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entrepreneurship and economic issues



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IMPORTANCE OF PROMOTING QUALITY OF LIFE OF ELDERLY PEOPLE UNDER THE INFLUENCE OF GLOBALIZATION

ABSTRACT

Today, globalization is perceived as a world without borders. Everything that is being created has started to reflect globally. Precisely because of this, globalization has multiple effects on the aging processes, increasing the age of the population, and this paper discusses the quality of life, including the predictors that become indispensable segments of dignified aging. The application and theoretical contribution of the paper is manifested in providing constructive guidance that is driven by the social dimension of all the stakeholders involved in the process of creating better conditions in decentralized homes for elderly and infirm persons.

Keywords: Globalization, aging, quality of life of elderly people, decentralized homes

1. Introduction

Globalization is changing everyday life, especially in more developed countries, and at the same time it is creating new supranational systems and strengths. Thus, globalization is altering institutions of the societies in which we live and is directly relevant to the rise of a new individualism.

The influence of globalization processes on aging, both on the perception of aging and on the reality of the older population, today has a more pronounced reception on the individual and the community. Considered from the point of view of the main globalization aspects, we need to analyse the

relationship towards the quality of life and health, through which one can observe age and aging as an important sociological and political concept. This paper will focus only on the underlying concepts of globalization needed to observe and isolate the notion of aging, not forgetting that, when it comes to globalization, it is an inexhaustible and extremely complex subject with enormous influence on the direction of the movement of human civilization as a whole. There is a range of consequences of modern life, such as cardiovascular diseases, cancer, anxiety, birth-rate reduction – these are just some of the indicators in a developed society that encourage the need to control everything and not to miss any-

thing, while at the same time wanting to be more effective in all areas of life and activity by ensuring a more dignified life for the elderly. Following all this, this scientific research points out that quality of life is becoming one of the initial indicators for dignity and successful aging. Following the purpose and subject matter of the paper, the following hypotheses are set:

Hypothesis 1: Growth of elderly population has an increasing intensity caused by the globalization process.

Hypothesis 2: Quality of life contributes to the more dignified aging of people in decentralized institutions.

The goal should be derived from the answer to the problem question: How much influence on emotional and social discourse of users in decentralized homes does quality of life have without neglecting progressive aging? Furthermore, emphasis is placed on providing social services and health preservation by taking into account the demographic component, i.e. users of decentralized homes for the elderly. Recognizing the factors involved in and investing in the quality of life of the elderly is becoming a key indicator of modern society, which is heavily under the influence of globalization.

2. Globalization and aging

At the heart of the problem, as a result of globalization, is certainly a crisis of the welfare state and the retirement system. Due to aging population in developed countries, there is a gap between generations, i.e. a significant increase in the number of retirees compared to the number of employed persons. This leads to a re-examination of the basic assumptions of the retirement system.

The retirement system is a key element of the welfare state and social security system. Many interests are confronted around the retirement system and its reforms, which lead to a lively debate in many countries. The retirement system has been in existence for 120 years, and the first retirement law was adopted in Germany in 1889 at the time of Bismarck. The importance of the retirement system is reflected in the fact that it directly concerns a large number of people (in developed countries around one fifth of the population), that virtually all citizens will sooner or later live in retirement, that today in developed countries retirement benefits account

for approximately 10% of the overall GDP (in some countries up to 15%) and that retirees make up a significant part of the electorate and can thus influence heavily the outcome of the elections in many countries (Puljiz, 1998: 125). Therefore, retirement reforms are approached with great care and are being discussed extensively.

It is also important to look at the crisis of the retirement system, as it is implicitly linked to the topic of this research. When explaining the crisis of the retirement system, most authors put demographic causes at the forefront, i.e. aging population. Aging of the population is the result of two factors. On the one hand, the average life is prolonged, and on the other hand, fewer children are born. The fertility rate has halved. In Western European countries in the 1950s, women gave birth to three children on average, and today that average is only 1.5. A particularly critical situation with regard to the size of the working and retired population will occur when the baby-boom generation, born in the first ten years after the war, starts to reach retirement age, which started in 2005. Then the generational scale, and especially the dependency index that comes from the ratio of working and retirement population, will significantly worsen. For example, today, for 100 people in working age (20-60 years) in Western Europe, there are 40 people over the age of 60, while this ratio is estimated to be 70 per 100 people in 2030 (Puljiz, 1998: 125).

Globalization brings global demographic changes, aging populations and prolonged life span, along with depopulation trends in Western cultures and the EU. On a global scale, there is a trend of increasing the world population to 9.4 billion people by 2050, of which 7.8 billion will belong to underdeveloped countries. The demographic dimension of globalization shows its two faces: the first is a feature of rich countries with a depopulation trend (West), and the other belongs to poor countries with hyperpopulation (Milardović, 2008: 61-63).

The already mentioned individualization creates changes at the value levels, which is reflected in the turning of the system to the individual and his/her egoistic interest and career, the weakening of social and family ties, the breakdown of the traditional family, the affirmation of different sexual orientations and the intensification of virtual "chat" relationships, which leads to alienation, as well as the deeper consumer orientation of society. It is also considered that by 2050 the population of

Europe will be reduced by 10% compared to 2007, which means that by 2050 there will be 67 million less inhabitants (Milardović, 2008: 61-63). By the middle of the 21st century, demographers predict a dramatic increase in the cultural diversity of the world's population, which will also reflect the growing population age. Today's share of older people is usually the largest in developed countries, but the largest growth of the older population actually occurs in less developed countries. Between 2006 and 2030, an increase in the number of older people in less developed countries is expected to escalate to 140% compared to 51% in developed countries (UN, World Population Prospects: The 2010 Revision)¹. A key feature of aging population is the progressive aging of the elderly population. Following all this, the influence of globalization on aging is confirmed, i.e. implicit-explicit link between aging and the quality of life associated with globalization. Globalization has prompted faster development in the international expansion and implementation of public health knowledge as well as social services. That is why it can be said that aging and quality of life are in direct synergy.

2.1 *Quality of life in the aging process*

The aging of the population is one of the greatest challenges facing the world, and the position of the elderly in society and the quality of their lives is an ever greater concern of professional and scientific research circles (Žganec et al., 2007). Age could be explained as the last development period in the life span that can be defined by chronological age, social roles or functional status (Galić et al., 2013). The very beginning of aging cannot be precisely determined, but usually it means the period from 65 years on (Nejašmić, Toskić, 2013). Aging is an extremely individual process of decreasing the structure and organ functions that occurs in each person differently, whereas age represents a life period associated with chronological age (Centre for Gerontology, 2003)². According to analytical indicators, Croatia's population is characterized by a very deep age, the most unfavourable type of age group, and Croatia is in the group of ten European countries with the largest share of the elderly (65 and more) in the overall population (Nejašmić, Toskić, 2013). According to the latest census of 2011, the total number of Croatian residents was 4,284,889. The share of the elderly was 758,633. Out of this number a total of 414,403 are 65-74, 283,630 are 75-84

and 60,600 residents are aged 85 or more (Croatian Bureau of Statistics, 2011)³. Defining senility is not, however, solely a question of someone's chronological age and functional abilities, but also the relationship of quality of one's life, the value system and the characteristics of the environment in which a person lives (Žganec et al., 2007). Countries around the world are developing different solutions, plans and activities for providing care for the growing elderly population (Jacob, Pearson, 2013), and a number of studies have been carried out to see what contributes to the quality of life of elderly people. The concept of quality of life in the scientific literature has many explanations and is often equated with the concepts of subjective well-being, life satisfaction and subjective quality of life (Schilling, 2003, according to Lovreković and Leutar, 2010). The World Health Organization defines the quality of life as an individual perception of the position in a specific cultural, social and environmental context (World Health Organization, 1996)⁴, while the authors Felce and Perry (1993) provide a more comprehensive definition and define the quality of life in a general as an overall well-being including objective factors and subjective evaluation of physical, material, social and emotional well-being, including personal development and purposeful activity through the personal system of individual values (Felce, Perry, 1993). Furthermore, in order to measure the quality of life of an elderly person, there must be clearly defined limits what quality of life of the elderly includes, i.e. what it does not include (Martinis, 2005), which depends on the researcher who, based on the available knowledge of the area, determines his/her interpretation of the quality of life of elderly people (Galloway et al., 2005). The quality of life in elderly age can be defined as the ratio of subjective characteristics of each individual complemented by previous life experiences and objective socio-economic factors which form the desired framework of life for people over 65, and is reflected in the joy and peace of life (Beauvoir, 1970; according to Lovreković, Leutar, 2010). Since this paper will examine the relationship between quality of life and satisfaction with the services of long-term users, it is important to note that in the institutional care the quality of life is interwoven with the quality of social care and the quality of health care (Raynes et al., 2000). Wiener et al. (2007) state that quality of institutional care can be assessed on the basis of indicators evaluating overall health status, functional status, mental health, accommodation comfort,

emotional status, privacy and autonomy (Wiener et al., 2007). Consequently, authors Mittermayer et al. (2010) examined the quality of long-term care of the elderly and highlighted the following indicators of the quality of life of the elderly living in a care institution: physical and psychological health, quality of pharmacotherapy, risk prevention, social and emotional status, services and respect for privacy and personality (Mittermayer et al., 2010), while according to Šučur (2008), indicators of quality of life are the economic position, housing conditions, health status and subjective satisfaction with life. The World Health Organization also emphasizes important areas of quality of life of users living in homes for the elderly, which include: physical health, psychological status, level of independence, proper diet, social contact, environmental factors, positive/negative health behaviour and spiritual needs (Mittermayer et al., 2010). Homes for the elderly are irreplaceable institutions for the care of elderly people who are no longer able to take care of the most basic needs of life and do not have the help of their relatives. These are the places that ensure a decent human life to people with a considerably reduced physical and other abilities (Smolić-Krković, 1974). Therefore, research results presented below will confirm the quality of life as one of the initial indicators for dignity and successful aging in decentralized homes for the elderly and infirm persons in Slavonia and Baranya in the Republic of Croatia.

3. Research Methodology

The data collection process was conducted via an anonymous questionnaire constructed by the authors for the purpose of measuring the importance of quality of life of users of homes for the elderly and infirm. All collected data were processed using the SPSS statistical program. In addition to socio-demographic characteristics, the questionnaire also contained closed-type items according to Likert's scale, which represented dependent variables. The research was conducted by personally interviewing the users. For the purpose of this research, the analytic method was used to analyse the results, the synthesis method allowed us to make new conclusions, whereas proofing methods were used to prove the truth of the set hypothesis. The survey methodology was based on the written data collection of attitudes with the help of a questionnaire survey conducted on a suitable sample of 150 respondents and the statistical method was used to

compile the data collected through the questionnaire statistically and graphically, thus confirming the hypotheses.

4. Research Results and Discussion

With the aim of a more comprehensive approach, this research sought to integrate existing theoretical and empirical findings of the importance of quality of life for the elderly. Consequently, this research suggests that quality of life is becoming one of the initial indicators for dignified and successful aging. Following the purpose and the subject of this research, two hypotheses were introduced: H1: Growth of the elderly population has an increasing intensity caused by the globalization process, and H2: Quality of life contributes to the more destabilized aging of people in decentralized institutions.

The study involved 150 users of decentralised homes for elderly and infirm persons in Osijek-Baranya County. The analysis of socio-demographic data showed that out of the total number of respondents (N = 150) there were 98 (65.3%) women and 52 (34.7%) men. Regarding the age, 4 were younger than 65 years (2.7%), 14 respondents (14%) ranged from 65 to 75 years, 93 were between 76 and 85 years (62%), 3 participants were between 86 and 95 (20%), while only two respondents were older than 95 (1.3%). The educational status of respondents shows that out of the total number of respondents (N = 150) 34 (22.7%) did not complete primary education, 68 (45.3%) had completed elementary school, 37 (24.7%) respondents had secondary education, while 9 (6%) had obtained higher professional qualifications, and only 2 (1.3%) respondents had university education. None of the respondents had completed doctoral studies. Furthermore, regarding the time period spent at the home for the elderly and infirm, the results showed that out of the total number of respondents, 24 (16%) respondents lived in the home for up to one year, 101 (67.3%) lived in the home for 1-5 years, 18 (12%) respondents lived in the home for 6-10 years, and 7 (4.7%) respondents lived in the home for the elderly and infirm for over ten years.

