisability of orienteering in their environment.

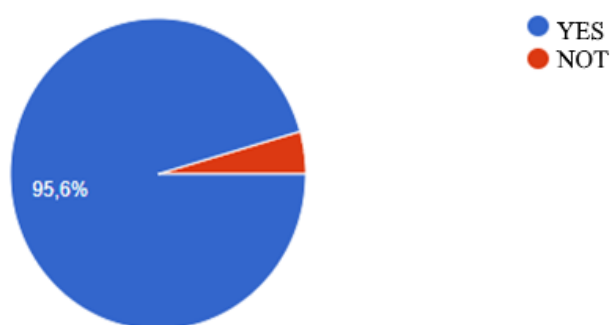
*Figure 4: Recognition of orienteering*



Despite the fact that orienteering is becoming increasingly popular in Croatia and Europe, 90% of the respondents who engage in this activity believe that it is not sufficiently recognized as a sport in Croatia. This is a very high percentage, and especially relevant when knowing that these are respondents who are engaged in orienteering. The fifth question concerns the application of augmented reality for the purpose of the possibility of its influence on the development and improvement of orienteering.

*Figure 5: Influence of application on orienteering*

Do you think an augmented reality app would contribute to the betterment of this sport?  
(Based on 136 responses)



By analysing the fifth question, it can be said that 96% of respondents believe that the application of augmented reality would contribute to the popularity of orienteering, and thus the improvement and greater interest of all ages regardless of gender to engage in this sport. This leads to the conclusion that respondents of both sexes and all age groups engaged in orienteering have confirmed that new technologies in this case, a mobile application can contribute to the popularization of this sport. Runners carry a mobile phone with them, and in addition to the augmented reality application on their mobile phone, they would also have all the other necessary information during training or competition.

## 5. CONCLUSION

Orienteering is becoming increasingly popular as a form of competition for the individual, team or family. Before the start, the competitor receives a ticket with certain checkpoints, the use of mobile phones during the competition is desirable for orientation or in case of necessary help, due to injury or disorientation or something else. Augmented reality applications can make the movement more interesting, interesting, and enrich the knowledge during the movement about shaving the collected flags, some information such as orientation movement, environment, history of an area, etc. The augmented reality system provides many opportunities to work on development and implementation in sports activities of orientation movement. An analysis of a questionnaire forwarded to people involved in orienteering found that we had almost the same percentage of 50% of respondents as far as gender was concerned. The age of the respondents who participated in the survey, as many as 80% of them are between 18 and 60 years old. 90% of respondents consider the use of the application useful. At the same time, they believe that using the orienteering application on mobile devices would help in competition or recreation, and thus participation would be more interesting for all age groups of both sexes. Using the app would certainly contribute to the popularization of orientation movement.

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## THE INTRODUCTION OF A CIRCULAR ECONOMY IN THE COMPANY AND THE SOLUTION OF LEGAL DILEMMAS

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### ABSTRACT

*During the mechanical processing of metals and alloys (grinding, milling, turning etc.) waste in different forms is produced (odbruski, ostružki, prah etc.). The waste is often classified as dangerous waste. Thus, questions of what to do with the waste, that is produced in such production, appear. Removal of the waste is expensive, it cannot be deposited and it can also not be stored in the company. Hence, we have developed a circular process, in which (considering all environmental regulations and law) we joined parallel processing of the potential waste into a by-product to the regular production. Therefore, we managed to combine two production processes into one uniform production processes with two products (main product and by-product). During the development of the uniform process our aim was to fulfil all the environmental regulations and to retain the production (the already established as well as the new, parallel) in the frame of the permission that was already existent. With the appropriate definition and the establishment of the production process by attaching a parallel processing of the »waste material« (into an economically valuable by-product) to the already existing production, we have managed to attain a final, uniform process, in which the product and a by-product are produced rather than the product and waste. With this uniform process we solved the problem of what to do with the waste (the waste removal that is done by an accredited contractor). Furthermore, the by-product can also be a source of income. Last but not least, our procedure has been patented (in regard to the technical performance) and we have received a prize for the innovation.*

**Keywords:** *Circular economy, waste, recycling, legal dilemmas*

### 1. INTRODUCTION

The circular economy (European Parliament, 2021) is a concept based on finding solutions for humanity's sustainable living in the future and advocates the »reduce, reuse and recycle« principle. The circular economy concept makes it possible to minimize the need for new resources, thus reducing the pressure on the environment. The essence of the circular economy concept is that all raw materials and processes are designed so that no waste is produced. The production of products or semi-finished products directly affects the stock of resources and raw materials, the environment and waste generation, and indirectly also human health. To ensure the sustainable development of society, we must use our (still available) resources prudently.



It has become clear that the existing "take-do-discard" economic growth model we relied on in the past is no longer sustainable in the long run, nor is it suitable for modern societies in a globalized world. Our research and development are thus in accordance with Agenda 2030 (UN, 2015), unanimously adopted by the United Nations Summit in September 2015 (Agenda 2030 combines three balanced dimensions of sustainable development: economic, social and environmental, and covers five areas crucial for human progress and environmental protection, including the 17 Sustainable Development Goals). In fact, we went a step further in our development and research. Simultaneously with the start of production or rather in one of our programs, we began to develop a uniform process in which (potential) waste would, through a parallel process (with regular production), immediately become secondary raw material. Accordingly, we have left out quite a few phases from this closed circle, thus reducing it by a few steps: »→ planning, design → production, processing → distribution → reuse, repair → collection → recycling → planning, design →.« By planning and designing during production, we implemented, in addition to the final regular product, also a secondary raw material suitable for sale to end-users. Research (and consequently development) was focused on the reuse of different alloy powder generated during production that would otherwise be treated as waste in the absence of appropriate further processing.

## **2. TRANSITION TO CIRCULAR ECONOMY**

The transition to circular economy is a very complex process, since it requires the modification of systems and new knowledge not just in the field of natural sciences, but also in the fields of planning and design (Eco Design), marketing and information communication technologies (European Commission, 2021) . The basis for a circular economy is recycling – used resources, materials and waste, that is a by-product in the producing procedure (what is waste for some is a raw material for others), are recycled, returned into the producing process as so-called secondary raw material and thereby reused. If the potential of the secondary raw materials wants to be optimally exploited, an effective waste management has to be established, which includes a relaxation of regulations in their trade and an assurance of high-quality standards. Only in that kind of environment is the industry entirely able to exploit the secondary raw material in their own producing processes and can simultaneously assure a reliable supply. The fundamental postulate of recycling in a circular economy is to generate materials by the means of collecting, disassembling in recycling of used products. The renewed integration of these materials into the beginning of the production life cycle directly results in environmental mitigation and production cost reduction. Although we have technically managed in a one year's time to solve the problem with the briquette production and to attain adequate results, a nearly equal amount of attention has been required for the formal legislative regulation by which our powder could be considered as a by-product in the production processes rather than classified as waste. The challenge was to solve the time-consuming obtaining of the legal environmental permission and required other permissions for recycling.

## **3. MAIN TERMINOLOGY**

### **3.1. Waste**

Waste is defined as matter or an item, that the owner discards, wants to discard or is obliged to discard (matter or an item, classified into one of the groups or subgroups on the waste list, is considered as waste only if it coincides the aforementioned definition).

### **3.2. Production residue**

Production residue is matter or an item, that is generated in a production process, which main aim is not the production of this matter or this item. The production residue can be either a by-product or waste.

### **3.3. By-product**

Conditions for production residues to become by-products:

- Further use of the production residue is ensured (the owner has a contract for selling, long-term existence or a market for selling, the production residue can be entirely used, it is not stored more than 3 years prior selling).
- The production residue can be directly used without further procession, except for normal industrial procedures (this applies if only washing, drying, control management etc. have to be performed).
- The production residue emerges as a constitutive part of the production process (if it is from technical characteristics of the process evident, that the production residue is ready for further use and is actually sent for further use).
- The production residue fulfils the demands, determined for the use of such matter or items by regulations, which apply to products, the protection of the environment and human health. Further use of these production residues will not harmfully impact the environment (if they fulfil technical standards for products, they also have to fulfil regulations which apply to the protection of the environment and human health, the REACH decree etc.).

## **4. ENVIRONMENTAL DEFINITION OF DIFFERENT ALLOY POWDER BRIQUETTING**

During the development and research of alloy-powder briquetting, we encountered not only technical but also legislative and environmental challenges. Thus, we had to set up and define the production method itself to meet the strict environmental standards. For this purpose, we decided on a uniform procedure that corresponded to the already obtained environmental permits. For the briquetting of different - alloy powder, we defined that the dust is a by-product and not waste, which is explained below. When briquetting different- alloy powder, it is necessary to begin with three key issues:

- What is waste?
- What is a by-product?
- When does waste cease to be waste?

and from this on, which legislation applies:

- on waste
- on products
- REACH
- ??? (or something else)

We are able to answer all answers by referring to the definition and establishment of the process with the help from the Scheme of deciding if a production residue is considered as waste or as a by-product and thereby are able to find a final solution.

### **4.1. What makes our product a by-product and not waste**

We had to define why the residue from the production is not waste but a by-product. We thus used the European Commission's Interpretation on Waste and By-Products (2007) and the REACH Regulation, i.e., the European Union regulation adopted to improve the protection of human health and the environment from the risks posed by chemicals.

1. The Communication from the European Commission to the Council and the European Parliament on the Interpretative Communication on waste and by-products (COM (2007) 59 finalized on 21 February 2007) states (European Commission, 2007):

Example: Chips and other similar material

In more general terms, excess material from the primary production process, or material that is deficient only in a cosmetic way but that is materially similar to the primary product, such as rubber compound and vulcanisation mix, cork shavings and pieces, plastic scrap, and similar material may be seen as by-products. For this to be the case, the material has to be reusable either directly in the primary production process or in other integrated productions where reuse is also reliable. Materials of this type can thus be considered to fall outside the definition of waste.

#### **4.2. Unnecessary additional registration or additional environmental permit**

Article 2 (7) of REACH states that registration is not required for (European Commission, 2007):

- (b) substances listed in Annex V (...substances present in nature, provided they are not chemically modified: minerals, ores, ore concentrates, etc.)
- (d) substances, on their own, in preparations or in products, which have been registered in accordance with Title II and which are processed in the Union if:
  - (i) the substance that results from the processing is the same as the substance that has been registered in accordance with Title II; and
  - (ii) the processing plant has access to the information required in accordance with Article 31 or 32 in relation to a substance registered in accordance with Title II.

Our answers to basic legal dilemmas:

- Different alloy dust is the residue of production (by-product or waste)
- Further use of the residue is ensured:
  - The holder does not have sales contracts (because nickel is a raw material, the price of which varies significantly on the stock exchange, and long-term fixed-price contracts do not make economic sense), the demand for raw materials such as nickel is constant or even increasing.
  - A long-term market is guaranteed (Ni as an alloying element and in the field of superalloys).
  - The residue of the production is fully usable in the form of briquettes.
  - The base has not been stored for more than three years.
- As the residue of the production, it can be used without any further processing, only by compressing (briquetting as a typical industrial process).
- The residue of the production is created as an integral part of the production process.
- The residue of the production meets the requirements set for the use of such a substance or object that regulate products, VO, and human health protection, and its continued use will not have a detrimental effect on the environment.
- In accordance with the Communication from the Commission to the Council and the European Parliament: Interpretation on waste and by-products (COM (2007) 59 final of 21 February 2007).
- In accordance with Article 2 (7) of REACH, point (d), which states that registration is not required.

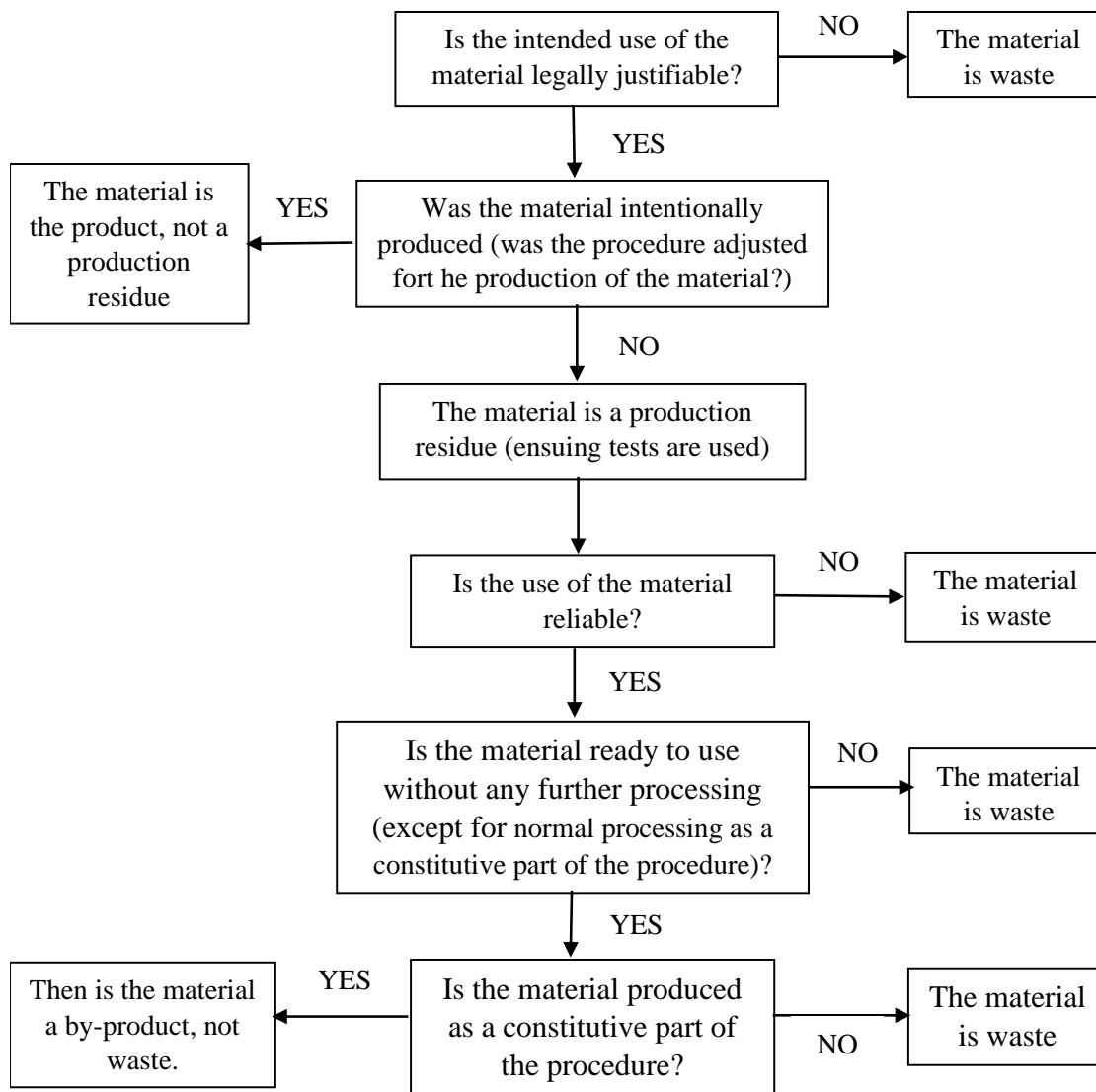
#### **4.3. Procedure**

During the development of the uniform process our aim was to fulfil all the environmental regulations and to retain the production (the already established as well as the new, parallel) in the frame of the permission that was already existent. With the appropriate definition and the establishment of the production process by attaching a parallel processing of the »waste material« (into an economically valuable by-product) to the already existing production, we have managed to attain a final, uniform process, in which the product and a by-product are produced rather than the product and waste.

The application for the legal permission was based on the decision-making scheme: when are production residues considered as waste and when as a by-product. Similarly, as we have been able to solve the technical issues in the process, by applying appropriate legal formulation we have also been able to the issues regarding the environmental requirements and regulations.

#### 4.4. Decision-making scheme

Figure 1: Decision-making scheme



The scheme shows the procedure, with the help of which it can be proved that the powder is a by-product and not waste.

#### 4.5. Procedure according to the scheme for our material<sup>1</sup>

Procedure according to the scheme for deciding whether or not a material is waste:

- 1) Is the intended use of the material legally justified?
  - YES. The intended use of the material is legally justified!
- 2) Was the process adapted for the production of the material?
  - NO. The process was not adapted for the production of the material!

<sup>1</sup> Naglič, Šumah et al, 2021

- 3) Is the use of the material reliable?
  - YES. The use of the material is reliable!
- 4) Is the material ready for use without further processing?
  - YES. The material is ready for use without further processing!
- 5) Is the material produced as an integral part of the production process?
  - YES. The material is produced as an integral part of the production process!

According to the decision scheme, our material is a non-waste by-product!

With this procedure, i.e., with parallel production, we have solved the legal-formal dilemma of whether our production creates waste or a by-product.

## 5. CONCLUSION

With a uniform production, i.e. recycling (with a final product, appropriate for direct immediate use in foundry or steel industry), we solve two important environmental aspects. Firstly, there is a significant decrease in the carbon footprint, since the primary production of metals and consequently alloys is considered one of the biggest CO<sub>2</sub> producers. Furthermore, as the biggest metal producers are Russia, Australia and Canada, followed by Asian countries and the USA, which are all countries that are far away from Europe, the decrease in the carbon footprint can also be associated with the restriction of global and local transport. Secondly, due to recycling of the alloy powder there is a reduction of waste and, consequently, of pressure on the environment. Before we developed the recycling method of briquette production, the alloy powder had been deposited as waste. The development of the prototype lasted more than one year since we had autonomously taken over the production, which had been previously carried out by another contractor. Meanwhile, the law also got stricter. Our success is confirmed by over two tons of produced briquettes. Moreover, through the introduction of the uniform process and recycling we have also limited the negative affect on the environment. Additionally, through the services that we conduct we help our partners (together with external contractors) in establishing and introducing circular economy (as a leading partner in projects). As a socially and environmentally aware company we strive towards the reduction of the carbon footprint and the limitation of waste deposition. With the uniform process that includes the recycling of the powder from nickel alloys into briquettes we have already entered the market. We have also patented this procedure. Our next undertaking is the development of a uniform process of copper and iron alloys recycling, which will soon be finished.

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## MODELLING TIME-SERIES COMPONENTS OF ENERGY CONSUMPTION

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### **ABSTRACT**

*The purpose of this paper is to examine and extract time-series components, namely trend, seasonal and cyclical variations, as well as random movements from aggregate consumer consumption of a macroeconomically important energy resource. The research question posits that this could be performed through standard time-series econometric methodology. Data is obtained from the Croatian gas storage system operator, and consists of daily opening and closing states. This could serve as a blueprint for similar energy consumption models, and as such it might assist in development of forecasting particular energy consumption in a dynamic environment.*

**Keywords:** *Time-series, energy consumption, Croatia*

### **1. INTRODUCTION**

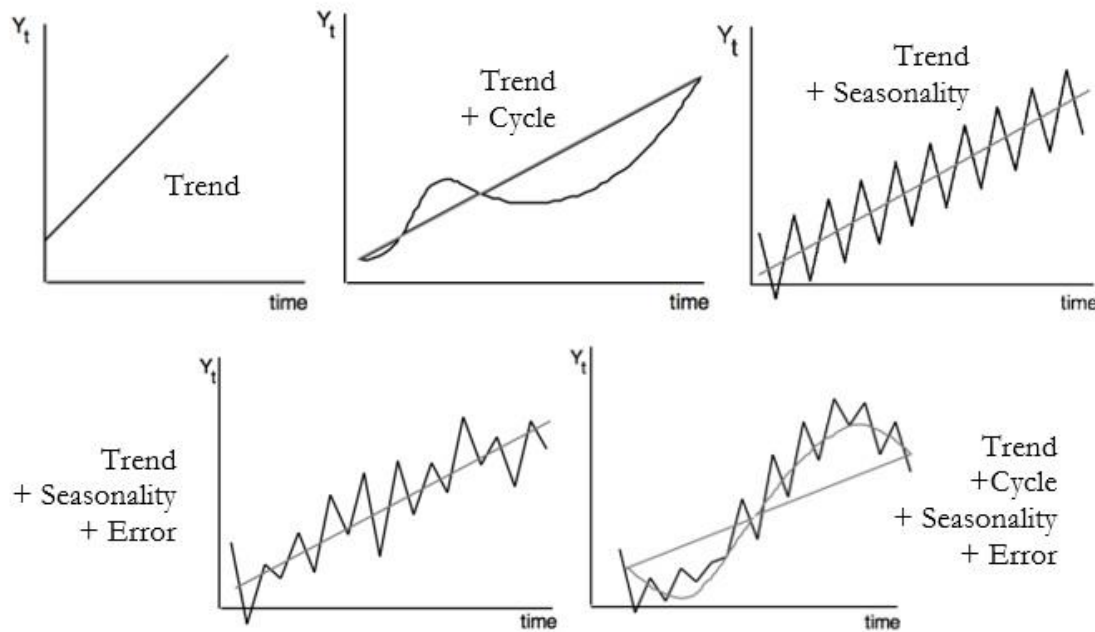
Prudent and far-sighted energy management is of utmost importance in the age of climate change. Improving energy efficiency can deliver both monetary and environmental rewards, and therefore needs to be constantly re-examined. In this work we attempt to identify a pattern of gas outflow from the central Croatian gas warehouse, a more or less stable progression (stationary process) over time, and to decompose these series into their components. The main categories of the components of time series are (Harris & Sollis, 2003; Mills, 2003):

1. long-term movement or trend (revealed over multiple years),
2. short-term movements (observable within a year), which can be further fragmented to
  - a) seasonal variations (quarterly, four seasons, or similar patterns),
  - b) cyclical variations (albeit cyclical oscillations can also occur over several years), and
3. random or irregular movements (remaining random noise, error).

These components are visually represented by Figure 1.

*Figure following on the next page*

Figure 1: Decomposing time series components



Source: Author's modification from Gerbing (2016)

As such, this work is an element of a project which attempts to deliver methodological framework for efficient energy management by intelligent data analytics (Merida, see footnote 1), and its purpose is to exhibit possibilities of contemporary methodology on a novel data set which stems from resource management. After this introduction, the next chapter brings forth the methodology and describes the data used, as well as the modifications of it. The third chapter presents and discusses the results, while the forth chapter concludes.

## 2. METHODOLOGY AND DATA

Data is obtained from the Croatian operator of the gas storage system, which is under authority of national gas transmission operator (Plinacro). It is freely available at their website (PSP, 2021) from where it was downloaded and merged into single database. It consists of historical data from April 1<sup>st</sup> 2014. to January 31<sup>st</sup> 2021, with series which comprise opening and closing states of the central Croatian gas warehouse. The opening position of the day is equal to the closing position of the previous day. It is published in kilowatt/hours which can easily be restated in monetary terms, and it can serve as a blueprint for similar energy consumption models. The data, therefore, consists of the daily opening (O) and closing (C) states, from which the absolute and percentage change – were calculated;

$$\Delta = C - O$$

$$\% \Delta = C/O - 1.$$

The data was cleaned from outliers by substituting 0,10% percent of the extremes from the distribution tails with the arithmetic means from the respective variables. Seasonal adjustment will decompose series into seasonal, trend and remainder components using a filtering algorithm based upon LOESS regressions (locally weighted polynomial regression), which create smoothed values of data. Tri-cube function with either a locally linear or locally quadratic polynomial are applied (Eviews, 2021). Seasonal and trend decomposition using loess (STL) has several advantages over the classical decomposition methods (Hyndman & Athanasopoulos, 2021).



STL will control any type of seasonality, not just monthly or quarterly. The seasonal component is allowed to change over time, and the rate of change can be controlled, as well as the smoothness of the trend-cycle. It can be robust to outliers so that they will not affect the estimates of the trend-cycle and seasonal components.

### 3. RESULTS AND DISCUSSION

Descriptive statistics is presented in Table 1.; the variables are normally distributed and the sample consists of approximately 2500 days.