Considering the hypothesis set, and judging by the analytical indicators, we can see that the population of Croatia is characterized by an extremely deep old age. If the current demographic trends continue, the number of young people (0-14 years) will be reduced in all counties and at the state level, whereas

the number of the old population will increase by 40.8%. Consequently, young people will account for only 12% of the total population, employed people for 57%, and 31% of the total population will be elderly people (Ombudsman, 2018)⁵. A large number of elderly people also leads to a deficit in the capacity of accommodation in homes for the elderly and infirm. Namely, in 2016, decentralized and state homes had accommodation capacities amounting to 10,900. Given that there were 758,633 people aged 65 and over in Croatia according to the 2011 census, it is obvious that these capacities are very modest, especially since decentralized and state-run homes generally offer affordable prices and high quality. This is why the interest exceeds the capacities (Ombudsman, 2018). Furthermore, in previous surveys on the quality of life of the elderly, the emphasis was placed on the health of respondents and the availability of social services in long-term accommodation. Authors Mittermayer et al. (2010) examined the quality of long-term care of the elderly and highlighted the following indicators of the quality of life of long-term third-age persons: physical and psychological health, quality of pharmacotherapy, risk prevention, social and emotional status, services and respect for privacy and personality (Mittermayer et al., 2010), which led us to construct a survey questionnaire for this research. The quality of life of an elderly person is closely related to the quality of institutional care, according to authors Ilić and Zupanić (2014), which includes accessibil-

ity of health care, satisfaction with forms of help, hygiene, mobility, nutrition, performing physiological needs, performing daily activities, social contacts and loneliness. Furthermore, authors Despot - Lučanin, Lučanin and Petrak (2005) outline social support, self - assessment of health, functional ability, need for care services and availability of care services, while author Šučur (2008) considers that economic status, housing conditions, subjective life satisfaction are very important indicators of quality of life.

This research confirms that quality of life is becoming one of the initial indicators for dignified and successful aging. The research results confirm the hypothesis that quality of life, indeed, contributes to the more dignified aging of people in decentralized institutions, and has a significant impact on the emotional and social discourse of users in decentralized homes. Specifically, the quality of life factors that affect the emotional and social discourse of the user, contributing to more sensible aging are: *Information on health status by medical staff*, where, according to Table 1, of the total number of respondents (N = 150) 92 (61.3%) stated that they completely agree with this statement, 48 (32%) mostly agree, 7 respondents somewhat disagree (4.7%), while 3 (2%) completely disagree with the statement (M = 3.53, SD = 0.682 shown in Table 13).

Table 1 Information on medical condition by medical staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	3	2.0	2.0	2.0
	I somewhat disagree	7	4.7	4.7	6.7
	I mostly agree	48	32.0	32.0	38.7
	I completely agree	92	61.3	61.3	100.0
	Total	150	100.0	100.0	

Source: Authors

Furthermore, *coexistence with people of the same or similar age* is a very important aspect of the quality of life of the elderly, which is evidenced by the fact that out of the total number of respondents (N = 150), 73 (48.7%) completely agree and 59 (39.3%)

mostly agree with this claim, whereas only 11 respondents (7.3%) state that they do not agree with the above, and 7 (4.7%) completely disagree with this statement (M = 3.32, SD = 0.805 shown in Table 13).

Table 2 Coexistence with people of the same or similar age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	7	4.7	4.7	4.7
	I somewhat disagree	11	7.3	7.3	12.0
	I mostly agree	59	39.3	39.3	51.3
	I completely agree	73	48.7	48.7	100.0
	Total	150	100.0	100.0	

Source: Authors

The claim that concerns the improvement of the social network of users at a retirement home is the *engagement in the activities organized by the home* in Table 3. Out of the total number of respondents (N = 150), 66 (44%)

state that they fully agree with this statement, 41 (27.3%) mostly agree, 28 (18.7%) somewhat disagree, and 15 (10%) completely disagree with this statement (M = 3.05, SD = 1,015 shown in Table 13).

Table 3 Engagement in activities that are organized by the home

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	15	10.0	10.0	10.0
	I somewhat disagree	28	18.7	18.7	28.7
	I mostly agree	41	27.3	27.3	56.0
	I completely agree	66	44.0	44.0	100.0
	Total	150	100.0	100.0	

Source: Authors

The statement relating to importance of *adequate care in the home for the elderly and infirm persons* is shown in Table 4. Of the total number of respondents (N=150), 100 (66.7%) completely agree with the statement, 43 (28.7%) respondents mostly

agree, while only 3 (2%) somewhat disagree and 4 (2.7%) think that adequate care in the home for the elderly and infirm does not contribute to their more dignified aging (M = 3.59, SD = 0.667 shown in Table 13).

Table 4 Adequate care in the home for the elderly and infirm

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	4	2.7	2.7	2.7
	I somewhat disagree	3	2.0	2.0	4.7
	I mostly agree	43	28.7	28.7	33.3
	I completely agree	100	66.7	66.7	100.0
	Total	150	100.0	100.0	

Source: Authors

Preservation of privacy, as one of the frequently mentioned quality indicators of institutional care in the literature, has proved to be significant in this research. Namely, as shown in Table 5, of the total number of respondents (N = 150), 98 (65.3%) state that they completely agree with the state-

ment on the importance of preserving their privacy, 42 (28%) mostly agree with this statement, 7 respondents (4.7%) somewhat disagree, while only 3 respondents (2%) consider that their privacy does not contribute to the quality of life at home for the elderly (M = 3.57, SD = 0.680 shown in Table 13).

Table 5 Preservation of privacy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	3	2.0	2.0	2.0
	I somewhat disagree	7	4.7	4.7	6.7
	I mostly agree	42	28.0	28.0	34.7
	I completely agree	98	65.3	65.3	100.0
	Total	150	100.0	100.0	

Source: Authors

The *comfort of accommodation in the home* is the following indicator of the quality of life which proved to be very important to survey participants, as can be seen from Table 6. Namely, of the total number of respondents (N = 150), 110 (73.3%) completely agree that comfort of accommodation is

one of the most significant indicators contributing to the quality of their life in long-term accommodation, 33 (22%) mostly agree, 1 respondent (0.7%) somehow disagrees, while only 6 (4%) respondents completely disagree with the statement (M = 3.65, SD = 0.696 shown in Table 13).

Table 6 Accommodation comfort in the home

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	6	4.0	4.0	4.0
	I somewhat disagree	1	0.7	0.7	4.7
	I mostly agree	33	22.0	22.0	26.7
	I completely agree	110	73.3	73.3	100.0
	Total	150	100.0	100.0	

Source: Authors

Furthermore, authors Ilić and Županić (2014) reported nutrition and beverages as one of the indicators of the quality of life of the elderly, and this was confirmed by this research. This is shown in Table 7 from which it is evident that of the total number of respondents (N = 150), 86

(57.3%) consider that *appropriate and varied diet* is crucial for the quality of their life, 44 (29.3%) of respondents mostly agree with this statement, 13 (8.7%) somehow disagree, and 7 (4.7%) completely disagree (M = 3.39, SD = 0.835 shown in Table 13).

Table 7 Appropriate and varied nutrition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	7	4.7	4.7	4.7
	I somewhat disagree	13	8.7	8.7	13.3
	I mostly agree	44	29.3	29.3	42.7
	I completely agree	86	57.3	57.3	100.0
	Total	150	100.0	100.0	

Source: Authors

A review of literature has shown that the availability of health care and the quality of pharmacotherapy are very important indicators of the quality of in-

stitutional care and the quality of life of the elderly (Despot-Lučanin et al., 2005; Mittermayer et al., 2010; Ilić, Županić, 2014). Similar results were ob-

tained through this research. As for the claim that *regular medication use* is important for their quality of life, of the total number of respondents (N = 150), 106 (70.7%) completely agree, 37 (24.7%) mostly agree, only two (1.3%) respondents somewhat disagree, while five (3.3%) completely disagree, as can be seen in Table 8 (M = 3.63, SD = 0.681 shown in Table 13). With respect to the above-mentioned, *daily availability of a family medicine physician* is a statement which a total of 90 (60%) of 149 respondents completely agree with, 46 (30.7%) mostly agree, 7 respondents (4.7%) somewhat disagree, and only 6 (4%) respondents completely disagree with

the statement that the daily availability of a family medicine physician contributes to the quality of their life, as can be seen from Table 9 (M = 3.48, SD = 0.767 shown in Table 13). Finally, Table 10 shows a claim related to the importance of *regular visits to a specialized physician*, and 87 (58%) of the total number of respondents (N = 150) completely agree with this statement, 39 (26%) mostly agree with, 16 respondents (10.7%) somewhat disagree, while 8 respondents (5.3%) completely disagree (M = 3.37, SD = 0.878 shown in Table 13).

Table 8 Regular medication use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	5	3.3	3.3	3.3
	I somewhat disagree	2	1.3	1.3	4.7
	I mostly agree	37	24.7	24.7	29.3
	I completely agree	106	70.7	70.7	100.0
	Total	150	100.0	100.0	

Source: Authors

Table 9 Daily availability of a family medicine physician

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	6	4.0	4.0	4.0
	I somewhat disagree	7	4.7	4.7	8.7
	I mostly agree	46	30.7	30.9	39.6
	I completely agree	90	60.0	60.4	100.0
	Total	149	99.3	100.0	
Missing	System	1	7		
Total	150	100.0			

Source: Authors

Table 10 Regular visits to a specialist physician

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	8	5.3	5.3	5.3
	I somewhat disagree	16	10.7	10.7	16.0
	I mostly agree	39	26.0	26.0	42.0
	I completely agree	87	58.0	58.0	100.0
	Total	150	100.0	100.0	

Source: Authors

Regarding the statement that *regular physical activity* contributes to quality of life, 62 (41.3%) respondents agree with the statement, 41 (27.3%) respondents mostly agree with this, 37 (24.7%) somewhat

disagree with this statement, and 10 (6.7%) respondents completely disagree with the statement, as can be seen in Table 11 ($M = 3.03$, $SD = 0.965$ shown in Table 13).

Table 11 Regular physical activity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	10	6.7	6.7	6.7
	I somewhat disagree	37	24.7	24.7	31.3
	I mostly agree	41	27.3	27.3	58.7
	I completely agree	62	41.3	41.3	100.0
	Total	150	100.0	100.0	

Source: Authors

Finally, the *possibility of satisfying personal hygiene needs* as the last indicator of the quality of life of the elderly is a statement with which 93 (62%) of the total number of respondents ($N = 150$) agree, 44 (62%)

mostly agree, 7 (4.7%) mostly disagree, and only 6 (4%) respondents believe that personal hygiene is not an essential indicator at all, as can be seen in Table 12 ($M = 3.49$, $SD = 0.766$ shown in Table 13).

Table 12 Possibility of satisfying personal hygiene needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I completely disagree	6	4.0	4.0	4.0
	I somewhat disagree	7	4.7	4.7	8.7
	I mostly agree	44	29.3	29.3	38.0
	I completely agree	93	62.0	62.0	100.0
	Total	150	100.0	100.0	

Source: Authors

Table 13 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. deviation
Appropriate and varied nutrition	150	1	4	3.39	0.835
Regular medicine use	150	1	4	3.63	0.681
Daily availability of a family medicine physician	149	1	4	3.48	0.767
Regular visits to a specialist physician	150	1	4	3.37	0.878
Possibility to satisfy personal hygiene needs	150	1	4	3.49	0.766
Regular physical activity	150	1	4	3.03	0.965
Information on medical condition by medical staff	150	1	4	3.53	0.682
Coexistence with people of the same or similar age	150	1	4	3.32	0.805
Preservation of privacy	150	1	4	3.57	0.680
Accommodation comfort in the home for the elderly	150	1	4	3.65	0.696
Adequate care in the home for the elderly	150	1	4	3.59	0.667
Engaging in activities that are organized by the home	150	1	4	3.05	1.015

Source: Authors

According to the above results, we can see that all of these claims are indeed essential factors contributing to the quality of life of an elderly person. This can be inferred from the results that show that more than half of the respondents state that they fully or mostly agree that the stated quality of life indicators contribute to the more dignified aging in decentralized institutions. The most important indicators were shown to be comfort of accommodation ($M = 3.65$, $SD = 0.696$) and regular medicine use ($M = 3.63$, $SD = 0.681$), while the least significant were regular physical activity ($M = 3.03$, $SD = 0.965$) and

inclusion in activities organized by the home ($M = 3.05$, $SD = 1.015$), as can be seen in Table 13.

Furthermore, in order to better understand the concept of quality of life and the planning of specific strategies aimed at as many users as possible in decentralized homes, the aim was to examine whether there is a significant link between the gender of the home user and the comfort of accommodation. The Pearson correlation coefficient obtained by statistical analysis has shown that this correlation is not significant, as can be seen in Table 14.