*Table 1: Descriptive statistics of the observed variables*

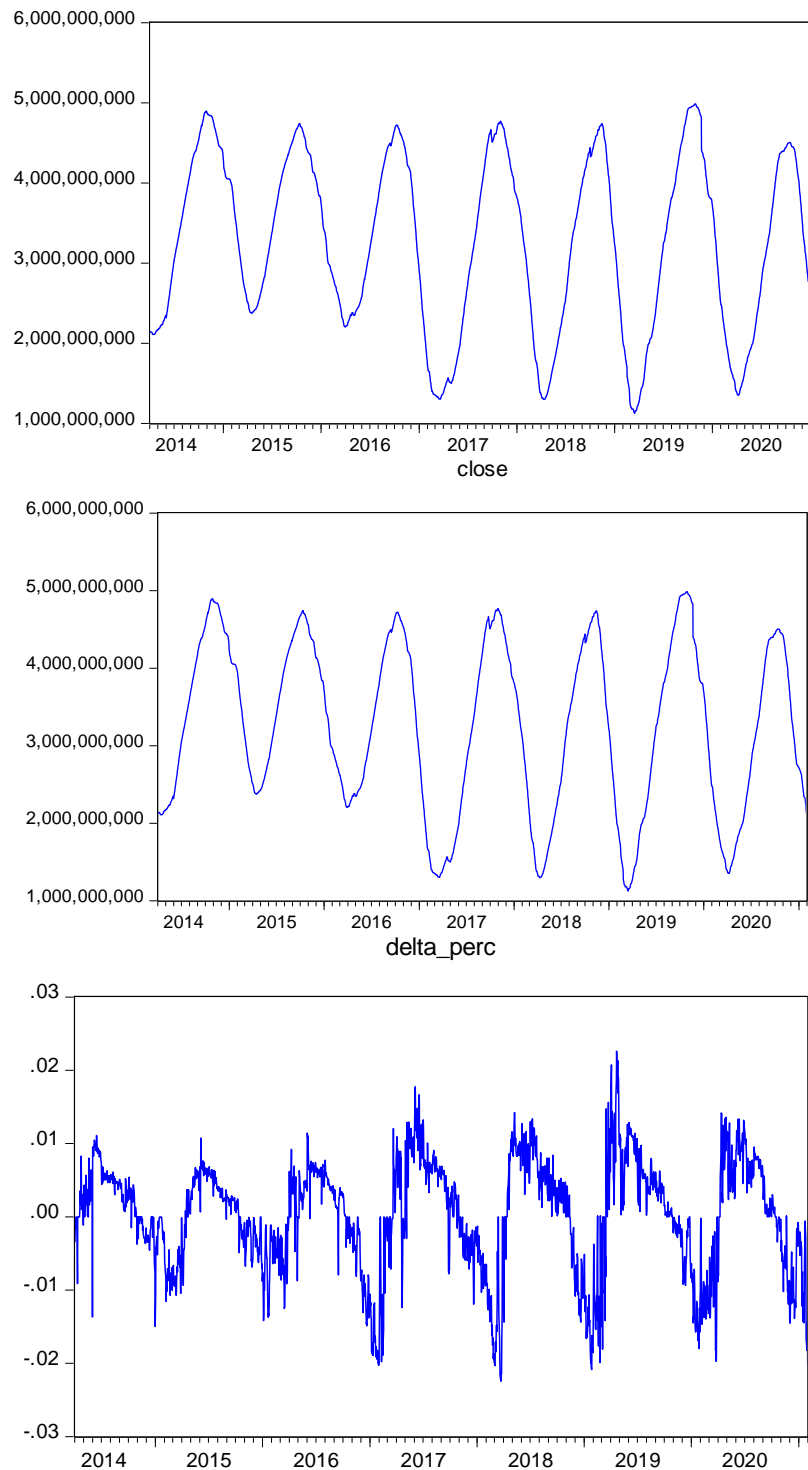
	OPEN	CLOSE	% $\Delta$	$\Delta$
Mean	3.24E+09	3.24E+09	0,014%	313991.3
Median	3.31E+09	3.31E+09	0,108%	3357067.
Maximum	4.99E+09	4.99E+09	2,259%	39880265
Minimum	1.12E+09	1.12E+09	-2,246%	-64494226
Std. Dev.	1.10E+09	1.10E+09	0,761%	20739519
Skewness	-0.199173	-0.198452	-0.529298	-0.539450
Kurtosis	1.783647	1.782965	2.931099	2.332684
Jarque-Bera	170.5087	170.5622	117.1326	167.5049
Probability	0.000000	0.000000	0.000000	0.000000
Sum	8.09E+12	8.09E+12	0.339548	7.84E+08
Sum Sq. Dev.	3.00E+21	3.00E+21	0.144751	1.07E+18
Observations	2498	2498	2498	2498

*Source: Author's calculation*

The raw data (opening and closing states, and daily percentage changes for the complete sample) of the gas consumption in Figure 2. Seasonal and cyclical patterns are clearly observable, and it is also clear that opening and closing states overlap. Therefore, only closing state will be further investigated.

*Figure following on the next page*

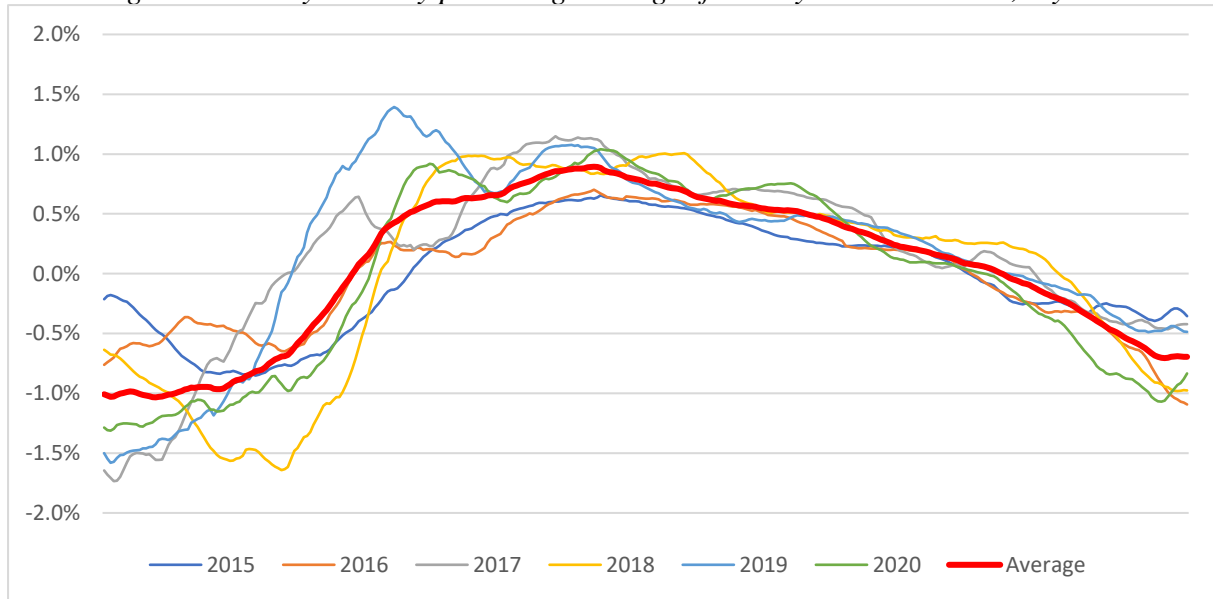
*Figure 2: Opening and closing states, and daily percentage changes for the complete sample*



*Source: Author's work*

We can focus on intra-year oscillations in Figure 3, where yearly data (for the years with complete yearly observations, i.e. 2015 - 2020) was selected, smoothed with a 30-day moving average, and layered in order to observe seasonal and cyclical configurations. In the first quarter, usually there are larger deviations from the mean, while the second and the third quarter reveal lower oscillations and a decreasing trend. This is expected as during the winter idiosyncratic gas expenditure intensifies.

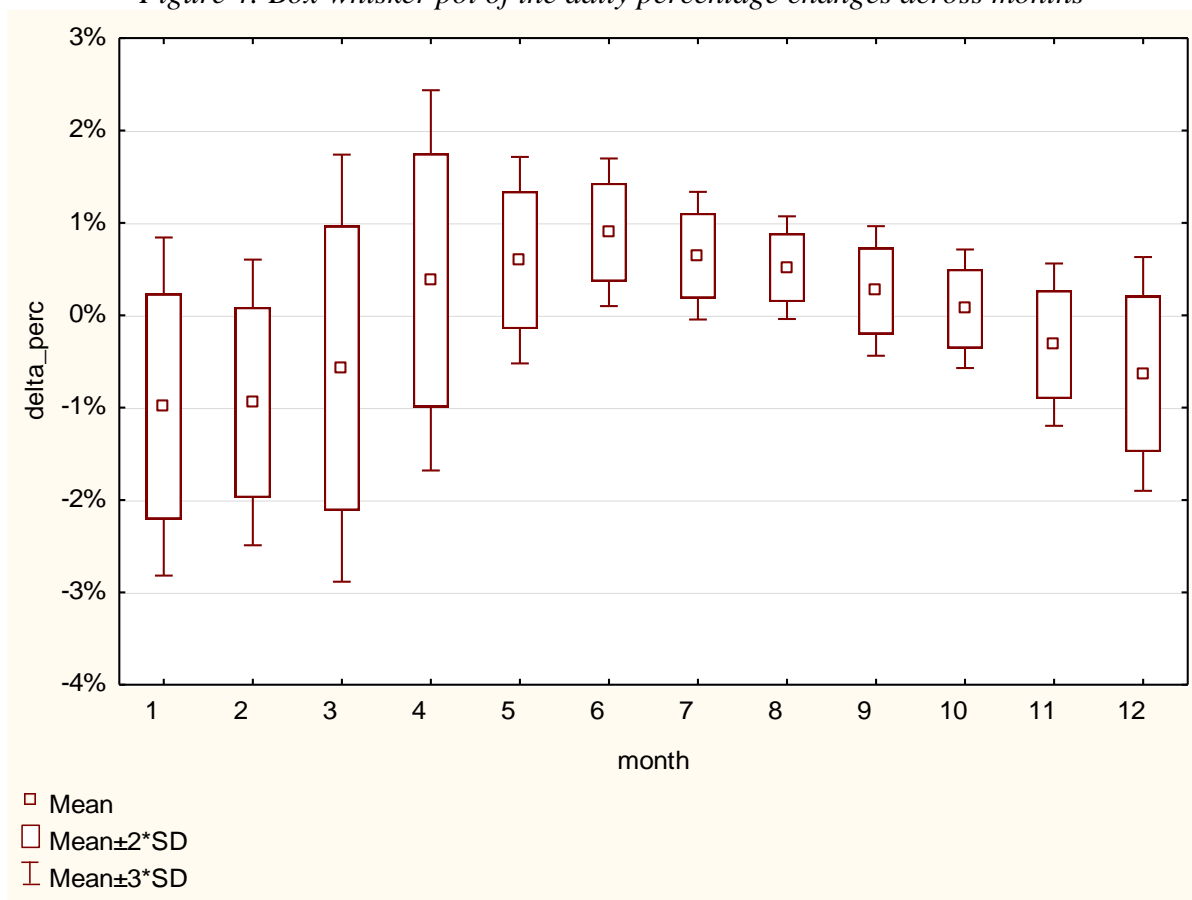
*Figure 3: Intra-year daily percentage changes for the years 2015-2020, layered*



*Source: Author's work*

Figure 4 displays the same underlying data as in Figure 3, but in the form of a Box-Whisker plot with the intervals of  $\pm 2$  and  $\pm 3$  standard deviations from the mean. It further accentuates the cyclicity observed in the Figure 3.

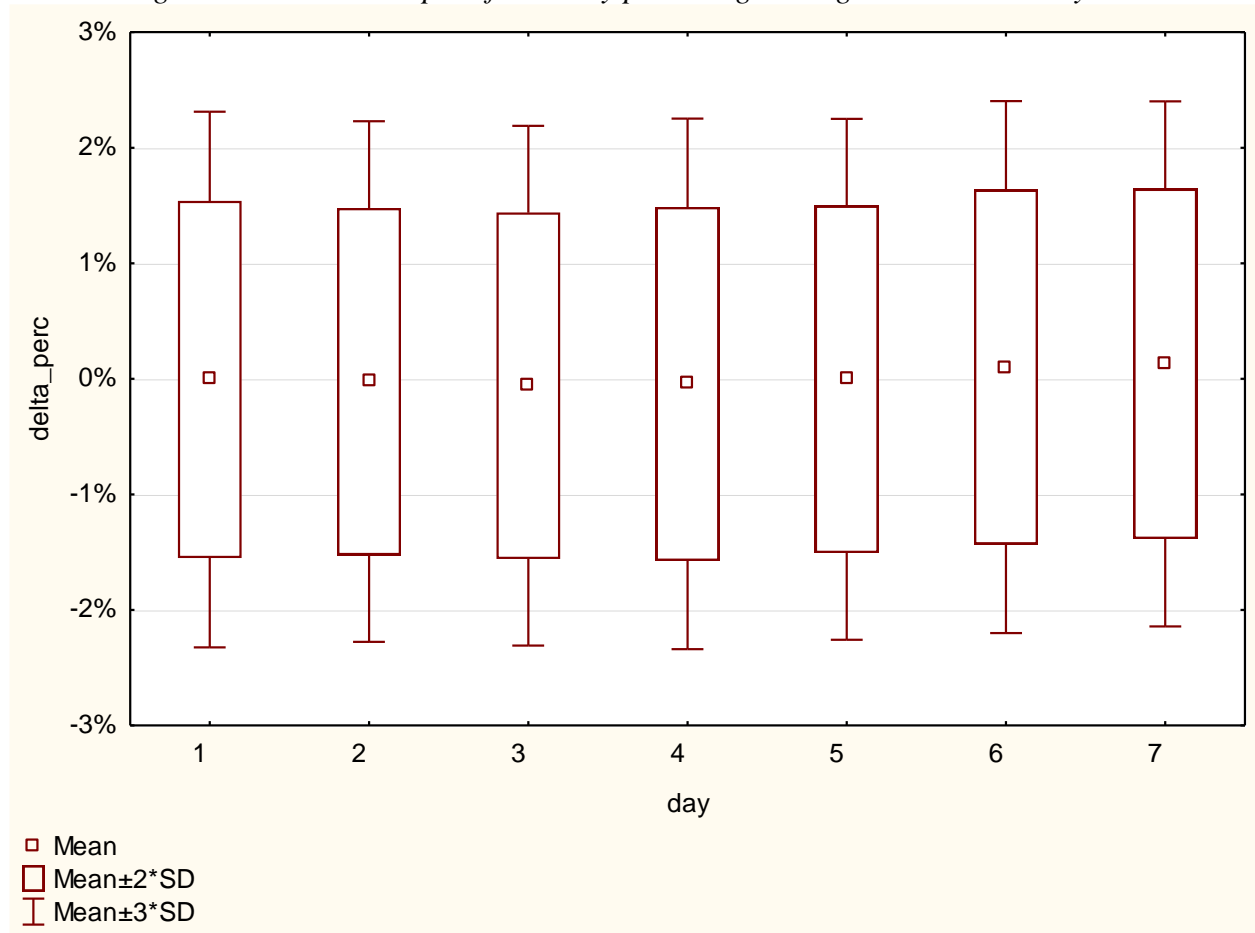
*Figure 4: Box-whisker pot of the daily percentage changes across months*



*Source: Author's work*

It is also important to examine weekly fluctuations. Figure 5 takes all the available data and arranges it into Box-Whisker plots from Monday to Sunday. As expected, there is a slight increase in Saturday and Sunday which indicates that the industrial use of the gas weakens over the weekend.