Table 14 Correlation between gender and comfort in the home for the elderly

		Gender	Comfort of accommodation in the home
Gender	Pearson Correlation	1	-0.134
	Sig. (2-tailed)		0.103
	Sum of Squares and Cross-products	33.973	-6.627
	covariance	228	-0.044
	N	150	150
Accommodation comfort in the home	Pearson Correlation	-0.134	1
	Sig. (2-tailed)	0.103	
	Sum of Squares and Cross-products	-6.627	72.273
	covariance	-0.044	485
	N	150	150

Source: Authors

It also sought to examine the relevance of connection between gender of the user and the inclusion in activities organized by the home. The results of statistical analysis point to significant, negative and poor correlation between gender and involvement in activities organized by the

home ($r = -0.288$, $p < 0.01$), as can be seen in Table 15. The t-test results showed that there is a significant difference in the inclusion in activities organized by the home depending on the gender of the user ($t(149) = 34.54$, $p < 0.01$), as can be seen in Table 16.

Table 15 Correlation between gender and inclusion in activities organized by the home

		Gender	Inclusion in activities organized by the home
Gender	Pearson Correlation	1	-0.288 **
	Sig. (2-tailed)		0
	Sum of Squares and Cross-products	33.973	-20.773
	covariance	228	-0.139
	N	150	150
Inclusion in activities organized by the home	Pearson Correlation	-0.288 **	1
	Sig. (2-tailed)	0	
	Sum of Squares and Cross-products	-20.773	153.573
	covariance	-0.139	1.031
	N	150	150

** Correlation is significant at the 0.01 level (2-tailed).

Source: Authors

Table 16 T-test to measure the significance of the difference in involvement in activities organized by the home with regard to gender

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Gender	34.541	149	0	1.347	1.27	1.42
Inclusion in activities organized by the home	36.835	149	0	3.053	2.89	3.22

Source: Authors

5. Conclusion

We live in a society that values youth and physical attraction, a society where the elderly are marginalized. However, due to the increasing numbers of older population and the recognition of their importance in society in recent years, the views on age are changing. It is unlikely that the elderly will have the authority and reputation they used to have in traditional societies of previous eras, but since they now make up the majority of the population, they have gained more political, sociological and cultural influence than they had before. Therefore, this paper gives clear indications regarding the effect of globalization on the aging process, the impact

of quality of life on the aging process through its applicative and theoretical contribution. Empirical research confirms hypotheses that emphasize the importance of quality of life for the elderly and their identification in decentralized homes for the elderly and infirm. The results of the research have highlighted clear factors in the implementation and inclusion in activities of users of homes for the elderly and infirm with the aim of promoting quality and decent living in those institutions. This paper gives constructive guidance to stakeholders in decentralized institutions by emphasizing perceptions of respondents as the first and only degree of assessment of respondents in the Republic of Croatia.

REFERENCES

1. Despot-Lučanin, J., Lučanin, D., Petrak, O. (2005), "Kvaliteta starenja – neka obilježja starijeg stanovništva Istre i usporedba s drugim područjima Hrvatske", *Revija za socijalnu politiku*, Vol. 13, No. 1, pp. 37-51.
2. Felce, D., Perry, J. (1993). *Quality of life: A contribution to its definition and measurement*. Cardiff: Mental Handicap in Wales – Applied Research Unit.
3. Galić, S., Tomasović Mrčela, N. (2013). *Priručnik iz gerontologije, gerijatrije i psihologije starijih osoba - psihologije starenja*. Osijek: Medical School Osijek.
4. Galloway, S., Bell, D., Hamilton, C., Scullion, A. (2005). *Well-being and quality of life: measuring the benefits of culture and sport*. Edinburgh: Scottish Government.
5. Jacob, R., Pearson, M. (2013). *A Good Life in Old Age?*. Paris: OECD Publishing.
6. Leutar, Z., Lovreković, M. (2010), "Kvaliteta života osoba u domovima za starije i nemoćne u Zagrebu", *Socijalna ekologija*, Vol. 19, No. 1, pp. 55-79.
7. Lončar, J. (2005). *Globalizacija – pojam, nastanak i trendovi razvoja*. Zagreb: Faculty of Science of the University of Zagreb.
8. Martinis, T. (2005). *Percepcija kvalitete života u funkciji dobi*. Zagreb: University of Zagreb.
9. Milardović, A. (2008). *Demografske dimenzije globalizacije i vrijednosne promjene*. Zagreb: Institut za migracije i narodnosti.
10. Mittermayer, R., Mustajbegović, J., Roksandić, S., Rukavina, A. (2012). *Kvaliteta dugotrajne skrbi starijih osoba*. Karlovac: Tiskara Pečarić & Radočaj.
11. Nejašmić, I., Toskić, A. (2013), "Starenje stanovništva u Hrvatskoj - sadašnje stanje i perspektive", *Hrvatski geografski glasnik*, Vol. 1, No. 75, pp. 89-110.
12. Puljiz, V. (1998), "Križa i reforme mirovinskih sustava (Teze za raspravu)", *Revija za socijalnu politiku*, Vol. 5, No. 2, pp. 125-129.
13. Raynes, N. (2000), "Quality care: The inside story", *Elderly Care*, Vol. 11, No. 10, pp. 8-10.
14. Smolić-Krković, N. (1974). *Gerontologija*. Zagreb: Savez društava socijalnih radnika SR Hrvatske.
15. Šučur, Z. (2008), "Socijalna sigurnost i kvaliteta života starijih osoba bez mirovinskih primanja u Republici Hrvatskoj", *Revija socijalne politike*, Vol. 15, No. 3, pp. 435-454.
16. Wiener, J. M., Tilly, J., Howe, A. (2007). *Quality Assurance for Long-term Care: The Experiences of England, Australia, Germany and Japan*. Washington: AARP.
17. Žganec, N., Rusac, S., Laklija, M. (2007), "Trendovi skrbi za osobe starije životne dobi u Republici Hrvatskoj i zemljama Europske unije", *Revija za socijalnu politiku*, Vol. 15, No. 2, pp. 171-188.

ENDNOTES

- 1 United Nations (2011), "World Population Prospects: The 2011 Revision", available at: http://esa.un.org/wpp/Documentation/pdf/WPP2010_Volume-II_Demographic-Profiles.pdf (Accessed on: June 01, 2018)
- 2 Center of Gerontology (2003). Gerontološki zdravstveno-statistički ljetopis za Hrvatsku- 2001/2002. Zagreb: Zagreb Institute of Public Health.
- 3 Croatian Bureau of Statistics (2011), "2011 Population Census", available at: <http://www.dzs.hr> (Accessed on: April 11, 2018)
- 4 The World Health Organization Quality of Life Group (1996). The World Health Organization Quality of Life Assessment (WHOQOL-BREF): Introduction, administration, scoring and generic version of the assessment. Geneva: Programme on Mental Health.
- 5 Ombudswoman of the Republic of Croatia (2018), "Annual report of the Ombudswoman of Republic of Croatia for 2017", available at: <http://ombudsman.hr/hr/izvjesca-hr> (Accessed on: June 01, 2018)

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VAŽNOST PROMICANJA KVALITETE ŽIVOTA OSOBA STARIJE ŽIVOTNE DOBI POD UTJECAJEM GLOBALIZACIJE

SAŽETAK

Danas se globalizacija doživljava kao svijet bez granica. Sve što se stvara počinje se odražavati globalno. Upravo zbog toga ona svoje učinke ostavlja i na procese starenja, povećanje starosti stanovništva. Ovim se radom naglašava kvaliteta života uključujući prediktore koji postaju neizostavni segmenti dostojanstvenog starenja. Aplikativni i teorijski doprinos rada očituje se s ciljem pružanja konstruktivnih smjernica koje svoje uporište prikazuju kroz socijalnu dimenziju svih dionika uključenih u proces kvalitetnijeg starenja u decentraliziranim domovima za starije i nemoćne osobe.

Ključne riječi: globalizacija, starenje, kvaliteta života osoba starije životne dobi, decentralizirani domovi

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ENTREPRENEURIAL EDUCATION - EXPLORING TEACHERS' CREATIVITY IN 11 COUNTRIES

ABSTRACT

Creativity is considered as one of the main entrepreneurial skills next to leadership and risk taking. Teachers as role models are becoming more aware of the changes needed within themselves and their classrooms and precisely their perception of importance of creativity and innovativeness (C&I) in teaching is the focus of this research. The views of teachers (N=149) from 11 countries (Germany, UK, Croatia, Bosnia and Herzegovina, Serbia, Slovenia, Portugal, Ireland, France, Spain and Albania) are researched and compared. The theoretical background of the paper explains the connection between creativity and entrepreneurial education and provides a sound rationale for reinforcing and emphasizing creativity as a needed entrepreneurial skill in both teachers and students. The findings of this paper will hopefully encourage teachers to participate in teacher training in C&I and can help raise teachers' awareness of the obstacles to C&I in classrooms across Europe.

Keywords: Creativity, entrepreneurial skills, innovativeness, teachers

1. Introduction

The old paradigm of the twentieth century is being replaced with the new paradigm of the entrepreneurial society – a society which rewards creative adaptation, opportunity seeking and the drive to make innovative ideas happen (ILO and UNESCO, 2006). Creativity is nowadays widely recognized in the world as a skill important for all types of profes-

sions. Plenty of research regarding creativity in the classroom has been conducted, yet it seems there is limited research that focuses on teacher's opinion or self-assessment of creativity in the classroom. Therefore, this research will focus on creativity as one of the main entrepreneurial skills next to leadership and risk taking. The four primary hypotheses are:

H1: Teachers are aware of the importance of creativity in their teaching

H2: Teachers value their role in developing students' creativity and innovativeness highly

H3: Teachers are willing to participate in further training in creativity

H4: There is a difference in the perception of importance of C&I between female and male teachers.

One thing is irrefutable, changes in transferring knowledge need to happen and teachers should be the ones whose awareness thereof needs to be raised. Raising teachers' awareness is the aim of our research. The paper consists of an introduction with four research hypotheses. The theoretical background emphasizes the importance of entrepreneurial education and acquired entrepreneurial skills. It encourages creativity as a key entrepreneurial skill in individuals and supports the idea of the need for creativity and innovativeness in teaching. After that, methodology used for the research is described, followed by the results. Discussion, as well as suggestions for further study are mentioned in the conclusion.

2. Theoretical Background

2.1 Entrepreneurial Education

Entrepreneurship in the 21st century has emerged into an influential economic force. Entrepreneurial education, from now on referred to as EE, is gaining interest both in the field of research and among policy makers. This interest can be ascribed to the perceived importance EE plays in the equipping of potential entrepreneurs and as a 21st century strategy to foster economic growth and development (Kurotimi et al., 2017). Higher education should be employing entrepreneurial teachers who can and will provide their students with necessary efficacy beliefs, intellectual tools and intrinsic values. Approaches such as action-learning and experiential learning should be emphasized with the aim of increasing the probability of successful entrepreneurial outcomes. An entrepreneurial teacher is the gatekeeper to improving the quality of the learning experience. Therefore, priority is placed on training and supporting new and established teachers to introduce EE (David et al., 2018). It provides future entrepreneurs with the prerequisite skills for today and a broad set of competencies, which can bring greater individual, social and economic benefits.

These competences lend themselves to application in every aspect of people's lives (European Commission, 2011; Kurotimi et al., 2017). According to Gibb (2002), EE aims to amplify individual characteristics and to promote a more entrepreneurial culture. Additionally, it prepares entrepreneurs who are able to chase entrepreneurship and innovation as employees and who become individuals who display enterprising behaviour (Gibb, 2002). Since sense of initiative and entrepreneurship are one of the eight key competences for lifelong learning, EE includes not only life-wide, but lifelong competence development (European Commission, 2011, European Commission, 2006¹). Furthermore, entrepreneurship and innovation are nowadays crucial for dealing with current consumer, technological and environmental trends (Daniel et al., 2017).

For the last decade, EE has been the focus of research (O'Connor, 2012; European Commission, 2011; Bikse et al., 2014) and a need for policy makers to promote EE is apparent due to all skills acquired from which individuals later benefit in both their personal and private life. History suggests that various economic and social innovations were led by entrepreneurs who played a crucial role in communities due to their willingness to take the lead, problem-solving skills and diligence. Thus, entrepreneurship refers to an individual's ability to put theory and ideas into practice. It comprises the ability to recognize commercial opportunities, to plan and manage projects, as well as creativity, innovation, showing initiative, risk-taking and communication skills (Kurotimi et al., 2017; European Commission, 2011). The mentioned characteristics are ones of entrepreneurial spirit (ILO and UNESCO, 2006). Moreover, soft competences such as professionalism, reliability, coping with uncertainty and ability to work under pressure, good verbal and written communication skills, IT skills and creativity are more required by companies than hard competences (Sisson, Adams, 2013; Andrews, Higson, 2008). Nevertheless, entrepreneurship skills are not fixed personal characteristics and should therefore be taught and acquired (Oosterbeek et al., 2010). The importance and outcomes of the acquisition of entrepreneurial skills are evident from the impact logic model for education policy (David et al., 2018). Authors explain the intertwining and influencing relationship between individuals, institutions, teachers, and economy. In addition to reducing social exclusion and having more active

citizens in terms of volunteering and social returns on investment, it results in improving the society as a whole.

2.2 Creativity

Creativity is an elusive concept, but a fundamental human quality (Hondzel, Hanses, 2015). It is the process of reorganizing knowledge (general or specific) and of articulating that synthesis so that other people can understand the meaning (Rhodes, 1961). Dayan et al. (2013) mention that there is a conceptual gap between a need to better understand mediating factors influencing entrepreneurial creativity and how they are integrated and linked with individual personality traits and other factors such as resources. According to Rhodes (1961), creativity is synthesizing knowledge and therefore has interdisciplinary appeal. He has provided the intertwining structure of components influencing creativity and named them the 4 P's: person, process, press and products. Person refers to personality, intellect and temperament, while process involves motivation, perception and learning. Press deals with the relationship between people and environment, and the product is an idea that has become embodied into tangible form. In order to successfully execute ideas that will become profit-oriented, individuals need to have the entrepreneur's skill set. Having the ability to produce multiple ideas is the skill of being creative and as such the most valuable skill an individual can possess. Business durability and longevity are also dependent upon creativity. Business longevity is a critical element due to the challenges generated by globalization, increasing competition, and rapid pace of change (Alencar et al., 2017). Creativity pressures companies into quicker innovations by requiring both originality and effectiveness (Runco, Jaeger, 2012). Companies (such as Google, SAS, Lego) that manage creativity will have a crucial advantage in the ever-increasing competition for global talent (Ulrich, Mengiste, 2014).

When looking at the subjective nature of creativity, research dates back to Katz and Giacomelli (1982). They stated that the subjective consensual definition of creativity does not solely involve openness of mind. Gardner (1994) shared his definition of creativeness as an individual who solves problems, fashions products, or poses new questions within a domain in a way that is initially considered to be unusual but is eventually accepted within at least one cultural group. He mentioned that "no

person, act or product is creative or uncreative in itself. Judgments of creativity are inherently communal, relying heavily on individual experts within a domain."

Creativity is essential at all stages of development, from concept to execution. Thus, a pattern of the competencies emerges, which teachers across the disciplines should enhance in their learners (David et al., 2018). Our first and second hypothesis will test whether teachers are aware of the importance of creativity in their teaching and whether they value their role in developing students' creativity and innovativeness. Possession of creative skills differentiates teachers from the future from the teachers of the past and it sets a new path for modelling future generation's knowledge. Moreover, it modifies the dynamic of teaching. In this 21st century, teachers are not expected simply to be sources of knowledge, but rather to develop entrepreneurial actions towards building a better educational system, thereby influencing their roles and general conduct (Neto et al., 2017). Entrepreneurship scholars agree that creativity is linked to entrepreneurship because creativity should promote identifying new opportunities (Murphy, Wright, 2017, as in Shane, 2003).

Creativity is not solely a mind-set for artists; rather, all professions under different circumstances benefit from being creative. Runco (2007) argues that even though creativity is associated with intelligence, innovation, imagination, insights and health, a distinction between these terms should be made. Creativity is positively related to organizational innovation since it is the first stage of innovation and provides the foundation for innovation (Muceldili, 2013, as in Baer, 2012). Furthermore, creativity is not an innate ability; it can be taught and learned.

2.2.1 Challenges in Stimulating Creativity

Since EE was, for the last twenty years, undermined by scholars for promoting learner's analytical skills rather than their capacity for innovative thinking (Gibb, 2002), in this day and age scholars are the ones who should put the emphasis back on acquiring soft entrepreneurial skills. For Claxton (2008)² creativity, as an entrepreneurial skill, is the ability to move fluently between focused, purposeful perception and relaxed, receptive knowledge acquisition. It proves that an example of experiential education instead of frontal teacher-focused teaching is a step forward towards a more creative classroom. Yet, theory differs from practice and continuous

challenges in stimulating creativity prevail. Higher education institutions put the emphasis on students' creativity, and teachers have a crucial role in developing it. Nevertheless, college faculty are generally not familiar with learning and teaching environments that promote creativity (Alencar et al., 2017). Thus, researchers emphasize the need for additional professional development regarding creativity as an integral part of teacher training (Maloney, 1992; Esquivel, 1995; Blumen-Pardo, 2002; Cimermanová, 2014³; Maley, Kiss, 2018), which is in line with our third hypothesis since we want to comprehend whether teachers are willing to participate in further training in creativity. Alencar et al. (2017) mentioned factors such as excessive work load, insufficient time for preparing lessons and for contact with students, large class sizes and inadequate resources as factors that inhibit creativity and prevent its stimulation. Finally, even though plenty of teachers understand and value the importance of incorporating creativity into their teaching, much work needs to be done to ensure higher education culture that supports and encourages creativity (Alencar et al., 2017).

2.2.2 Gender and Subject Differences Influencing Creativity and Innovation

The regime of traditional professional teacher education is nowadays seen as somewhat inflexible and as one that does not allow room for creative processes. Therefore, differences between teachers (experience-wise, gender-wise, or subject-wise) regarding creativity and innovation are apparent. In our research we wanted to explore the teachers' differences in gender as well as the differences between teachers' main subject of teaching.

Gender differences in creativity are an omnipresent and favoured topic in various research (Simpkins, Eisenman 1968; Baer, 1998; Kaufman, 2006; Kousoulas, Mega, 2009). Baoguo et al. (2017) have concluded that women scored higher than men on originality. Moreover, women usually exceed men in semantic processing, which is the major function of the left temporal region. Our fourth hypothesis will test whether there is a difference in the perception of importance of C&I between female and male teachers in our survey.

Furthermore, Cimermanová (2014) believes that foreign language teachers have more opportunity to express their creative skills and promote creativity within their students. Also, students' creativity

depends on the creativity of a teacher, the task, and the amount of creativity that the teacher embraces (Cimermanová, 2014). Teaching a foreign language allows the freedom to choose the tools, techniques and approaches appropriate for application in the classroom. Purposeful conduct is central rather than optional to successful language teaching as it should reflect the cognitive and sociocultural facets of creativity (Jones and Richards, 2016). The role of foreign language teachers has shifted from the controller to facilitator or catalyst (Cimermanová, 2014; Alencar et al., 2017; David et al., 2018). Simply by allowing students to choose how they want to learn, their intrinsic motivation is encouraged and they are better enabled to become creative.

3. Methodology

The focus of this research are the perceptions of European teachers from all levels of education regarding the use and need for creativity in teaching. The paper aims to raise the awareness of the need for entrepreneurial skills in teachers, i.e. for reinforcing creativity in entrepreneurial "classrooms". The survey was conducted online and the data was collected in the summer of 2017. The link to the survey was distributed using the purposive sample (the snowball sample) among teachers (N=149) in eleven European countries (Germany, UK, Croatia, Bosnia and Herzegovina, Serbia, Slovenia, Portugal, Ireland, France, Spain and Albania). Teachers who participated in the survey teach different subjects (foreign languages or other) at all levels of education (pre-school, primary, secondary, higher education). The survey examined their perception of creativity and innovativeness in teaching. The questionnaire included yes/no questions, questions with short and long answers, multiple choice questions and five-point Likert scales as answers. The survey was comprised of 16 questions in total, grouped into demographic data, teacher's perception of creativity and innovativeness and teacher's attitude towards receiving training in creativity. In order to analyse the data SPSS was used for descriptive statistics and bivariate statistical methods (independent sample t-test). Table 1 provides the demographic data of the respondents (N=149).

Table 1 Demographic data

Country	n (%)
Croatia	107 (71.8)
Other	42 (28.2)
Total	149 (100)
Gender	n (%)
Female	99 (66.4)
Male	50 (33.6)
Total	149 (100)
Age	n (%)
20-30	29 (19.5)
31-40	52 (34.9)
41-50	41 (27.5)
51-60	22 (14.8)
60+	5 (3.4)
Total	149 (100)
Years of experience	n (%)
5 or less	30 (20.1)
6 to 10 years	33 (22.1)
11 to 20 years	51 (34.2)
More than 20 years	35 (23.5)
Total	149 (100)
Institution	n (%)
Early Childhood Education	3 (2.0)
Primary Education	8 (5.4)
Secondary Education	23 (15.4)
Higher Education	115 (77.2)
Total	149 (100)
Subject	n (%)
Foreign language	52 (34.9)
Other	97 (65.1)
Total	149 (100)

Source: Authors' own calculations

4. Results

Teachers (N=149) were asked to share their perception of the importance of creativity and innovativeness in general and in their teaching. The questions contained five-point Likert scales as answers. For the purpose of simplifying the results in our Tables, answers were categorized. Table 2 provides the data from 11 European countries where it is apparent that more than 97% of all responding teachers value creativity and innovativeness as important, regardless of

the subject they teach. Furthermore, 93.95% of teachers consider the use of creativity and innovativeness in teaching important. When asked to self-assess the use of creativity and innovativeness in their teaching, only two teachers (1.3%) do not consider it important. Since English teachers are more prone to using technology and altering their lessons, it is not unexpected that they value their use of creativity and innovativeness in teaching more (85.6%) than do teachers of other subjects (78.4%).

Table 2 Teachers' Perception of the Value of Creativity and Innovativeness in General and in Their Teaching

How do you value creativity and innovativeness?					
		not important	moderately important	important	Total
Which subject do you teach?	Foreign language	1 (1.9%)	1 (1.9%)	50 (96.2%)	52 (100.0%)
	Other	0 (0.0%)	2 (2.1%)	95 (97.9%)	97 (100.0%)
How do you value the use of creativity and innovativeness in teaching?					
		not important	moderately important	important	Total
Which subject do you teach?	Foreign language	1 (1.9%)	1 (1.9%)	50 (96.2%)	52 (100.0%)
	Other	1 (1.0%)	6 (6.2%)	90 (92.8%)	97 (100.0%)
How do you value YOUR use of creativity and innovativeness in teaching?					
		not important	moderately important	important	Total
Which subject do you teach?	Foreign language	1 (1.9%)	6 (11.5%)	45 (86.5%)	52 (100.0%)
	Other	1 (1.0%)	20 (20.6%)	76 (78.4%)	97 (100.0%)

Source: Authors' own calculations

Table 3 exhibits teachers' agreement or disagreement with ten statements regarding creativity and innovativeness in teaching. As most of the surveyed teachers (76.5%) have between 5 and 20 years of experience in teaching, it is not surprising that as many as 131 of 149 teachers agree that they are confident of their own teaching. Over 85% agree or strongly agree that they like new things and would try out new functions and usages. Additionally, when they encounter a problem, a great majority (132) often asks themselves "why" in order to get to the bottom of a phenomenon. Almost three out of four teachers (71.8%) find that their needs are not catered for by ordinary teaching materials, and therefore often have to develop materials by themselves. More than 80% of teachers agree that everyday objects and events often stimulate them to embark on self-learning and exploration (82.55%), while only 6 teachers disagree with the

statement (4.02%). While there are 117 teachers (78.52%) who believe that multimedia helps them be more creative and innovative in their teaching, there are only 7 teachers who disagree (4.69%). Interestingly, only two teachers (1.3%) disagree with the statement that creativity and innovativeness enhance teaching performance. Even though the results show that 52 teachers (34.9%) are satisfied with the knowledge and skills they had acquired during their initial teacher education, the results from the Likert-scale show that merely four out of those 52 teachers (0.76%) strongly agree with this statement. Almost all teachers (N=145) assess their role in developing student's creativity and innovativeness as crucial (97.4% teachers agree with this). 123 teachers agree that creativity and innovativeness contribute to a faster path to employment of graduate students (82.55%), while only six teachers disagree (4.02%).