*Figure 5: Box-whisker pot of the daily percentage changes across weekdays*

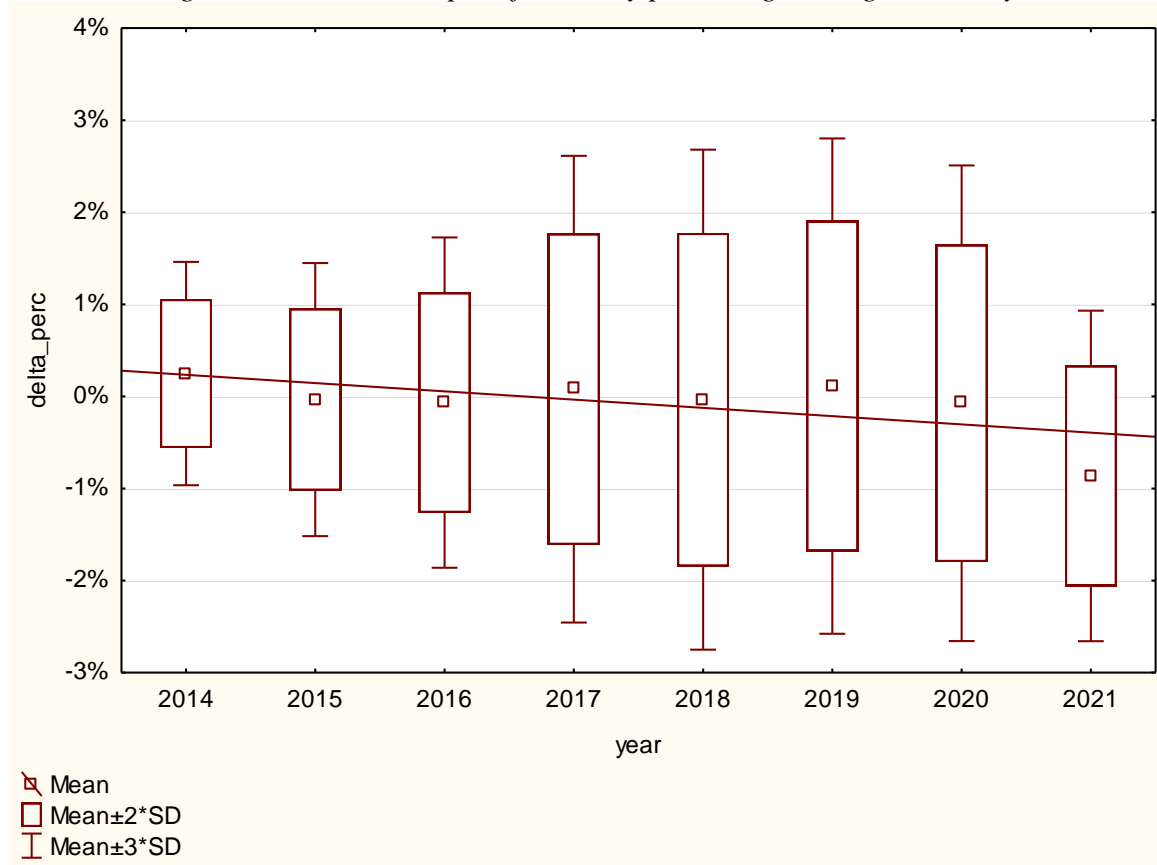


*Source: Author's work*

The long-term trend is shown in Figure 6. It is clear that the difference between closing and opening state is expanding over the observed period, with a negative trend. The lower use of gas could indicate increasing energy efficiency, shrinking economic activity, or both.

*Figure following on the next page*

*Figure 6: Box-whisker plot of the daily percentage changes across years*

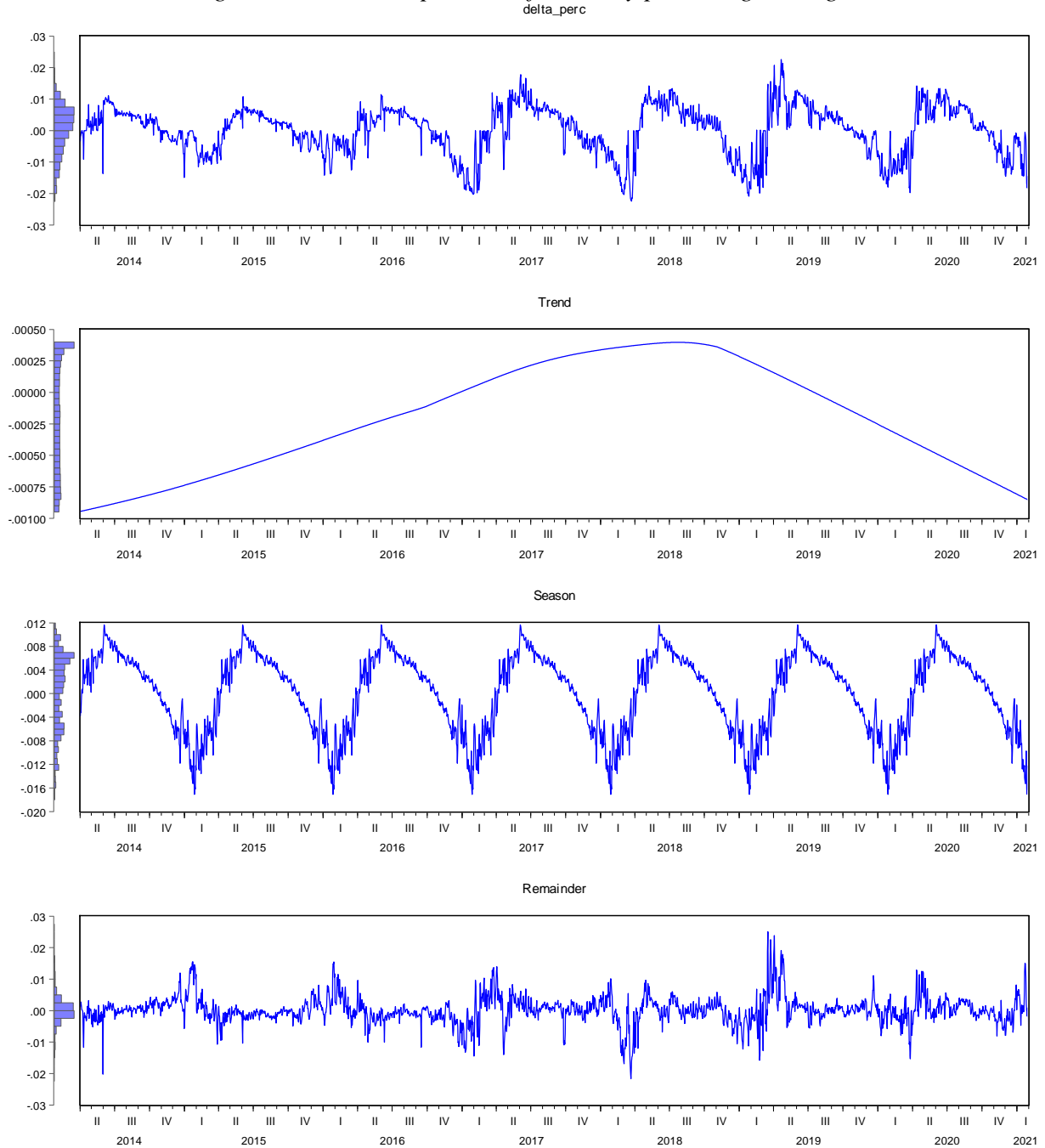


*Source: Author's work*

After initial analysis seasonal and trend decomposition using loess (STL decomposition) was then deployed. The seasonal polynomial degree was set to 0, and the trend and filter to 1. As for the smoothing window, we use seasonal smoothing window of 123 (three months), a trend window of 1825 (five years), and a filter of 365 (one year). Inner loop was performed 3 times as it converges quickly, hence only few inner loop iterations can be set. Since the distribution of the data is normal (as seen in Table 1.) and outliers were purged, the outer loop was set to 3. Figure 7 exhibits the STL decomposition – original data, trend, season and residual – for the daily percentage change. Trend was positive up to mid-2018, after which it inverted. The seasonal component is isolated and stable throughout the observed period.

*Figure following on the next page*

*Figure 7: STL decomposition of the daily percentage change*

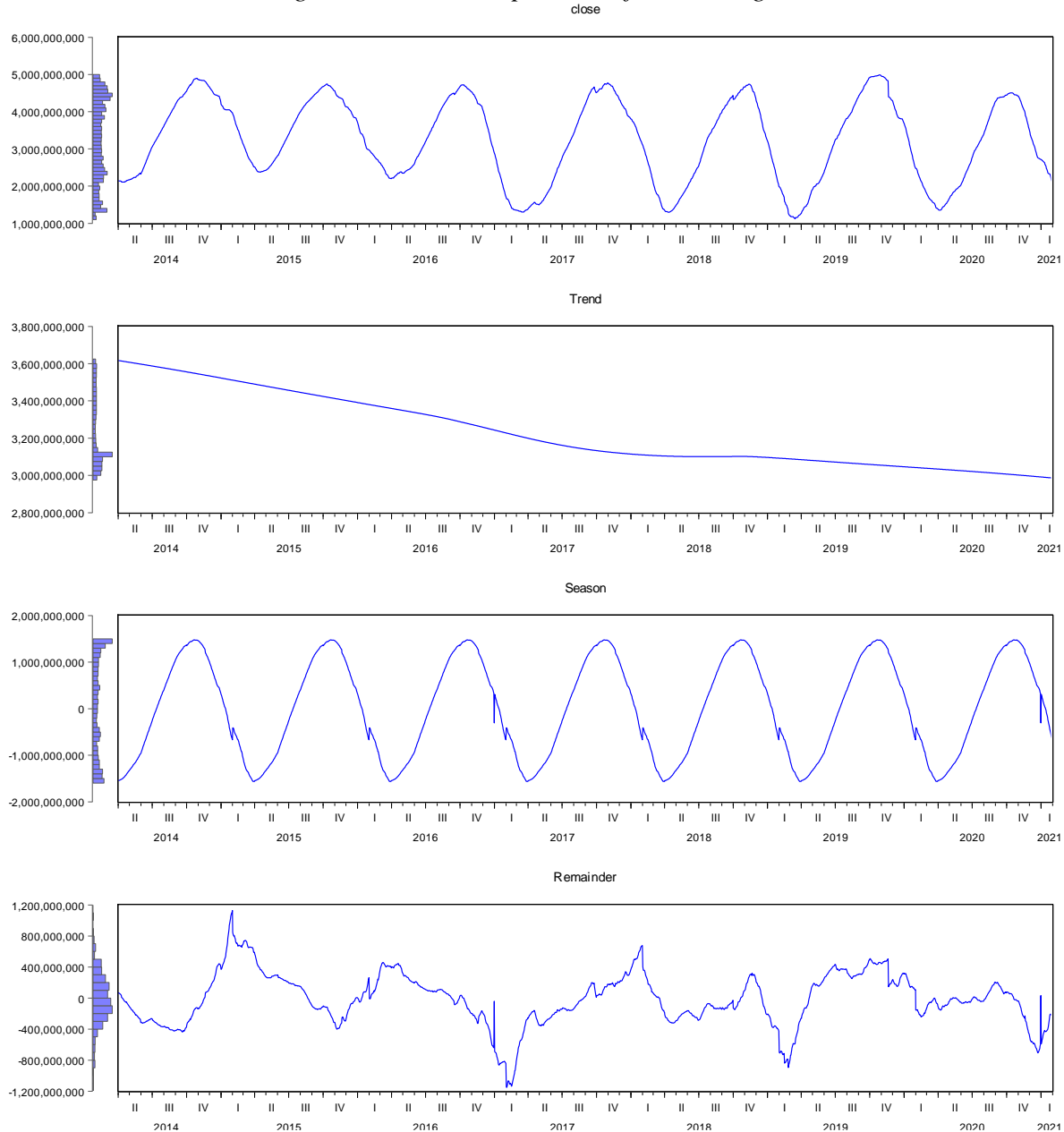


*Source: Author's work*

Finally, Figure 8 displays the STL decomposition for the daily closing state. Trend is downward sloping, with intense seasonal effects.

*Figure following on the next page*

*Figure 8: STL decomposition of the closing state*



*Source: Author's work*

#### 4. CONCLUSION

The purpose of this study was to decompose and observe time-series components (trend, seasonal and cyclical variations) from a national gas warehouse. The procedures and the methodology tested in this paper are appropriate and applicable, and can be deployed for the purpose of forecasting and energy efficiency improvements. This implies that practitioners could implement these methods into their forecasting portfolio, and could contribute to solve the problem of optimal procurement. Future research could encompass classical, SEATS, X11, X13 and other decomposition methods.

**ACKNOWLEDGEMENT:** *This work has been fully supported by Croatian Science Foundation under Grant No. IP-2016-06-8350 „Methodological Framework for Efficient Energy Management by Intelligent Data Analytics“ (MERIDA). <http://www.efos.unios.hr/merida/en/>.*

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## BLENDING LEARNING ENVIRONMENT: WEAKNESSES AND OPPORTUNITIES

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### ABSTRACT

*The breakout of the global pandemic in 2020, continuing into 2021, has had an enormous impact on every aspect of contemporary life. Accordingly, it has left its mark on education, making technology in teaching and learning an indispensable tool. It can be expected that returning to traditional ways of teaching exclusively is not a likely option, instead it can be assumed that advances in technology will offer even more opportunities for constructing and improving the new learning environments. In these uncertain times, education has changed dramatically and proceeded in various ways. Teaching has been done primarily online, in a hybrid or blended form, or face-to-face in a classroom whilst observing the rules of social distancing. Such change of context has had an impact on learner motivation, but it has also given a strong impetus and opened a world of opportunities for fostering learner autonomy and learner agency. The article presents the weaknesses and opportunities of a blended learning environment as observed in a language learning classroom at a university level, even though selected issues, practices and suggestions are applicable in other areas of education as well. Blended learning involves both face to face and online lessons, which by definition includes the use of technology. While there may be a great variety of tools available for use in online learning, it is important to note that they should be used effectively and not merely for the sake of being used. Weaknesses of blended learning, possible solutions and opportunities will be explored and exemplified, primarily in a language learning context.*

**Keywords:** *blended learning, language teaching practices, learner agency, learner motivation, technology in teaching*

### 1. INTRODUCTION

Beginning of 2020 the world faced one of the most serious challenges of modern times - the COVID-19 pandemic. Not a single country was left unscathed and every aspect of contemporary life was affected. The primary focus of the paper lies in the field of education. In the efforts to tackle the disruption in education, various forms of learning environments were adopted and applied throughout the world according to very specific conditions and possibilities of a country and region in question. The paper looks at blended learning as a form of a new learning environment used in higher education and, more specifically, on the example of a language learning context. The unforeseen and changing circumstances left an impact on learner motivation, but the chosen option allowed for uninterrupted learning albeit with a few observed weaknesses. Nevertheless, the complex new situation has opened up new opportunities for using the gained experience and new technologies as well as for fostering learner agency, rather than just going back to modes of learning and teaching used previously.

### 2. NEW LEARNING ENVIRONMENTS AMID THE COVID-19 PANDEMIC

The breakout of the COVID-19 pandemic worldwide in 2020 and carrying on in 2021 has taken an unprecedented toll on our lives. It has brought about serious changes in all aspects of modern-day existence, including education. In a matter of a few weeks, schools were closed, lessons disrupted, and a major shift to new forms of learning was introduced in many cases with little or no previous preparation.

The shocking spread of the coronavirus globally and its subsequent effect on education are well illustrated by UNESCO's ongoing visualization which monitors school closures as a direct consequence of COVID-19 pandemic since February 16 2020 (COVID-19 Impact on Education, n.d.). From the onset of the pandemic up until January 2021, the schools were fully closed for 14 weeks (a global average), in Europe the average was 10 weeks (UNESCO figures show two thirds of an academic year lost on average worldwide due to Covid-19 school closures, 2021). The severity of the impact on the educational process varies from continent to continent, country to country, even within neighbouring regions, and so does the response to new circumstances. However, there are several common features resulting from school closures: disruption in learning and assessment, switch to challenging new forms of learning environments, additional workload and stress for teachers, student struggles with the new learning environment, social isolation. The choice of a response to closure has been very context-specific and tailored to particular circumstances. Even the traditional face-to-face learning process in a classroom has seen great changes particularly in terms of social distance practices. In situations when face-to-face learning was no longer possible as a result of the pandemic in a particular region, learning remotely became the obvious choice. Remote learning is not a new concept, and it has been practiced for a few decades. Even though terms such as e-learning, online learning and distance learning are not entirely interchangeable (Moore, 2011), they refer to learning which has come to rely on the use of technology. With the onset of the pandemic, such learning processes became a necessity in order to respond to new circumstances, even in contexts in which they were previously used to a lesser extent or not at all. A survey on online and distance learning conducted by the Europe's online platform for school education called School Education Gateway revealed that the main challenges for teachers in switching to online or distance learning included student engagement, motivation and involvement of students from socially disadvantaged homes, increased workload and stress for teachers working from home, access to technology both for students and teachers, converting and preparing content for online lessons (Survey on online and distance learning – Results, 2020). In order to lessen the disruption in education due to the pandemic, schools and educational institutions started applying the mechanisms of online and distance learning to their curriculums with all the challenges such a prompt transition presented. Classes were imparted entirely online with a low-tech or high-tech approach, included synchronous and asynchronous learning, or in the form of hybrid and blended learning, all depending on the specific circumstances of a particular region and/or educational institution.

### **2.1. Blended learning in times of the global pandemic**

The concept of blended learning presented corresponds to an educational process which combines online and traditional classroom instruction. Garrison & Kanuka (2004:96) describe it as 'the thoughtful integration of classroom face-to-face learning experiences with online learning experiences'. Keeping in mind the basic definition of blended learning, it is important to note that it is not one thing. It comes in many shapes, flavors, and colors. [...] In the broadest sense, blended learning [...] can be defined or conceptualized as a wide variety of technology/media integrated with conventional, face-to-face classroom activities (Picciano, 2006: 96). This paper focuses on blended learning as a form of a learning environment educational institutions resorted to in order to tackle the disruption in learning as a result of the COVID-19 pandemic. In other words, it is not an example of a pre-planned and designed online learning, but rather emergency remote teaching which stands for 'a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances' (Hodges et al., 2020). Blended learning included synchronous and asynchronous lessons online as well as face-to-face instruction in a classroom setting while observing the rules of social distancing. More often than not an abrupt switch to blended learning, which was not necessarily determined by

the curriculum, requires a swift response and adaptation by the teacher in both modes of teaching. Also, the online setting may not correspond to initial expectations of the students and, consequently, can result in diverse individual responses to the new learning environment.

## **2.2. Impact on learner motivation**

Despite a lack of scientific consensus about the approach to and understanding of motivation, the complex term can be simplified in the following way: 'motivation is responsible for *why* people decide to do something, *how long* they are willing to sustain the activity, *how hard* they are going to pursue it' (Dörnyei & Ushioda, 2011:13). Within the broad field of motivation studies, the self-determination theory (Center for Self-Determination Theory, n.d.) focuses on the intrinsic and extrinsic factors that propel people to act. The former refer to people's interests, values, curiosity, sense of achievement, etc. while the latter encompass rewards, grades, sense of fear or power, affiliation, opinion of others, etc. The theory also regards the ways in which social and cultural factors can have an impact on motivation. Furthermore, conditions supporting the individual's experience of autonomy, competence, and relatedness are argued to foster the most volitional and high quality forms of motivation and engagement for activities, including enhanced performance, persistence, and creativity (Center for self-determination theory, n.d.). COVID-19 pandemic caused an abrupt shift in learning environments, which by extension left its mark on learner motivation. While students may not necessarily lose their genuine interest in the studies or their motivation to continue until reaching the goal of passing a subject or gaining a degree, the change of circumstances on the individual and societal level can impact their commitment and learning opportunities. For example, existential issues, inability to attend class amid illness or isolation, technological difficulties and the like, may disturb and thwart the dedication to pursue the set goals. A change from what was meant to be a traditional face-to-face instruction in a classroom to blended learning is embraced to a greater or lesser extent, even within a single group or subject. Consequently, it is important to foster autonomy, competence and relatedness in both settings in a way that is not perceived as a burden. Teachers should encourage students to be autonomous in their learning, both in classroom and in an online context, and assist them in the process if necessary, particularly when using new technology in teaching. Most of all, learner autonomy does not simply replace teaching in a sense that the learning process is transferred into the hands of students, which can then be perceived as imposed or additional workload. Similarly, students should be able to work on their competence in a subject in a way that the switch from online to classroom setting does not hinder them in achieving that. One way of doing that is to use technology that does not leave the students confused, overwhelmed, or distracted from the subject matter, but in fact assists them to do well. The feeling of relatedness requires particular attention. After all, the traditional classroom is not only a very specific setting where students expect to learn, but it also has a social dimension. COVID-19 pandemic greatly affects this experience - both in classroom and online. For example, rules of social distancing may impede interaction, discussion, work in pairs, etc. Similarly, synchronous lessons held over Zoom, Google Meet or other platforms can replace face-to-face instruction to some extent, but it is more difficult to achieve the sense of group connection, if students feel physically isolated from the group. The impact of the new circumstances due to COVID-19 pandemic on learner motivation should be acknowledged and addressed in order to lessen and bridge the disruption in the learning process.

## **3. BLENDED LEARNING IN A LANGUAGE LEARNING CONTEXT IN HIGHER EDUCATION**

This paper illustrates a blended learning environment used in a language learning class at the university level. To be precise, it presents blended learning practices used for the purposes of the course Spanish Language in Business Communication 1 within the specialist graduate study

program Tourism and Sports Management, held at Međimursko veleučilište u Čakovcu from October 2020 to January 2021. Blended learning was chosen as a means of preventing possible disruption in learning due COVID-19 pandemic and as a response to ever-changing health and safety conditions on the national and regional level. The selected learning environment was meant to be implemented in a way that lectures were held once a week exclusively online, while the practical classes were supposed to be conducted face-to-face in the classroom. However, due to participants' isolation, epidemiological situation on a regional and institutional level, several practical classes were also held online. Technology used in teaching included e-learning platform Merlin and Google Meet. Study materials, announcements and assignments were available on Merlin, while Google Meet was used for synchronous lessons online. The Google Meet sessions, both lectures and practical classes that were held online, were recorded and the recordings were at students' disposal on Merlin. A digital coursebook was also used in online classes. It is important to note that it was a beginner level course in a language the majority of students had very little contact with or none at all prior to the course. In such a setting, students generally expect guidance from the teacher. Language teaching practices included imparting linguistic knowledge adapted to the language level, encouraging students to actively participate and apply the acquired knowledge to express themselves about personal and professional topics. A certain level of learner autonomy was required to complete the tasks in asynchronous assignments, particularly with open-ended tasks.

### **3.1. Observed weaknesses**

One of the most important observed issues with blended learning is the need for raising awareness among students that both online and offline contexts are active learning environments. A classroom setting gives them a familiar context in which they know how to behave and what is expected of them. Online environment as a learning space is made more vague and understandably so when students follow lessons usually in a private setting, which feels far less instructional and can come with distractions which never occur in a traditional classroom (inadequate work space, disrupting family members, etc.).