Table 3 Respondents' Agreement and Disagreement with Statements Regarding Creativity and Innovativeness

Statement	Disagree	Neither agree nor disagree	Agree	Total
I am confident of my own teaching and my ability in solving problems.	5 (3.4%)	13 (8.7%)	131 (87.9%)	149 (100.0%)
I like new things and would try out new functions and usages.	3 (2.0%)	20 (13.4%)	126 (85.6%)	149 (100.0%)
Whenever I encounter a problem, I often ask myself "why" in order to get to the bottom of a phenomenon.	4 (2.7%)	13 (8.7%)	132 (88.6%)	149 (100.0%)
I find that my needs are not catered for by ordinary teaching materials, and therefore often develop materials by myself.	6 (4.0%)	36 (24.2%)	107 (71.8%)	149 (100.0%)
Everyday objects and events often stimulate me to embark on self-learning and exploration.	6 (4.1%)	20 (13.4%)	123 (82.5%)	149 (100.0%)
Multimedia helps me to develop creativity and innovativeness in my teaching.	7 (4.7%)	25 (16.8%)	117 (78.5%)	149 (100.0%)
Creativity and innovativeness enhance my teaching performance.	2 (1.4%)	20 (13.4%)	127 (85.2%)	149 (100.0%)
I am satisfied with the knowledge and skills I had acquired during my initial teacher education in the University.	47 (31.5%)	50 (33.6%)	52 (34.9%)	149 (100.0%)
Teachers should encourage students to develop their creativity.	2 (1.3%)	2 (1.3%)	145 (97.4%)	149 (100.0%)
Creativity and innovativeness contribute to a faster path to employment of graduate students.	6 (4.0%)	20 (13.4%)	123 (82.6%)	149 (100.0%)

Source: Authors' own calculations

Statistically significant differences were evident from the statistical tests, which were based on the analysed data on teachers' gender and the subject that they teach. According to the T-test in Table 4, there is a statistically significant difference between teachers according to their gender ($p=0.009$, $df=84.314$, $t=2.655$) since there are more female teachers who consider that teaching materials do not cater to their needs and therefore often need to develop the materials by themselves ($x=4.04$) than male teachers ($x=3.66$). Also, based on the results of the T-test in Table 4, there is a statistically significant difference between teachers according to their gender ($p=0.005$, $df=81.867$, $t=2.911$) regarding the benefits of multimedia use for developing creativity. Female teachers ($x=4.23$) believe that multimedia helps them to develop

creativity and innovativeness in their teaching more than male teachers do ($x=3.78$). Interestingly, the results of the T-test in Table 4 prove the statistically significant difference ($t=2.118$ $df=147$ $p=0.036^*$) between male and female teachers since there are more female teachers ($x=4.31$) who believe that creativity and innovativeness enhance their teaching performance than there are male teachers ($x=4.04$). Based on the results of the T-test in Table 4, there is a statistically significant difference between teachers according to their gender ($p=0.000$, $df=147$, $t=3.597$) regarding the use of creativity and innovativeness in their teaching. Female teachers who participated in the survey value their use of creativity and innovativeness in teaching more ($x=4.41$) than male teachers who participated in the survey ($x=3.94$).

Table 4 Statistically Significant Gender Difference between Teachers

	Gender	Mean	Std. Dev.	t-test
I find that my needs are not catered for by ordinary teaching materials, and therefore often develop materials by myself.	Female	4.04	.727	t=2.665, df=84.314, p=0.009*
	Male	3.66	.872	
Multimedia helps me to develop creativity and innovativeness in my teaching.	Female	4.23	.767	t=2.911, df=81.867, p=0.005*
	Male	3.78	.954	
Creativity and innovativeness enhance my teaching performance.	Female	4.31	.709	t=2.118, df=147, p=0.036*
	Male	4.04	.807	
How do you value YOUR use of creativity and innovativeness in the classroom?	Female	4.41	.700	t=3.597, df=147, p=0.000*
	Male	3.94	.867	

*p-value is given for T-test on a significance level of 0.05

Source: Authors' own calculations

Furthermore, according to the results of the T-test in Table 5, there is also a statistically significant difference between English teachers and teachers who teach other subjects ($p=0.049$, $df=147$, $t=1.948$) regarding multimedia. English teachers believe that multimedia helps them to develop creativity and innovativeness in their teaching more ($x=4.27$) than do teachers who teach other subjects ($x=3.98$). Moreover, the results of the T-test in Table 5 also

demonstrate a statistically significant difference in the opinion of English teachers and teachers of other subjects regarding the fact that creativity and innovativeness contribute to a faster path to employment of graduate students ($t=-2.272$, $df=77.987$, $p=0.026$). Teachers of other subjects ($x=4.30$) give higher value to creativity and innovativeness as a factor of employment of graduate students than do English teachers ($x=3.92$).

Table 5 Statistically Significant Subject Difference between Teachers

	Which subject do you teach?	Mean	Std. Deviation	t-test
Multimedia helps me to develop creativity and innovativeness in my teaching.	Foreign language	4.27	.660	t=1.984, df=147, p=0.049*
	Other	3.98	.935	
Creativity and innovativeness contribute to a faster path to employment of graduate students.	Foreign language	3.92	1.064	t=-2.272, df=77.987, p=0.026*
	Other	4.30	.738	

*p-value is given for T-test on a significance level of 0.05

Source: Authors' own calculations

Additionally, teachers were asked to identify and comment on some challenges of EE and aspects that inhibit creativity in form of an open-ended question. A descriptive analysis of results is used and the most significant answers are provided. The main aspects recognized from teacher's answers were the curriculum, conformity and lack of materials and conditions. To be more precise, 14 teachers mentioned the constraints of the curriculum, the traditional style of teaching, as well as *ex cathe-*

dra approach and the pressure of predefined grading system. Furthermore, 39 teachers mentioned the lack of support for proactive teachers (seminars, workshops), as well as the lack of motivation of both teachers and students, technology and electronic devices, Wi-Fi, materials, time, resources and interest. Apart from that, 11 teachers pointed out the fact that the main aspects that inhibit creativity are the ones within the teachers themselves, namely intrapersonal factors such as reluctance

to change, teacher's fear of change, losing control, fear of humiliation and insufficient thinking out of the box as well as the lack of teacher's knowledge about how to boost creativity among students. Even though teachers who participated in the survey are quite confident in their teaching, 96% of teachers (N=142) would be willing to receive further training in creativity and innovativeness if provided by their educational institution.

5. Discussion and Conclusion

It is relevant to understand whether teachers are aware of the importance of creativity in their teaching and whether they value it. If we do not develop teachers who can recognize, develop and demonstrate entrepreneurial skills and creativity, we could be disadvantaging students who need to be able to adjust to the fast-changing entrepreneurial environments. (David et al., 2018). Teachers are the educators, facilitators and catalysts who transfer knowledge, energy and motivation to their students. If they are not creative, students who are might be missing out on their personal development and even have their creativity suppressed. Even though creativity in the classroom is gaining its reputation in research, it appears there is limited research that focuses on teacher's opinion or self-assessment of creativity in the classroom. This is the reason why this research focused on creativity as one of the main entrepreneurial skills. As it is evident that almost all of the teachers who participated in the survey value their creativity and innovativeness in teaching highly, the first hypothesis has been proven. Moreover, teachers who participated in the survey seem to be rather creative, innovative and confident in their teaching, but are in general unhappy with the materials they have to use in the classroom. The collected sample for the survey was non-representative, the participation was voluntary and the selection of teachers unguided. Teachers in the survey are confident of their teaching, which is not surprising as more than 56% of them have between 5-20 years of teaching experience. As many as 85.6% expressed their wish to try out new things and functions. This is encouraging since motivation and a positive attitude towards change are key entrepreneurial skills which should be a part of each teachers' personality. A large part (88.6%) of teachers in the survey ask themselves the question "why" when they encounter a problem. Those teachers tend to search for causes of prob-

lems and they do not take them for granted, which in turn represents the willingness to put effort into their work. Similarly, a substantial majority (82%) embark on self-learning and exploration on a regular basis, which is crucial for having successful lessons. The willingness to learn emphasizes the desire to improve oneself, to learn new things and become more competent in both professional and personal life. Almost all teachers (97.4%) agree that teacher's role is, among other things, to stimulate creativity in their students. Furthermore, it accompanies other entrepreneurial skills such as thinking "outside the box", opportunity recognition, problem-solving and self-confidence, which are important for their personal development and future career. This has proven our second hypothesis.

From the results of our research, certain differences between teachers are evident. Female teachers seem to be more creative than male ones (self-assessment). Furthermore, female teachers are also more conscious that creativity and innovativeness enhance their teaching performance. Therefore, our fourth hypothesis which states that there are differences in the perception of C&I regarding female and male teachers has been proven. Interestingly, teachers of English believe that multimedia helps them develop creativity and innovation in their teaching more, compared to teachers who teach other subjects. Still, teachers who teach other subjects value creativity and innovation as a factor that leads to faster employment of graduate students more than English teachers do.

One of the limitations of this research is the fact that the sample for foreign language teachers was non-representative. If the sample had been larger, some valuable statistically significant differences between them and teachers of other subjects might have had appeared. Also, another limitation of this research is the fact that authors only requested the teachers to choose whether they teach foreign languages or other subjects. Teachers could not give further information on which other subjects they teach.

More than 70% of teachers are not satisfied with the teaching materials because they do not cater to their needs. In addition, they have to develop their own materials. Furthermore, female teachers are more aware of the lack of suitable materials. This is crucial information for authors and publishers since a market research should be carried out in order to see which materials are needed,

to meet expectations and needs of teachers. Also, authors should work in cooperation with teachers to improve the efficacy of the published material. Surprisingly, more than a third of teachers in this survey (34.9%) are satisfied with the knowledge and skills acquired during teacher education. This result is of great value for teachers at training colleges and course designers since the need for creating various teacher training courses is evident and should be offered to educational institutions. The questions remain whether there are such programs, whether they depend on the country, whether they are free for the teaching staff and which topics they would entail. Additionally, how would they be implemented into the working hours of the teachers and how could the outcome of these trainings be measured?

Moreover, the focus of this paper is the research question: What aspects inhibit creativity? Among the most serious challenges are the constraints of the curriculum, lack of support for teachers but also certain intrapersonal factors such as reluctance to change. It is surprising that in this day and age teachers still feel that there is lack of support for them, since they are the ones who educate young people for the future and should therefore have all the needed support. Yet, depending on the educational institution they are affiliated with, the teacher training policy may not be as transparent as it should be. The most difficult issue to deal with is essentially the lack of materials. Publishers issue books they believe teachers need, yet teachers still have to come up with their own resources, authentic material and supplements for their specific purpose due to publishers' insufficient adjustment to teach-

ers' requirements. When discussing the issue of the lack of technology, the question of whether teachers can be creative without technology remains. Surprisingly, there are still 5% of teachers who are not interested in further training in creativity and innovativeness. This shows us the everyday reality of the rest of the 95% of 21st century teachers who value the use of creativity in teaching and would be willing to receive further training on creativity and innovativeness. Thus, our third hypothesis has also been proven. Nonetheless, our purposive sample might be the reason behind such a large number of teachers willing to receive training on creativity since the mere fact that these teachers were willing to participate in the research shows their inclination towards creativity.

These findings are of utmost importance since we hope to raise awareness and encourage teachers globally to become proactive and keep up to date regarding their teaching methods and approaches. We hope to encourage teachers to participate in teacher training in creativity, as well as help raise their awareness of the obstacles to creativity and innovativeness in classrooms across Europe. Finally, it is suggested that further studies be conducted on a larger sample of teachers for a cross-cultural comparison with the aim of a more valuable insight in the global perception of creativity in teaching. Furthermore, it would be insightful to see the extent or benefits of the implementation of creative teaching on students' own creativity and their motivation and willingness to learn.