#### *3.1.1. Technological issues*

While lack of a device necessary for following the online lessons was not an issue, since the chosen platforms are available in a mobile version as well, certain difficulties did arise such as occasional connectivity issues, sound and microphone problems, but not to an extent that it would disrupt the entire lesson. However, it is important to note that good sound quality is crucial for language learning, particularly in the beginner stage when students become acquainted with the sounds of a new language. Depending on the size of the screen on the device they were using, some students also reported difficulties in discerning working material on the screen shared by the teacher.

#### *3.1.2. Student engagement issues*

Having the camera on was not mandatory during the online lessons, since some students lacked the device with a camera, others were camera-shy or did not have an appropriate study environment around them. While active participation is a required language teaching practice and it was implemented in the course, it was noticed that some students were not in fact 'present' at certain times when asked a question, did not give timely feedback when asked about understanding a certain topic, did not feel comfortable to participate in their private setting.

#### *3.1.3. Issues in a socially distanced class*

Rules of social distancing and obligatory wearing of face masks also had an impact on language teaching practices in the classroom. For example, it is difficult to illustrate pronunciation when

students cannot see the teacher's mouth behind the mask. In such a case, parallels were drawn with the native language or other languages students are acquainted with, or the online lesson served as a space for further explanation. Also, group work was avoided while pair work was mostly done in couples that had arrived to class together without guided pairing aimed to combine weaker students with stronger ones to foster competence and relatedness across the study group. Finally, monitoring task completion by the teacher was difficult to navigate in a socially distanced classroom, so the online learning environment was used instead.

### **3.2. Opportunities for progress**

Regardless of the challenges global pandemic holds for us in the future, it has also opened up a lot of opportunities in language learning and education in general. Technology in teaching has been around for quite some time and its benefits need to be further explored and applied. Emergency remote teaching exemplified by blended learning in a language learning context should be considered in terms of continuing certain practices that enhance learning, even once adverse circumstances cease to exist.

#### *3.2.1. Continuous teacher training*

With the onset of the pandemic, a wide range of digital learning tools have been developed and made available. Simultaneously, many teachers had to make a swift adaptation of their teaching practices to fit the online, hybrid or blended environment. Ongoing teacher training allows them to get better acquainted with the e-learning platforms such as Merlin and digital teaching tools that are here to stay in the future, and maximize their teaching effectiveness, not to mention their better preparedness for emergency situations. It also empowers their creativity in using and producing their own teaching materials which best suit the specific needs of the students and specific learning environments.

#### *3.2.2. Creating learning content*

Creating activities, materials, recording lessons and sharing them with the students gives them more flexibility in their learning and fosters autonomy. For example, missing a class or feeling the need for reclarification is easily solved by resorting to available resources.

#### *3.2.3. Flexibility, subject awareness and self-discipline*

While online teaching and available resources award flexibility to the students, it is crucial that they are made aware of the subject matter, the process of learning without lagging behind and falling into the trap of delaying. An appropriate number of smaller assignments with focused content, clearly set goals and deadlines can assist students in navigating the course and becoming better acquainted with the subject matter, while maintaining the sense of flexibility and autonomy. This is essential in language teaching practices, since learning a language is a process that requires continuous work and commitment in order to achieve set goals.

#### *3.2.4. Monitoring engagement and motivation*

In uncertain times and beyond students might be faced with issues that impact their motivation and focus. Asking for continuous feedback from them, engaging them in class and providing support, particularly for struggling students, can have a positive impact on their motivation and learning.

### **3.3. Fostering learner agency**

In a challenging situation such as the COVID-19 pandemic when a sense of control of certain aspects of our lives has been taken away, the need to foster learner agency has become more evident than ever before. Becoming agents of their own learning, students are better equipped

to react at the face of unforeseen circumstances, to take on challenges and grasp opportunities. Agentive learners take initiative, seizing and even creating opportunities to learn. They take risks, confident that they can learn from their mistakes. They are also resilient; they have the ability to adapt and persevere in order to overcome setbacks (Larsen-Freeman et al., 2021:6). Learner agency is not about teachers handing over control, but rather enabling learners to 'take responsibility for their learning, play an active role in the classroom, and become more confident in their potential' (Larsen-Freeman et al., 2021:6). Feeling empowered, they become more invested in their learning and the subject matter. In a language learning context, some examples of high learner agency include students generating content, reacting to a particular linguistic situation that arises in class even when it does not match the lesson plan, using open-ended questions and activities, allowing students to use native (or other) language, creating a supportive and cooperative learning community, students are given the opportunity to auto-correct and to correct one another, enjoyable activities and games are used, students are encouraged to reflect on the learning process, etc. (Larsen-Freeman et al., 2021). Even at beginner level students can be equipped with tools and skills that allow them to show agency in their learning process. Learner agency may differ from students' expectations and prevailing cultural-societal beliefs about what a learning environment should look like. It is important to clearly define and explain what such an approach entails and encourage students to become active participants in their learning, be it in a physical or digital environment.

#### 4. CONCLUSION

Technology in teaching and learning has been a crucial factor for bridging and mitigating the dire effects of the global pandemic on education. A great number of tools and platforms have been made available to fit very specific needs of a variety of fields of study. While it can be expected that the future has even more advances in technology in store, it is important to learn how to apply them properly, according to set goals, and not just for the sake of using them. Therefore, striving for tech literacy should be replaced by aiming for tech proficiency both in the case of teachers and learners. The example of blended learning in a language course at a university level indicates that, despite a few observed weaknesses, such learning environments should be further examined, analyzed, adapted and used in the future according to specific needs and contexts of a given subject. By providing relevant resources, fostering engagement and learner agency, students are able to acquire knowledge regardless of the setting, i.e. both in a classroom and online spaces, and thus become better equipped to respond to the demands of the contemporary world and to unforeseen circumstances. In case of language learning, the aim is to assist learners to acquire a set of global skills which include communication and collaboration, creativity and critical thinking, intercultural competence and citizenship, emotional self-regulation and wellbeing, and digital literacies (Global Skills: Creating empowered 21st century learners, 2021).

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# INVESTIGATING THE EFFECTS OF CELEBRITY AND INFLUENCER ENDORSEMENT ON ATTITUDE TOWARD PERFUMES AND BUYING INTENTION

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## **ABSTRACT**

*In recent years, it has become very popular in the world for corporations and businesses to employ celebrities to attract customers' attention and endorse the company's brand because celebrities have the power to manipulate and influence buyers' minds to make a purchase. This review focuses on the engagement of celebrities and influencers in the perfume business by investigating the significance of celebrity and influencer endorsement in current marketing practices. Furthermore, in this paper the ways the celebrity and influencer endorsement affect the buying intentions of customers with regards to the perfumes purchase, their attitudes, are considered from the perspective of social psychology based on a theoretical background (review) related to the topic. In that matter, the works of E. Aronson, J. Bargh, De Freitas and others were benefited from. In addition, the article sheds light over some modern approaches of digital marketing and social media influencer marketing. The results of the studies indicate that using social media influencer marketing techniques for perfume companies is still successful because it can result in an effective marketing strategy in a dynamic business environment where the business is heavily revolving around the attitudes and intentions of the customers. Similarly, perfume-based corporations may create labels to increase the popularity of their products. The use of celebrities and influencers for brand promotion via brand ambassador approaches yields positive results in terms of controlling buyer intentions.*

**Keywords:** *Buying intentions, influencer and celebrity endorsement, perfume industry, social psychology*

## **1. INTRODUCTION: BRIEF BACKGROUND OF THE STUDY**

Over the past few years, the advancement in social and electronic media has granted a popular venue for celebrities to endorse a variety of products, such as perfumes, fast food, automobiles, garments, etc. With the advent of increasing competition, companies have adopted innovative and creative techniques to survive, sustain, and keep their significant part of the share in the market by attracting customers with effective marketing and communication. (Keller, 2016). As the nature of the competition keeps evolving, consumers have also become more sophisticated, and complex. Thus, it has become quite a norm in the world for companies and businesses to engage celebrities to draw consumers' attention and promote the company's name. For instance, the telecommunication sector is based in Ghana where different telecommunication companies like Vodafone, Airtel, and Tigo use celebrities' names to endorse their brands (Brodie et al. 2011). However, the perfume industry has evolved to a whole other dimension, as a vast majority of celebrities have signed deals with various perfume houses. Their names have been distinctively associated with a signature perfume scent (Na, 2007). These signature scents, associated with a celebrity's name is the first step in the marketing campaign. A good example of it could be perfume brand Sauvage by Cristian Dior. The advertisement of Sauvage is driven by wild, open fields; blue skies that cover rocky landscapes, hot underneath the sun of the desert and an amazing appearance of Johnny Depp.



Television is the most common and effective source for reaching out to consumers and introducing the brand, as it has a great appeal towards both literate and illiterate audiences. With the rapid growth and influence of electronic and social media, cultural boundaries have been immensely wiped out (Jinadasa, 2016).

## **2. LITERATURE REVIEW**

### **2.1. Significance of celebrity and influencer endorsement in perfume industry**

The celebrities' names are an actual brand themselves, and the number of celebrities who have themselves launched perfumes (David Beckham, Cristiano Ronaldo etc.) and fragrances or endorse them have significantly escalated, the main reason being that they look upon this multibillion dollar worth of perfume market as the lucrative and effective pathway to expand their already renowned brand name. Be it musical, film, drama, or the sports sector, celebrities are making their presence felt in various consumer markets, especially the fragrance market (Hung et al., 2011). Various perfume houses are seeking and looking to adopt innovative marketing communication methods to keep in the game of this ever growing sales competition, the most common and popular being branding by celebrity endorsement. They register the trademark of their scent under a celebrity's name, to be able to compete with both premium branded and fancy celebrity endorsed scents (Prasad, 2013). According to Rajasekar (2018), a celebrity is known as a person who is famous and known to all. He has the power to influence and instil a unique identity for a product. He enjoys the fame and recognition by the public and uses this fame and reputation to advertise a consumer product by endorsing it in an advertisement. The celebrity endorsements for any product have been success-proven in electronic and print media, as it has the appeal to draw consumers' attention towards recognition of their brand (Djafarova et al, 2017). With the vast appeal of social media nowadays, a celebrity product endorsement on his/her personal social media account gets instantly hit and enhances the effectiveness of the brand's marketing strategy. These endorsements assist in creating brand recognition and awareness (Dhotre et al. 2010). Moreover, the personal attachment of the fan base with their celebrity through social media platforms is a bonus advantage as compared to traditional endorsement and marketing of a product (Rushworth and Djafarova, 2017). When it comes to celebrity endorsements, there are diverse ways and methods by which a celebrity name can be utilised. Digital marketing campaigns through various social media platforms are the most common and mainstream ways right now, while traditional advertisements and endorsements are equally great (Gaied and Rached, 2017). From the point of view of perfume houses and the initiatives taken for its marketing, the medium through which a celebrity is incorporated for branding procedures depends on the scent, i.e. the product itself and the marketing budgets (Rojek, 2015). Some celebrities sign a one-off deal, which means the celebrity endorses the fragrance's brand for just one time, it may be a public brand endorsement at an event, or by means of social media account. In other cases, brands gift their products to a bunch of celebrities without signing an official deal. The PR agencies associated with different celebrities endorse and execute the product's outreach. For a powerful celebrity having a huge fan base, brands rely on the full-time partnership to use the celebrity's influence and his/her name recognition (Yang, 2018). On the other hand, according to McCormick (2016), an influencer's image is beyond any cultural or religious boundaries and consumers all over the world can be overwhelmed with him immensely. Moreover, the study of Biswas et al (2006) highlights that the ability to create and put some meaning in an advertisement to not only make it believable but also make it a more effective marketing communication is the sole argument why brands employ renowned influencers as their products' marketers. Once signing a deal with the brand, the influencer is expected to exert the factors such as influence on consumers' attention, attitude, and consequently their buying intention towards this product (Rafique et al., 2012).

Another important study suggests that small and less renowned products can be converted into well-known and branded ones through brand endorsement by famous influencers. Such advertisement and brand endorsement add a great deal of value to that brand's name and product. However, the majority of the available studies associated with celebrity brand endorsement examine post endorsement attitude of the brand, the quality perceived of that brand, and also the buying intention of the brand's items (Bergkvist et al, 2016; Zhou and Bergkvist, 2016). The study of Amos et al (2008) investigated the celebrity endorsement for branding in light of the previous researches, case studies, and various other determinants. Some of these determinants include the celebrity's outreach, charisma, expertise, attractiveness, popularity, appeal, liking, and the product congruency itself. Thus, the findings of the study suggest that the level of influencer expertise and value determines his marketing effectiveness, that is, the more expertise an influencer carries along with his or her name, the more effective his/her brand endorsement will be. As for negative or devaluation of a brand, the expertise of an influencer will not be altered by negative publicity of the product, but the credibility of the brand will be negatively impacted. Gorton et al (2012) relate to how a celebrity or influencer fits with the product and suggests that it is a fundamental aspect and theme, which requires proper evaluation before making the choice of endorsing the product. Hence, it is a general phenomenon that the traits, attributes, and qualities exhibited by the brand endorsers have a greater probability to be transferred into the marketing of the product they are endorsing and on the other side, consumers perceive the match up and congruency between the influencer and the product he or she is endorsing (Thwaites et al. 2012). For instance, while Emma Watson is a good match and fits for White Diamonds perfume, choosing Mike Tyson for the same perfume brand will not be that effectively perceived by the consumers (Raluca, 2012). Previous studies have also shown that brand endorsements having greater value and prestige attached to them are the result of great match up and fit between the endorser and endorsed product (Choi et al. 2012). The congruence matchup between the celebrity and the product's target customers, and the brand they endorse, in correlation with how this image is perceived by the consumers, plays a pivotal role in brand marketing and boosting its sales (Audi et al., 2015). According to Okorie et al (2012), the chemistry between the product influencers and consumers begins even before they start their brand endorsement campaigns, thus it is necessary that the influencers should be perceived as positive figure images, both as a person as well as a brand endorser. The study concluded that consumers have very little buying intention of endorsed items by an unfamiliar celebrity as compared to familiar ones. For instance, Instagram celebrities, bloggers, or Youtubers are more influential in terms of female consumer's behaviour assessment whereas traditional endorsers are less impactful to female consumers (Waqas et al., 2020).

## **2.2. Celebrity and influencer endorsement and its affect on customer attitude and purchase intention**

Escalas (2009) in his study suggests that a celebrity endorser is a person who is by the general public, well known for his/her accomplishments in his main line of work and other areas, other than that of the product endorsed. Compared to other endorser types, well known and successful athletes, sportsmen, musicians, and influencers always attach and add multiple levels of prestige, attention, and uniqueness to the product and brand. Kaur and Sharma (2012) employed regression analyses in their studies to evaluate the influence of source info, whether positive or negative, on the endorsed product's credibility and on consumer perceptions of the brand and its item. The outcome of their analysis suggests that the cognitive and affective product's prestige and value are impacted and perceived differently by negative information. Similarly, Gan (2006) also examined the buying intention and behaviours of consumers toward celebrity and non-celebrity TV commercials. His analysis indicates that consumers generally prefer celebrity commercials and collectively respond well to celebrities who possess more

professional career skills, even though other reasons can also be critical in influencing them such as handsome appearance, the quality frame of mind, and zealous spirit which drives their career forward. Research studies suggest that negative information influence celebrity reputation. Their outcomes in the study imply that bad influence and recognition about a celebrity may lead to bad persona and attitude regarding the new brand and its venture, thus, new brands and businesses can surely avoid this damaged reputation by keeping a distance far from that celebrity endorser, but such a step might not be as helpful when that venture is owned and run by another entrepreneur who is also a celebrity (Hunter et al., 2008). Apart from this, the study of Schlecht (2003) produced a correlation which exists between celebrity and influencer endorsements and brand, by examining and applying a set of known rules of how customers' behaviour and perception of a brand can be positively impacted. Thus, the concept of celebrity's expertise as well as his credibility with the congruency of match up theory, and the widely accepted rules of multiple products and celebrity brand endorsement were utilised. On the other hand, a thorough examination of the current perfume houses and their situation in markets implies that influencer endorsement branding methods and strategies under appropriate situations can surely justify the huge budgets that are involved with this form of marketing and brand endorsing. Thus, the brand advertisers must be fully prepared and alert about the complex mechanisms and processes that underlie influencer and celebrity brand endorsement (Koththagoda and Weerasiri, 2015). Escalas and Bettman (2010) analysed consumer's suitable analogy of the brand that comes from celebrity endorsement to develop and communicate their self-concepts. According to one finding, celebrity endorsement strengthens self-brand connections when customers seek to be like the celebrity but weakens them when they do not; this impact is more noticeable when the brand image is consistent with the celebrity's image. The degree to which a brand expresses something about the customer further moderates this impact, with more significant brands having greater effects than less significant brands. The second finding of this study is that when consumers' self-esteem is challenged, the impact of celebrity endorsement on self-brand connections is amplified. Buyers improve their self-image by connecting with positive celebrity images and trying to distance themselves from negative celebrity images. (Jha et al., 2020). Within the context of TV commercials, research suggests that how some factors and characteristics make these endorsements effective and so prestigious. The current methodologies play a foundation role in examining the success factors and work strategies by which endorsement in TV commercials are so effective, the basis of which is bounded within a circle of social psychology (Mahdavi et al., 2019). From these experiments, it can be deduced that the effectiveness of a celebrity brand endorsement is strongly influenced according to the consumers' perceptions regarding if the celebrity who is endorsing well and truly likes the endorsed product (Silvera and Austad, 2004). The research analysis of Bergkvist et al (2009), suggests that advertisers and brand owners must expend further effort not just in choosing the appropriate endorsers that are well matched with brands, but also in creating clear arguments and compelling reasons for why endorsers genuinely like the items they endorse. Mukherjee (2009) examined the impactful influence a celebrity exerts on a branded product. His research paper proposes a model comprising of 20 effective arguments which can be utilised as a trademark criterion, which can also be employed by business owners and executives for choosing celebrity endorsers and then utilising the resources and benefits a celebrity brings with his/her name through effective 360-degree brand communication and strong influence on the consumers, which conforming to this study, is the central point of the influence of celebrity endorsement. According to Mukherjee (2009), celebrity brand endorsement is like holding a sharp-edged sword, and if properly matched, it carries with itself many privileges and positive outcomes, as it can do awe for the brand; and if not properly aligned, it may also exert a bad image of the company and its brand. Thus, the brand's image dwells on the mind of their customers, based on what they have learned, felt, seen, and heard about that brand for the course

of certain time. Moreover, various research work also investigates the relationship between a brand image and brand quality with a strong emphasis on brands plagued with negatively induced impressions, which includes circumstances where a consumer's perception of qualities of products conflict with the products' perceived brand image (Mukherjee, 2009; Opris et al., 2020). According to Saleem (2007), brand managers use celebrities in commercials where there is no or little product differentiation. When a marketing team must target a more diverse market with multiple celebrities' endorsement, that is, more than one celebrity in a single advertisement), this can potentially be an answer. His studies explored the difference between young adults toward single celebrity TV commercial endorsements with multiple celebrities' advertisements. The result of his statistical data research concluded the fact that the response towards ads and buying intention of consumers are rather positive for multiple celebrities' advertisements as compared to single celebrity advertisements. In fact, there actually exists no significant perceptual discrepancy in the response towards the brands for multiple celebrities' advertisements and single celebrity advertisements.

### **3. SOCIAL PSYCHOLOGICAL PERSPECTIVE OF THE IMPACT OF CELEBRITY AND INFLUENCER ENDORSEMENT ON CUSTOMER BUYING INTENTION AND EFFECT OF SOCIAL MEDIA**

Antonio Damasio, professor of neuroscience at the University of Southern California, concludes that emotion is a key requirement in almost any decision. When faced with a decision, feelings from past, linked experiences bind values to the choices that we are considering. These emotions build preferences that contribute to our decision (Damasio, 1994). From customer behaviour perspective, after we make a purchase decision based on our emotions, we use logical reasoning to justify the purchase. Human is, by default, a social animal; a person who is, naturally unsocial and not unintentionally, either under our notice or more than a human being. The society that we live in is something of a nature that precedes the individual. The more things you have in common with other person in attitudes, beliefs, and desires, the more you like that person. Opposites can attract people, but they do not stick in the long run (E. Aronson 2018). Whilst making the decision more often than not there is quite a fair bit of effect of our social environment on it. In his book J. Bargh (2017) distinguishes between behaviours that are the consequences of our own deeds and the ones that are automatically triggered by the stimuli that comes from outside. Endorsement from celebrity and influencer can be categorized as an external stimulus. People are often unaware of the reasons and triggers for their own actions. In reality, many experimental researches points to a profound and fundamental disconnection between conscious knowledge and the mental processes responsible for one's actions; most of those exemplars of behaviour tend to be invisible to conscious access (Hassin, Uleman & Bargh, 2005). Subsequent studies have shown that this asymmetric pattern of identity decisions has been mediated by individual human values (rather than superficial factors) and that intuitions of essence (rather than categorization or contamination) have been causally responsible for the effect. It is worth mentioning that people seem to have a more general propensity to assume that the essence of an object is good (De Freitas et al. 2016). To attract customer's attention and going even further and influencing their mind to buy the items is not an easy task. In his study Taylor (2013) mentioned that no matter what means of medium is used, be it, social media platform, conventional internet advertising, SMS or etc. it is quite cumbersome to get someone's attention to the posted advertisement. In today's reality we can see so many times the ads that are made in a way to emotionally or psychologically affect us, touch our emotional cords or any other way to play with our mind and make us or influence us to take action. One of the most powerful ways that buyers are being manipulated with, is the scarcity.

It goes without saying that the scarcity creates value. One of the ways companies intend to create value is by introducing certain product with limited edition. As if it would not be enough they also invite a celebrity who has a say related to this product, to endorse it. It could be a famous photographer to take part in latest Canon camera ad or a famous football player to be recorded in a limited edition of Nike boots. The goal is the same: getting into people's mind, leaving a mark and sit back and wait. This works even better in case of fragrance advertisements. Let's take an example of the advertisement of J'adore by Cristian Dior, that featured Carmen Kass in their ad in 1999. In 2016 they made the J'adore l'or prestige the limited edition and 5 bottles only. No need to elaborate how big was the competition to get one of those. Does an individual who makes the purchase based on the endorsements from celebrities, assume that their choice was rational? According to the bounded rationality theory by Simon Herbert (1990), buyer's rationality is limited due to the lack of full knowledge on the purchased item, mind's cognitive limitations and last but not least the finite time that the person has to make the purchase decision. As a result, instead of opting for the maximizing utility of the purchase, they will make a satisfactory decision that is a "good enough" but not necessarily the best available option. However, from the emotional perspective they will have a greater satisfaction since now they have bought the item that was recommended by someone they trust or they look up to. Social media and different digital platforms have taken over society and have influenced people, especially millennials to follow the trends or purchase a product that is used by a famous celebrity or their favourite social media influencers (Daniel et al., 2018). According to Priyankara et al. (2017), celebrity endorsers are individuals that are widely known for their achievements and hold the potential to attract the targeted population to a greater extent. This can also be supported by the research study of Malik and Guptha (2014), which suggests that to increase the customer base, companies can utilise celebrity and influencer's presence on the different social media platform. It is also revealed that the customer intention of buying a product or avail services is directly linked to the influencer and celebrity endorsement. The research also revealed that the individuals prefer the advertisement or the product in general that showcases celebrity, unlike non-celebrity commercials. Moreover, the respondents are greatly influenced by the commercial that has more professional celebrities (Rafique and Zafar, 2012). However, there can be other reasons for this customer behaviour as well and this may include good career sprint, good disposition, and good appearance as well. The customer intention to purchase the product is not only impacted by the appearance of the celebrity but the negative or positive attitude of the celebrity in the society matters a lot (Illicic and Webster, 2011). For instance, the audience is more likely to show a negative attitude towards a brand or venture in which any celebrity that does not have a positive reputation in society. This customer intention can potentially harm the venture or brand promotion financially. The research of Balakrishnan and Kumar (2011), is focused on the analysis of the characteristics that make the advertisement of the perfume effective and valuable. This is significantly linked to social psychology with regard to the customer's intention to purchase a product. The research revealed that the celebrity and influencer endorsement advertisement of the perfumes is effective only when the customer infer that the celebrity or influencer cast in the advertisement likes the product as well (Michoma, 2019). Moreover, the celebrity's positive image has a favourable impact on the customer intention to buy a product. This is because the customer trusts the celebrities and assume that that the product is recommended by the famous celebrity and it will impact their personality as well if they will start using the similar product. Celebrity endorsement in the advertisement of different products especially beauty products and perfume has gained immense popularity in the recent era. The marketers utilise the celebrity in advertisements when there is very little or no product differentiation (Belch and Belch, 2013). This is because the marketers incorporate a perspective that famous celebrities or influencer with millions of follower holds the potential to positively impact the customer intention to

purchase a product, given that the celebrity demonstrates the positive behaviour. When the marketing team of the particular brand has to target a diverse audience effectively, the celebrity or influencer endorsement is considered as the best option (Waqas et al., 2020).