REFERENCES

1. Alencar, E. M. L. S., Fleith, D. S., Pereira, N. (2017), "Creativity in Higher Education: Challenges and Facilitating Factors", *Trends in Psychology / Temas em Psicologia*, Vol. 25, No. 2, pp. 553-561.
2. Andrews, J., Higson, H. (2008), "Graduate Employability, 'Soft Skills' Versus 'Hard' Business Knowledge: A European Study", *Higher Education in Europe*, Vol. 33, No. 4, pp. 411-422.
3. Baer, J. (1998), "Gender Differences in the Effects of Extrinsic Motivation on Creativity", *The Journal of Creative Behavior*, Vol. 32, No. 1, pp. 18-37.
4. Baer, M. (2012), "Putting Creativity to Work: The Implementation of Creative Ideas in Organizations", *Academy of Management Journal*, Vol. 55, No. 5, pp. 1102-1119.
5. Baoguo S., Chen, Q., Qiu, J. (2017), "Sex Differences in the Association between Gray Matter Volume and Verbal Creativity", *NeuroReport*, Vol. 28, No. 11, pp. 666-670.
6. Bikse, V., Riemere, I., Rivza, B. (2014), "The Improvement of Entrepreneurship Education Management in Latvia", *Social and Behavioral Sciences*, Vol. 140, pp. 69-76.
7. Blumen-Pardo, S. (2002), "Effects of a Teacher Training Workshop on Creativity, Cognition, and School Achievement in Gifted and Non-Gifted Second-grade Students in Lima, Peru", *High Ability Studies*, Vol. 13, No. 1, pp. 47-58.
8. Daniel, A. D., Costa, R. A., Pita, M., Costa, C. (2017), "Tourism Education: What about entrepreneurial skills?", *Journal of Hospitality and Tourism Management*, Vol. 30, pp. 35-72.
9. David, K., Penaluna, K., McCallum, E., Usei, C. (2018), "Embedding Entrepreneurial Skills Development in Teacher Education", in James, J. et al. (Eds.), *Entrepreneurial Learning City Regions*, Springer International Publishing, Cham, pp. 319-340.
10. Esquivel, G. B. (1995), "Teacher behaviours that foster creativity", *Educational Psychology Review*, Vol. 7, No. 2, pp. 185-202.
11. European Commission – Directorate-General for Economic and Financial Affairs (2011), "European Economic Forecast – Autumn 2011", Commission Staff Working Document, European Economy 6/2011, February 2011, available at: http://ec.europa.eu/economy_finance/publications/european_economy/2011/ee6upd_en.htm (Accessed on March 7, 2018)
12. Gardner, H. (1994), "The Creator's Patterns", in Boden, M. A. (Ed.), *Dimensions of Creativity*, The MIT Press, Cambridge, pp. 143-158.
13. Gibb, A. (2002), "In pursuit of a new "enterprise" and "entrepreneurship" paradigm for learning: Creative destruction, new values, new ways of doing things and new combinations of knowledge", *International Journal of Management Reviews*, Vol. 4, No. 3, pp. 233-269.
14. Hondzel, C. D., Hansen, R. (2015), "Associating creativity, context, and experiential learning", *Education Inquiry*, Vol. 6, No. 2, pp. 177-190.
15. ILO, UNESCO (2006). *Towards an Entrepreneurial Culture for the Twenty-First Century: Stimulating Entrepreneurial Spirit through Entrepreneurship Education in Secondary Schools*. Geneva: International Labour Office; Paris: United Nations Educational, Scientific and Cultural Organization.
16. Jones, R. H., Richards, J. C. (Eds.) (2016). *Creativity in Language Teaching: Perspectives from Research and Practice*. New York: Routledge.
17. Katz A. N., Giacommelli, L. (1982), "The subjective nature of creativity judgments", *Bulletin of the Psychonomic Society*, Vol. 20, No. 1, pp. 17-20.
18. Kaufman, J. C. (2006), "Self-reported differences in creativity by ethnicity and gender", *Applied Cognitive Psychology*, Vol. 20, No. 8, pp. 1065-1082.
19. Kousoulas, F., Mega, G. (2009), "Students' Divergent Thinking and Teachers' Ratings of Creativity: Does Gender Play a Role?", *The Journal of Creative Behaviour*, Vol. 43, No. 3, pp. 209-222.

20. Kurotimi, M. F., Franklin, A., Aladei, G., Helen, O. (2017), "Entrepreneurship Education as a 21st Century Strategy for Economic Growth and Sustainable Development", *International Journal of Social, Behavioural, Educational, Economic, Business and Industrial Engineering*, Vol. 11, No. 9, pp. 2168-2179.
21. Maley, A., Kiss, T. (2018), "Becoming a Creative Teacher", in *Creativity and English Language Teaching*, Palgrave Macmillan, London, pp. 181-201.
22. Maloney, J. E., (1992). *Teacher training in creativity: A phenomenological inquiry with teachers who have participated in creativity coursework*. Doctoral dissertation. Amherst: University of Massachusetts.
23. Muceldili, B., Turan, H., Erdil, O. (2013), "The Influence of Authentic Leadership on Creativity and Innovativeness", *Procedia-Social and Behavioural Sciences*, Vol. 99, No. 673-681.
24. Murphy, L., Wright, A. (2017), "An Exploration of the Value of Design Thinking to Entrepreneurship Education, in Particular the Relationship between Design Thinking, Creativity and Opportunity Identification", paper presented at ECSB Entrepreneurship Education Conference 2017, May 10-12, 2017, Cork.
25. Neto, R. C. A., Vinicius, P. R., Panzer, S. (2017), "Exploring the relationship between entrepreneurial behaviour and teachers' job satisfaction", *Teaching and Teacher Education*, Vol. 63, pp. 254-262.
26. O'Connor, A. (2013), "A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes", *Journal of Business Venturing*, Vol. 28, No. 4, pp. 546-563.
27. Oosterbeek H., Van Praag, M., Ijsselstein, A. (2010), "The impact of entrepreneurship education on entrepreneurship skills and motivation", *European Economic Review*, Vol. 54, No. 3, pp. 442-454.
28. Rhodes, M. (1961), "An analysis of creativity", *The Phi Delta Kappan*, Vol. 42, No. 7, pp. 305-310.
29. Runco, M. A., Jaeger, G. J. (2012), "The Standard Definition of Creativity", *Creativity Research Journal*, Vol. 24, No. 1, pp. 92-96.
30. Runco, M. A. (2007). *Creativity: Theories and Themes: Research, Development and Practice*. Burlington, MA: Elsevier Academic Press.
31. Simpkins, R., Eisenman, R. (1968), "Sex differences in creativity", *Psychological Reports*, Vol. 22, No. 3, p. 996.
32. Sisson, L. G., Adams, A. R. (2013), "Essential Hospitality Management Competencies: The Importance of Soft Skills", *Journal of Hospitality & Tourism Education*, Vol. 25, No. 3, pp. 131-145.
33. Ulrich, F., Mengiste, S. A. (2014), "The challenges of creativity in software organizations", in Bergvall-Kåreborn, B., Nielsen, P. A. (Eds.), *Creating value for all through IT*, Springer-Verlag, Berlin, Heidelberg, pp. 16-34.

ENDNOTES

- 1 European Commission (2006), "Implementing the Community Lisbon Program: Fostering entrepreneurial mindsets through education and learning", Brussels, February 2016.
- 2 Claxton, G. (2008), "Cultivating Positive Learning Dispositions", available at: <https://www.seas.upenn.edu/~eas285/Readings/Claxton.Learning%20Dispositions.pdf> (Accessed on: March 16, 2018)
- 3 Cimermanová, I., (2014), "Foreign Language Teaching and Creativity", available at: <https://www.pulib.sk/web/kniznica/elpub/dokument/Germuskova2/subor/Cimermanova.pdf> (Accessed on: February 15, 2018)

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PODUZETNIČKO OBRAZOVANJE - ISTRAŽIVANJE KREATIVNOSTI PROFESORA U 11 DRŽAVA

SAŽETAK

Kreativnost se smatra jednom od najvažnijih poduzetničkih vještina uz preuzimanje vodstva i spremnost na rizik. Profesori kao uzori postaju svjesniji promjena potrebnih unutar sebe kao i promjena potrebnih u njihovoj nastavi, te je upravo njihova percepcija važnosti kreativnosti i inovativnosti (K&I) u nastavi svrha ovog istraživanja. Istraženi su i uspoređeni stavovi profesora (N = 149) iz 11 država (Njemačka, Velika Britanija, Hrvatska, Bosna i Hercegovina, Srbija, Slovenija, Portugal, Irska, Francuska, Španjolska i Albanija). Teorijska pozadina istraživanja objašnjava povezanost između kreativnosti i poduzetničkog obrazovanja te pruža razumna obrazloženja za jačanje i naglašavanje kreativnosti kao potrebne poduzetničke vještine kod profesora i studenata. Rezultati ovog istraživanja nastoje potaknuti profesore na obučavanje za kreativnost i inovativnost te mogu pomoći podići svijest profesora o preprekama na koje te dvije karakteristike nailaze u nastavi širom Europe.

Ključne riječi: inovativnost, kreativnost, poduzetničke vještine, profesori

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THE IMPACT OF GLOBALIZATION ON THE ECONOMY OF THE REPUBLIC OF CROATIA

ABSTRACT

Globalization and globalization processes that have been particularly noticeable in the last few decades have made an impact on the transfer of power centres and have significantly changed the geopolitical picture of the world. In order to affect globalization, its impact must be measured, but the first precondition is to understand globalization in order to be able to properly measure it at all. Measuring a complex phenomenon such as globalization requires the inclusion of a number of elements on which measuring will be based, such as measuring the social, economic, political and ecological dimensions of globalization. Certain elements of globalization are harder to measure because the indicators involved in each element are not entirely appropriate. Economic globalization is mostly made up of economic indicators that are unequivocal and comparable, while social or political globalization is determined by indicators that depend on economic strength and state development. Globalization processes have significantly influenced the economy of the Republic of Croatia as well as the state of the environment. The aim of the paper is to provide a comprehensive overview of the globalization trends within the Croatian economy as well as a comparison between the Croatian economy and the economies of neighbouring countries that have had a similar transition path based on the composite globalization index. In this paper, a regression analysis of individual elements within the composite globalization index was conducted.

Keywords: Globalization, composite globalization index, regression analysis, Republic of Croatia

1. Introduction

Globalization as a multidimensional term is contained by all elements of the modern economy. Its development can be followed along with the development of mankind, encompassing all the processes that take place in the world and which serve to eliminate obstacles to the free movement of goods, services, people, information and ideas. Over the last few years, thanks to the advancement of technology, physical distances have ceased to be a limiting factor. Goods and people continue to

travel at a limited speed, but the volumes of these flows are increasing from year to year. Unlike them, information and data are spreading almost immediately, and technology enables remote operation and control.

Many theorists have defined the concept of globalization (Al-Rodhan, Stoudmann, 2006), but regardless of the definition of this term, globalization has become a topic that has been subjected to significant controversy lately. The term itself is on its way to becoming a phrase that is often used and which

has become self-explanatory (Kaluderović, 2009). Over time, two basic currents developed: the proponents of globalization and anti-globalists. The impact of globalization is irrefutable and visible everywhere in the modern world (Lončar, 2005). Its effects can be seen in the improvement of world trade, technological progress, faster knowledge transfer, the increasing influence of multinational companies, the shifting of power centres, increased mobility of persons and the relocation of activities to more suitable areas.

In order to be able to properly manage globalization, it would be necessary to understand its impacts. The qualitative and quantitative analysis of globalization represents the basis for measuring globalization. The qualitative analysis is focused on multidimensional analysis by setting frameworks and concepts, which make it possible to understand globalization, whereby a measuring instrument is not developed, and such a method of analysis carries the risk of unfounded scientific speculation. The quantitative analysis is based on the use of data and statistics. In quantitative analysis, there is a risk of using inappropriate indicators, which can lead to distortion of the final result and the wrong conclusions. Given the complexity of globalization, it is necessary to cover it in broader terms and include the theory and measurement. That is why, for the measurement of globalization, the structure of the composite index is most appropriate (Dreher et al., 2010).

The composite globalization index is a relative measure and can be used to calculate globalization indices and comparisons between states and smaller territorial units such as provinces or cities. When selecting variables for the composite globalization index, the objectivity and coverage of all elements was complied with, in accordance with the OECD Handbook on Constructing Composite Indicators (Nardo, Saisana, 2009). The composite globalization index consists of variables divided into four categories: economic, social, political and ecological globalization.

2. Composite Globalization Index

The assessment of impacts and the causes of globalization has become an essential element of modern society. Globalization is determined through the interaction of social, economic and political elements the expansion of which was

greatly influenced by the advancement of technology. Given that globalization manifests through the interaction of these elements, it is possible to monitor the indicators of globalization, which is of utmost importance as this is the only way to influence globalization. There are many indirect indicators of globalization, however, it is very difficult to link them directly to globalization or to mark them as the universal measuring instrument of globalization. Because of its complexity, it is impossible to set up a comprehensive measuring instrument of globalization. The measuring instrument can include more or less indicators and, accordingly, describe some areas of globalization better. Instrument's acceptance depends on the quality of the area covered and the quality of the instrument itself (Caselli, 2008).