#### **4. CONCLUSION**

The paper noted that celebrity and influencer endorsement greatly influence perfume buyers' perceptions and purchasing intentions. Even though this marketing strategy arose shortly after the advances in telecommunication technology in the form of television and newspapers. However, the dramatic impact of celebrity and influencer endorsement on buyer's attitude was observed following the explosion in digital marketing approaches in the form of social media influencer marketing, as revealed in the review, since a large proportion of the global population is on social media platforms. The study also showed that celebrities and influencers have a large fan base and that people have a strong emotional connection and affection towards them. Furthermore, people show a high degree of confidence in influencers and keep a close eye on their lifestyle and expenditures while planning to follow them in their daily lives. Perfumes are high-end products, and consumers are often curious about the perfume labels used by their celebrities. As a result, it can be argued that celebrity endorsements and influence through telecommunications and digital marketing platforms have a major impact on consumer attitudes and purchasing intentions. This paper endorses and encourages the use of social media influencer marketing techniques for perfume companies because it can result in an effective marketing strategy in a dynamic business environment where a business is strongly rotating around the buyer's attitudes and intentions. Similarly, perfume-based companies may build labels to make their goods more popular. The use of celebrities and influencers for brand promotion through brand ambassador approaches yields positive results in terms of controlling buyer intention indicators.

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## REGIONAL DEVELOPMENT THROUGH CREATIVE INDUSTRY – CREATIVE AND EDUCATIONAL CENTRE MURAI

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### ABSTRACT

*In 2020, the Čakovec Community centre Platform signed a participatory governance agreement on the Jurica Murai Cultural Center building with the Sveti Juraj na Bregu Municipality. It was the foundation for the implementation of the ESF project that will set up the building as a Creative and Educational Center Murai. This paper describes the concept of participatory management and the development of the creative industry sector through this concept. In addition, the paper presents the business results of the Murai Creative and Educational Center in the first quarter of the project implementation and explains the set Key Performance Indicators.*

**Keywords:** case study, ESF project, Murai Centre, participatory governance, public spaces

### 1. INTRODUCTION

This paper will describe the model of participatory governance of Educational Centre Murai as a model for more successful management of building owned by Sveti Juraj na Bregu Municipality and managed by Čakovec Community Centre Platform. Participatory governance contributes to the regional development of Municipality based on multiple sectors of the Creative Industry. The concept of participatory governance can be defined as sharing governance responsibilities among different stakeholders who have a stake in what happens' (Wilcox, 1994:5). The stakeholders can be local administrations, public institutions, non-governmental organizations, civil initiatives, local community representatives, artists, and others. Čakovec Community center Platform ESF (The European Social Fund) project Educational Centre Murai aims to establish such a model for building Murai.

### 2. CREATIVE INDUSTRY IN CROATIA

This paper deals with one of the factors of regional development of northern Croatia in the context of the readiness of local self-government to implement EU projects based on the development of the creative industry sectors. In the early 2000s, creative potential possessed by each and every individual started to be seen as a separate area of research (Florida, 2004), whereas the creative industry is the engine of national economies in developed countries. The creative industry implies copyrighted production covered by the projects generating non-material products and services intended for market exchange. (Horvat, 2018). Next Table (Table 1) describes Creative industry sectors in Republic of Croatia as proposed by Ars Andizetum<sup>1</sup>.

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<sup>1</sup> The Ars Andizetum publication resulted from a four-year activity of Andizet – the Institute for Science and Art Research in the Creative Industry founded with the intention of joining science and art. Research endeavours undertaken in the field of (creative) industry are still under going a process of formalisation. (<https://www.andizet.hr/ars-andizetum-english/>)

*Table 1: Creative industry sectors in the Republic of Croatia*

Architecture	Film	Museums, libraries and heritage
Design (fashion, graphics, interior design and product)	Music and performing arts	Art (writing, visual and performing arts)
Publishing	Electronic media	Advertising and marketing communications
Crafts (traditional arts and crafts)	Computer games and new media	Photography

*Source: Ante Vekić, according to the proposed mapping of the creative and cultural industries in the Republic of Croatia*

For this paper Art (as sector of CI) is chosen as major factor for regional development. The creative industry (CI) contributes to economic development in general, has an export potential and is based on knowledge, science, technological and art innovation, development of talents and preservation of national cultural heritage through its implementation into contemporary products and services. The authenticity of creative products and services is based on the use of cultural and historical contents, whereby artistic and productive innovation ensures diversification and market recognition. (Bakarić, Bačić, Božić, 2015) The results of the study - Mapping of the creative and cultural industries in the Republic of Croatia indicate a significant economic potential of cultural and creative industries in the Republic of Croatia: the gross value added of these industries in 2012 amounted to HRK 6.3 billion or 2.3 percent of the gross domestic product (GDP) of the Republic of Croatia. The importance of the contribution of creative and cultural industries to the Croatian economy is also confirmed by employment data. At the end of 2014, the creative and cultural industries employed 42,212 people or 3.0 percent of the total number of employees (Bakarić, Bačić, Božić, 2015, 188). The results of the study clearly indicated the specifics of cultural and creative industries in Croatia. The study shows that there is significant room for sector expansion and dynamization of activities and thus for increasing employment, as it is a sector characterized by a fragmented economic structure, dominated by micro-enterprises and an above-average number of self-employed. The study identified the needs and potentials of the sector and how the sector can be a leader in strengthening the "culture of creation" and "creative economy" in the Croatian economy; the sector can be the bearer of innovations, participate in the innovation and development processes of other sectors and participate in the modernization of the Croatian economic structure; in some sub-sectors, the potential for competition in foreign markets based on price competitiveness has been identified (Bakarić, Bačić, Božić, 2015)

### **3. ČAKOVEC COMMUNITY CENTRE PLATFORM AND THE PROJECT "CREATIVE EDUCATIONAL CENTRE MURAI"**

Čakovec Community Centre Platform (hereinafter: Platform) started as an initiative of about twenty NGOs, social and cultural activists, and citizens, which formalized the activities of the 1729/2 Initiative at the end of August 2015. The Platform encourages and advocates democratic and participatory practices in policymaking and develops the conditions for the development of participatory democracy and the participation of citizens and NGOs in decision-making processes at the local level. After two failed agreements and attempts to use public space, according to the invitation of the EU Council for participatory management of cultural heritage the building Scheier was located as a key point of cooperation of citizens with local authorities. The Scheier building is located within the protected cultural and historical ensemble of the city of Čakovec (in the very center of the city), as a former socio-cultural space. In the last ten years, since it has been owned by the County of Međimurje, it has not developed a management

strategy. There was a lack of a public model of management and proposing, selection, contracting, and transparent informing of the public about programs which results in "privatization" of space and closing towards a new, better program as well as active involvement of the local community in (co) creation, which is in line with EU guidelines for local development. Finally, the Platform with Međimurje County in 2017 initiated the participatory management model of the Scheier building by signing the Joint Management Agreement of the Scheier building for the period 2018-2020 and became a partner in the ESF project "New Practices". Over the two years of project implementation on Scheier building Platform successfully led the participatory management process and applied lessons learned to the new ESF project of the Creative Education Center Murai. Similar to Scheier building – Murai activities aim to educate the local population, members of associations, local government employees about the benefits of the participatory model. The Murai Creative Education Center for the first time will map the needs of the local community. At the end of the project, the organizational team of the Murai building will be trained in cultural management skills. Training and workshops with project partners and stakeholders (other associations and volunteers) in the field of participatory management, regional exchange of experiences, and programs with emerging socio-cultural centers and independent organizations in Varaždin and Koprivnica will be held. By connecting and involving different creative sectors, it will contribute to a better understanding of the specifics of both the civil and public sectors, which will be useful in future cooperation and policy-making, community development, and improving the quality of life. The improved Murai building management model based on civil-public partnership will contribute to the openness and transparency of the public sector towards the community improving the quality of life of the local community. By establishing a successful participatory management model, the model will also be able to be presented and implemented at the regional level, ie in other places/cities/counties in Međimurje County. Involving citizens, institutions, and organizations through open processes - open doors, public calls, surveys, focus groups, training, and workshops; will continuously increase the interest of citizens, contribute to the development of civic competencies and active citizenship. The activities of the volunteer program, workshops, and art programs of the local and wider community based on the problematization of current socio-cultural topics will contribute to the actualization of programs in the Murai building. Thus, it will provide the capacity to create a program tailored to the needs of the community which contributes to the program and financial sustainability given the potentially higher demand for space and cultural consumption (long term). By adapting and equipping the Murai building, space will be more accessible to marginalized social groups, especially people with disabilities. Adaptation will contribute to the polyvalence of the space and will increase the possibilities of renting it to a wider number of users, which will increase the number of users and contribute to the visibility of the socio-cultural center and financial sustainability. By using ecological materials in the adaptation of the building and economical energy solutions, it will contribute to ecological sustainability.

#### **4. THE RESULTS OF JOINT MANAGEMENT OVER SCHEIER BUILDING – EARLY DAYS**

Until the start of participatory governance of the Murai building, there are no official figures that can be systematically analyzed. At the beginning of the participatory governance model, through the annual reports of the manager of the Murai building, there is greater transparency of the results of the work and operations of the Murai building. According to the following table, which shows set KPI's - the number of total concluded contracts for the use of the Murai building, a positive trend in the use of the Murai building can be seen since the beginning of the participatory governance.

An analysis of the annual report on the use of the Murai building (November 2020 – March 2021) shows the use of the building premises (Table 2: Use of Murai venue).

*Table 2: Use of Murai venue*

Event duration (hours)	Amount (Croatian kuna)	Exempt (Croatian kuna)	Murai Hall	Murai Atelier
<b>57</b>	<b>2075,00</b>	<b>2075,00</b>	3	3

*Source: own production according to the report of the manager of the Murai building*

A total of 57 hours of activities were held in the Creative Education Center, which amounts to a total of HRK 2,075.00 in rent payments. All activities are exempt from rent because they were open to the public, so the total amount of rental income in the 1st quarter of the implementation is 0 kuna. According to the list of social networks used to promote activities in the Murai Creative Education Center, the largest number of followers follow the Murai Facebook page, 482 of them, while the second network with the most followers is Instagram profile @murai.kec with 297 followers. In the conversation with the manager of the Murai building about the early business results of the building, the following topics should be highlighted: - digital transformation of event organization during the covid-19 pandemic, communication with local government and joint decision-making on the Murai building, regional development based on cultural and artistic activities. as a generator of tourist offer.

- 1) Digital transformation of event organization during the COVID-19 pandemic  
One of the biggest challenges in the implementation of the EU project of specially contracted activities related to physical interaction with users are the measures introduced due to the COVID-19 pandemic. The team in the Murai building made a great effort to have Plan A (physical organization of activities) and Plan B (online organization of activities) during the implementation of the project. The Murai building has a website ([www.pdcck.hr/murai](http://www.pdcck.hr/murai)) where users can follow online events. In addition, the audiovisual equipment procured by the project provides the possibility of producing content for online channels.
- 2) Communication with local government and joint decision-making on the Murai building  
The key activity of the Murai building manager besides communication with the users is communication with the local self-government. The Coordination Board of the Murai building, formed by two representatives of the Platform and two representatives of the Municipality of Sveti Juraj na Bregu, makes quarterly decisions related to the operation of the Murai building. So far, this has proven to be a successful model of co-management over the Murai building.
- 3) Regional development based on cultural and artistic activities of the building as a generator of tourist offer  
The project of the Creative and Educational Center Murai finances 16 cultural and artistic events with which it wants to expand the tourist offer of the Municipality of Sveti Juraj na Bregu. Additionally, on the Murai website there is a subpage Visit Sv. Juraj na Bregu where tourist attractions, local events and gastronomy are mapped. Murai has a plan to be a tourist info point by the end of the project, ie a starting point for discovering the region through the sectors of the creative industry.

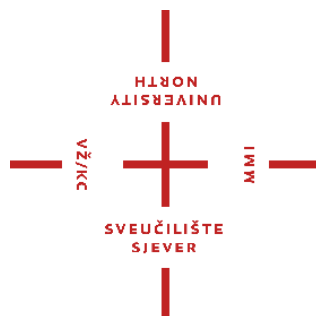
## 5. CONCLUSION

This paper describes a model of joint decision making and participatory governance over Murai - Creative Education Center. Also, the paper describes the sectors of the creative industry and the importance of the creative industry to regional development.

The creative industry and its sectors show that they can be an important factor in the economic development of smaller communities with minimal investment costs with the use of EU funds. An example of such a development is the work of the Platform, which has been working for ten years on the revitalization of unused public spaces and resources based on participatory management. In two years, until 2022, the platform will implement this model and monitor the success according to the parameters shown in the paper. The Murai Creative Education Center will develop the creative industry sector (with a focus on Art) to be a leader in the regional development of the Municipality of Sveti Juraj na Bregu. The Murai Creative Education Center is in the early days of setting up a new management model. For now, there is a framework for monitoring work based on KPIs which will show progress in the regional development of the municipality in two years.

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