Globalization indicators are often associated with economic development, but it is necessary to keep in mind that the globalization index is not just a more complex indicator of economic development (Dreher et al., 2008). The elements of the globalization index should be simple for an easier use and greater applicability. Otherwise, unnecessary complexity is created, and the index is harder to analyse and interpret, and at the same time an error may occur during the calculation of the index. Simplicity leads to an easier applicability and greater usage of the index more easily. Apart from the methodology itself, it is necessary to take into account the accessibility of the data. The data on basis of which the index is calculated and which are publicly available are not primarily set for the global level but are the reflection and indicator of the economic, social or political state of a country.

2.1 Variables for Calculating the Composite Globalization Index

The composite globalization index represents the relative measure of globalization that can be used to calculate the globalization index. The elements used to compute the composite globalization index are set based on the work of AT Kearney/Foreign Policy Globalization Indicators (Lockwood, 2004), KOF Globalization Index (Dreher, 2008), New Globalization Index (Vujaković, 2010), Guide to OECD Measuring Globalization (OECD, 2005) and variables that are unique to the composite globalization index only.

The variables composing the index are divided into four categories: economic, social, political and ecological globalization. All categories consist of several indicators or variables, with the exception of ecological globalization that is made by the Ecological Footprint variable and which is taken over from the global non-profit organization *Global Footprint Network*. The variable itself, according to its characteristics, could be in the category of social globalization, but it was set apart to emphasize the need for sustainable development. The global Ecological Footprint is a composite variable that measures how many of the natural resources a country has, how much it uses them and in which way.

By an analysis of the scientific papers written so far on the globalization measurements and the categories used to produce the index, it has been established that the index usually consists of the economic, political, and social globalization categories. When considering variables for the index, great attention is also given to the technological elements. Indicators that make up the technological elements are set as part of social globalization because they represent essential elements that can be considered as predetermined because technology is one of the fundamental preconditions of globalization. Technology, whether it is the progress of transport or electronics, which enables rapid exchange and easy access to data and knowledge, is the basis for a faster globalization of society. The selection of variables for the design of the composite globalization index was compiled on the basis of the OECD Handbook on Constructing Composite Indicators (Nardo, Sai-sana, 2009).

Economic globalization is presented in a series of economic indicators that speak of the strength and openness of the state. States are trying to make the best use of their comparative advantages because no country is self-sufficient. This was particularly evident in the recent decades when the fall of communism led to the creation of a number of new states. The loss of the markets that affected such countries, including Croatia as one of those examples, coupled with the opening up of the market, led to economic difficulties. The new states had to strengthen their economies and many of them had to move from a planned economy towards a market-oriented economy, which led to the disap-

pearance of entire production segments that were considered extremely important prior to the fall of communism. This position has changed in the new economic environment. Indicators such as trade or indebtedness allow an insight into economic power while direct foreign investment or income from duties and taxes provide an insight into the openness of the state. It is safe to assume that countries with a lower amount of foreign direct investment are more closed, just like those countries that have higher income on the basis of the collected duties.

Social globalization is one of the most sensitive elements of globalization. Like in every process - production, service or some other - there are people in the background who are the carriers of this process. Over the centuries, people have travelled, relocated and caused a mixing of cultures that was mostly local or limited. With the emergence of modern mass transportation and the advancement of long-distance telecommunications technology, the great distances stopped being a barrier. In order to gain a better insight into globalization and to understand and measure globalization processes more easily, it is necessary to introduce the notion of global geography that, apart from the physical environment in which society operates, takes into consideration the relational environment, i.e. with whom the society communicates, cooperates, exchanges goods, services and information and against whom it is fighting (Hargittai, Centeno, 2001).

Political globalization is represented by the diplomatic relations that the state has with other states and on basis of which the relationships are built. If a country considers that a relationship with a state is important, it will seek to strengthen its diplomatic relationship with that country. The quality of diplomatic relations affects the amount of information a country disposes of and the protection of individual interests. Information on the number of embassies or representations in individual states is a sign of state power in a political sense. Similarly to embassies, membership in international organizations represents the openness or engagement of the state, and participation in UN peacekeeping missions is one of the indicators of political globalization.

Ecological globalization is the result of the interaction of all elements of globalization i.e. of people on Earth. Resources on Earth are limited, and significant changes started happening only after the Industrial Revolution. The Industrial Revolution has also caused many ecological problems, including overcrowding of large cities, reducing biodiversity, increasing pollution and climate change (Steger, 2003). Sustainable development and management are a necessary prerequisite for further development. It has often been the case that the countries wishing to attract direct foreign investment and achieve economic development, end up neglecting sustainable development and very quickly face water, land and air pollution, which rapidly turns into the aggravating circumstance of further development.

2.2 *Method for Computation of the Composite Globalization Index*

The composite globalization index consists of 20 variables classified into four categories (subindices). The *Principal Components Analysis*, (PCA) was applied to each of the subindices to obtain the influence (direction and strength) of individual variables on the subindex. Subindices then represented the newly acquired variables for which the same procedure was applied again to produce the influence of the subindex on the composite globalization index. The only exception is ecological globalization because it consists of one variable, so the corresponding subindex method has not been implemented because it was not meaningful, i.e. ecological globalization is equivalent to ecological printing. The method is still known as Karhunen-Loeve Transform or Hotelling Transform.

The method was set up by Karl Person in 1901 based on three variables, assuming that the method can be applied to solving problems with multiple variables. The method of calculating the method was set by Hotelling in 1933. The main component method is one of the basic methods of a multivariate technique. The calculations used by the method are very complex, especially with a larger number of variables, so the method in widespread use came only from the beginning of computer use.

The main component analysis deals with the interpretation of the structure of matrix variables and covariants of a set of original variables by a small number of their linear combinations. The purpose of the method is to compress a smaller number of dimensions emphasizing the main patterns of data variation.

The main component method was described and developed based on the following papers by Pećina (2006)¹, Bahovec (2008)², Bogunović and Dalbelo Bašić (2003/2004)³.

2.3 *Calculation of the Composite Globalization Index*

The composite globalization index was calculated using the PCA method, so that it was applied to each subindex (economic, political, and social), thus gaining the index value. Ultimately, the method was applied to the subindex as a novel variable, resulting in the values of the main index. The index was calculated for the Republic of Croatia for the period from 1995 to 2015. The year 1995 was taken as the starting year for calculating the index, as only it can be considered as the first year in which the Croatian economy had stabilized. The previous years, since independence, were not taken as representative due to the burden of separation from the former republics' community, war conflicts and refugees and displaced persons. The index was calculated for the aforementioned period also for transitional countries in the wider region, with a view to comparing trends and the present degree of globalization. At the same time, certain individual variables used for the calculation of the index alone are very telling about the state of the economies of individual countries.

2.4 *Calculation of Economic Globalization Elements*

The first subindex - economic globalization - consists of nine variables that are shown in Table 1. The values inserted for each variable were taken from the period 1995 to 2015 for Croatia and the related transition countries, where data substitution was made if necessary. Based on these data, a matrix is created in which the variables X1, ..., X9 are the columns, and the rows are made up of all the countries for the observed period.

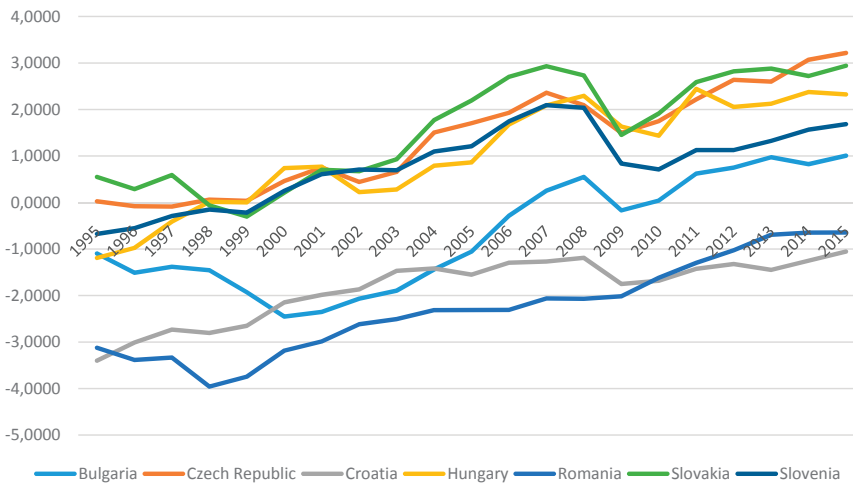
Table 1 Variables for calculation of economic globalization

Category	Variable Name	Variable Explanation	Code
Economic Globalization	Trade Import	Export in % GDP	X1
	Trade Export	Import in % GDP	X2
	Gross Domestic Product (GDP)	GDP Growth (%)	X3
	Savings	Gross Domestic Savings in % GDP	X4
	Foreign Direct Investments	Foreign Direct Investments	X5
	Investments Portfolio	Investments Portfolio % GDP	X6
	Economic Freedom	Economic Freedom Rank	X7
	Patents	No. of Patents by Non-residents	X8
	Electricity Consumption	Electricity Consumption Per Capita	X9

Source: Author

Since the analysis of the main components assumes a correlation between the variables, it is necessary

to form a matrix of variables and covariances from which the correlation matrix ensues.

Figure 1 Fluctuation of the Economic Globalization Index

Source: Author

Fluctuation of the economic globalization index in the observed period in all countries is on the rise, however, it is not equal. Figure 1 shows that the Czech Republic, Slovakia and Slovenia have retained primacy in the observed period. Hungary has also made significant progress, while Bulgaria has made the largest progress and although the index has recorded a negative trend in the first few years, the growth that followed after 2001 was very significant. The countries that achieved the lowest index of economic globalization in the observed pe-

riod were Croatia and Romania. Although Romania had a slightly higher index at the beginning of the year, it was falling until 1998, after which the index for Romania continued to grow, so that in 2010 it exceeded Croatia's index and Croatia remained in last place. The index of economic globalization is a composite index of several variables that can say a lot about the state of the economy on their own. At the same time, it is only possible to confirm that the Slovak, Czech and Slovenian are the leading transition economies, while the Croatian economy

has remained in the worst position, although it was one of the strongest economies at the beginning of the transition period. The situation is even worse considering that both the Romanian and the Bulgarian economy have overtaken Croatia in the key elements.

2.5 *Calculation of Social Globalization's Elements*

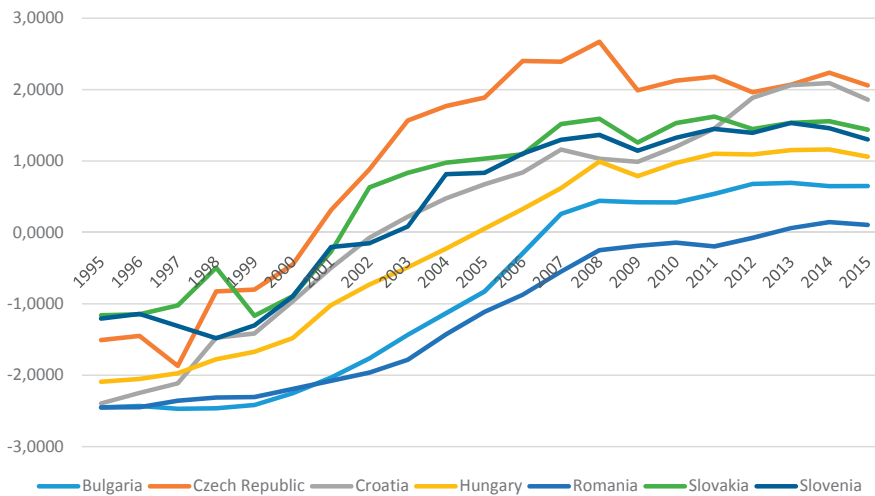
Social globalization is made up of six variables that are shown in Table 2. For the calculation as in the case of economic globalization, data substitution was done where necessary.

Table 2 *Variables for the calculation of social globalization*

Category	Variable Name	Variable Explanation	Code
Social Globalization	Internet	Internet users per 100 inhabitants	X1
	Mobile Phones	Subscribers on mobile networks per 100 inhabitants	X2
	Tourism	Foreign Tourists' Overnight Stays	X3
	Magazines (printables)	Newspaper Imports % GDP	X4
	Books	Book Imports % GDP	X5
	McDonald's Restaurants	Number of McDonald's Restaurants <i>per capita</i>	X6

Source: Author

Figure 2 *Fluctuation of the Social Globalization Index*



Source: Author

By observing Figure 2, it can be seen that the index of social globalization in all countries recorded a significant growth. The fastest growth occurred in the period from 1999 to the beginning of the world crisis i.e. 2008. As technological advances play a significant role in the social globalization, the growth of the index could be expected. It should be added that the development of technology itself has also had an impact on price reductions and thus increased availability.

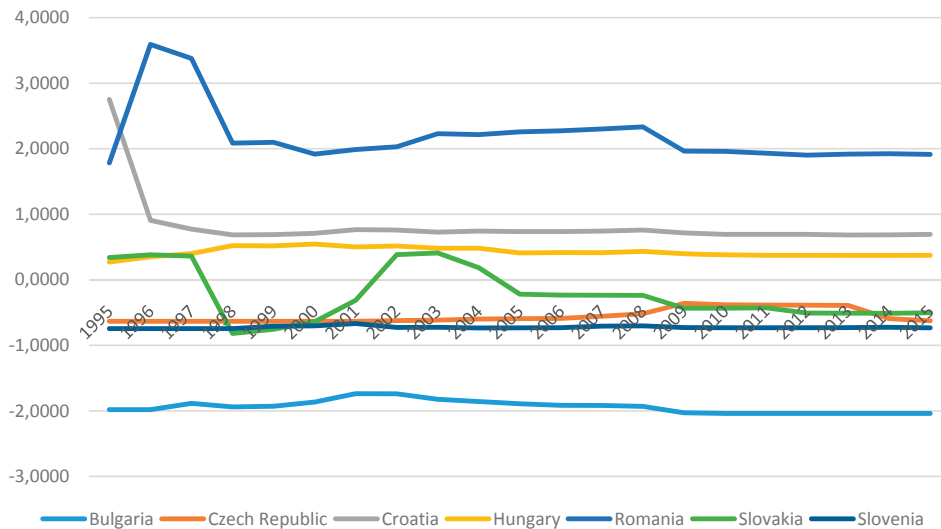
2.6 *Calculation of Political Globalization's Elements*

Political globalization is composed of four variables shown in Table 3. The variables used for the calculation differ from the variables of the first two categories because the data available were for one year only (except for the variable X1) hence substitution was made so that it was equal for all years.

Table 3 Variables for Calculation of the Political Globalization

Category	Variable Name	Variable Explanation	Code
Political Globalization	Participation in the UN Peacekeeping Missions	Number of Participants in the UN Peacekeeping Missions	X1
	International Agreements	Number of International Agreements Signed	X2
	International Organisations	Membership in Different Significant International Organizations	X3
	Foreign Representative Offices	Number of Embassies and Consulates	X4

Source: Author

Figure 3 Fluctuation of the Political Globalization Index

Source: Author

Political globalization is one of the categories of the composite globalization index, which is indirectly associated with other categories. Fluctuation of the index of political globalization in the observed period is mostly influenced by the variables of the number of participants in the UN peacekeeping missions. Historical data on the number of participants were available for the whole observed period, while the current number was used for the number of signed international agreements and membership in the various international significant organizations, as well as the number of embassies and consulates. Data that were not available for the observed period have been supplemented. The assumption is that other variables can be linked in a similar way, which can be one of the directions for further study of the index of political globalization.

2.7 Calculation of the Elements of the Composite Globalization Index

The composite globalization index consists of four categories (Table 4). In the first step, the analysis of the main components was applied to the categories (subindex) to show how some variables affect the subindices. In the next processing step, the categories become variables to which the said method will be applied again to determine how far and in what direction the categories affect the composite index.

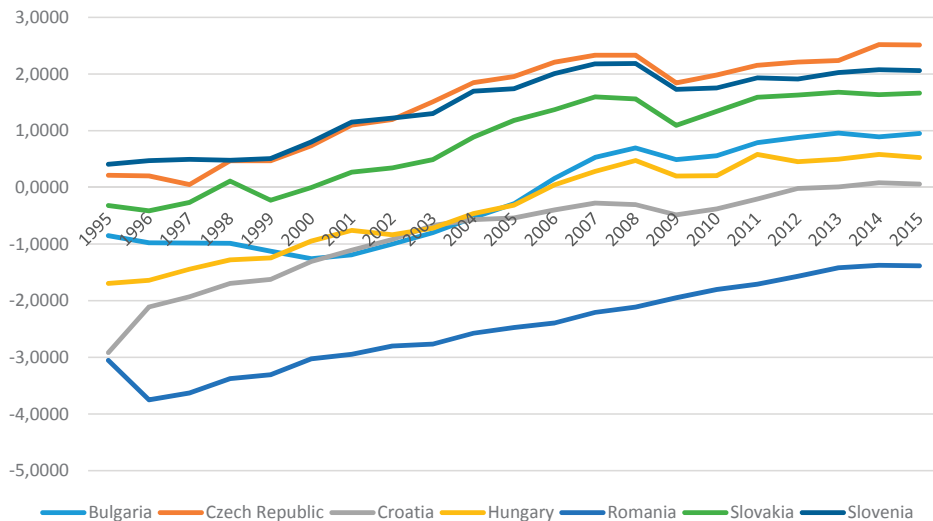
Matrix variables and covariances were equally calculated, along with the correlation matrix for variables in the original amounts, i.e. for the corresponding standardized variables.

Table 4 Variables for Calculation of the Composite Globalization Index

Category	Code
Economic Globalization	X1
Social Globalization	X2
Political Globalization	X3
Ecologic Globalization	X4

Source: Author

Figure 4 Fluctuation of the Composite Globalization Index



Source: Author

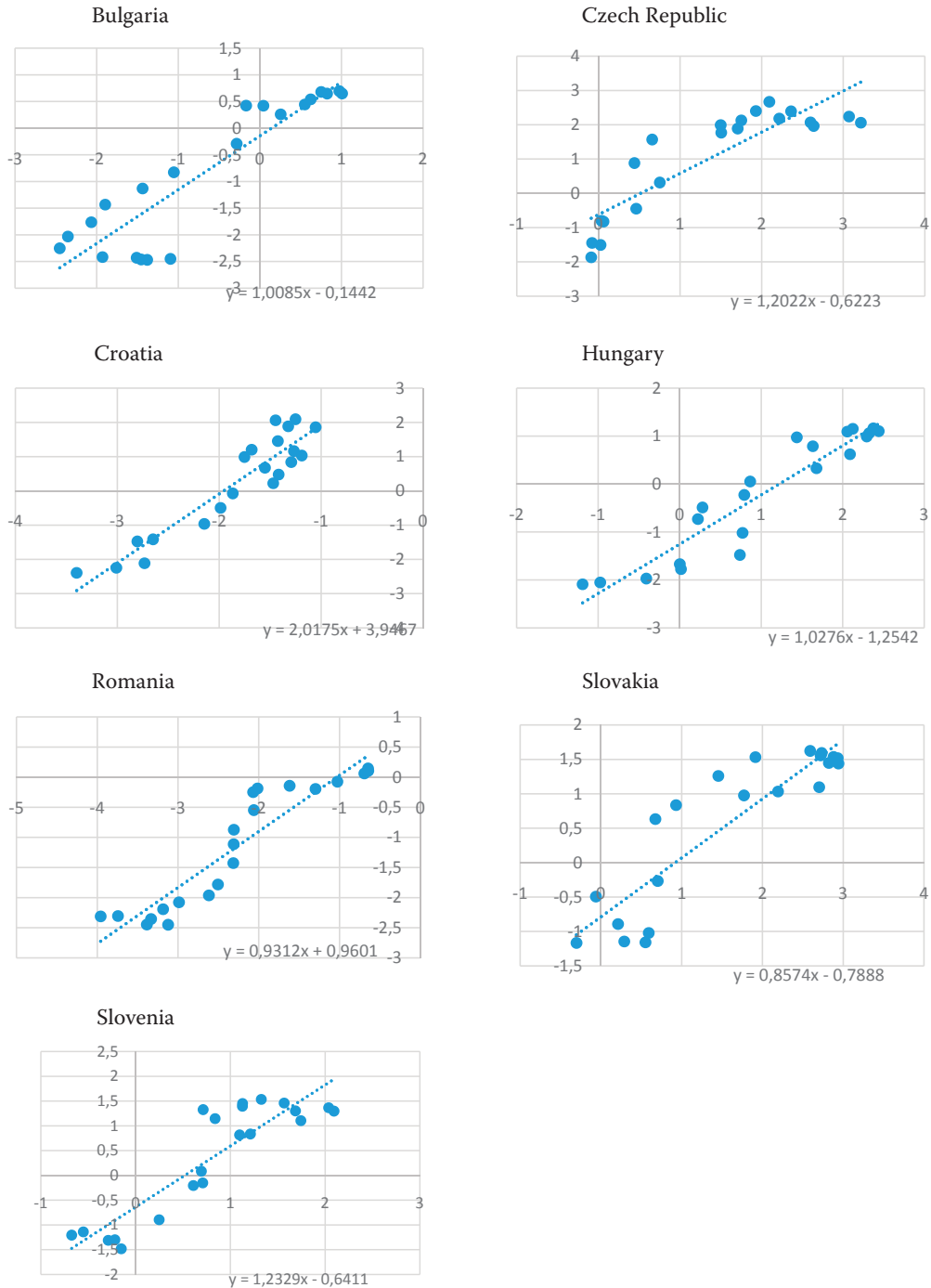
By observing Figure 4, we can notice that the Czech Republic and Slovenia are the only countries whose globalization index at the beginning of the observed period had a positive value. Although the growth of the index is recorded in all countries in the observed period, the only country whose index remained negative for the observed period was Romania. On the other hand, only Romania has recorded an almost continuous growth of the indiscriminate index under the influence of the world economic crisis, which occurred in a larger or smaller volume in all observed states. It is also a country which, despite the negative indices, has recorded its highest average growth.

3. The Regression and Correlation Analysis by Countries

The regression and correlation analysis by countries has been made to show how globalization categories (subindices) affect each other. It is assumed that economic globalization is the most significant of all categories and that it contributes to the composite globalization index to the greatest extent.

3.1 The Influence of Economic Globalization on the Social Globalization

Given that scattering (dispersion) diagrams form the basis of variable dependence analysis, the following scattering (dispersion) diagrams by observed countries are shown below.

Figure 5 Scattering (Dispersion) Diagram – Economic and Social Globalization

Source: Author

The diagrams point to a positive statistical link between variables X (economic globalization) and Y (social globalization), which is expected. The situation in the economy has a situation in society as a direct implication. Namely, countries with higher economic growth have a higher standard, reflecting the greater use of technology and technology solutions, greater electricity consumption and many other elements. For most countries the data is, roughly, grouped around the line. Whether such an approximation is correct will be seen on the basis of representativeness indicators and results of the hypotheses testing. The least squares method yields a constant member and the regression coefficient of the straight line equation.

Table 5 Regression Lines by Countries – Economic and Social Globalization

Country	Regression Lines
Bulgaria	$y = -0.1442 + 1.0085x$
Czech Republic	$y = -0.6223 + 1.2022x$
Croatia	$y = 3.9467 + 2.0175x$
Hungary	$y = -1.2542 + 1.0276x$
Romania	$y = 0.9601 + 0.9312x$
Slovakia	$y = -0.7888 + 0.8574x$
Slovenia	$y = -0.6411 + 1.2329x$

Source: Author

The regression coefficient shows the average change in social globalization when economic globalization grows by unit. In the case of Croatia this means: if economic globalization grows by one unit, then the global socialization will grow on average by 2.0175 units.

For representativity indicators it is necessary to make a variance analysis (Table 6) which relies on the decomposition of the squares sum of the deviation of the value of the dependent variable from its arithmetic mean.

Table 6 Variance analysis for a simple linear regression model – economic and social globalization

Country	SP	SR	ST
Bulgaria	28.9569	5.9939	34.9508
Czech Republic	35.1688	11.2512	46.4150
Croatia	38.0002	5.5572	43.5574
Hungary	27.4051	3.4978	30.9029
Romania	17.7658	2.8107	20.5765
Slovakia	19.2517	4.8226	24.0743
Slovenia	20.8498	5.2026	26.0524

Source: Author

The sum of the squares of total deviations (ST) of the social globalization values from the arithmetic mean is equal to the sum of the squares of the interpreted part (SP) of the deviation of the value of social globalization from the arithmetic mean and the sum of squares of the uninterpreted part (SR) of the deviation of the value of social globalization from the arithmetic mean.

Based on Table 6, representativity indicators can be calculated (Table 7):

Table 7 Representativity Indicators – Economic and Social Globalization

Country	Standard Deviation σ	Variation Coefficient V	Determination Coefficient r^2
Bulgaria	0.5617	-0.6857	0.8285
Czech Republic	0.7695	0.7474	0.7576
Croatia	0.5408	2.3782	0.8724
Hungary	0.4291	-2.1581	0.8868
Romania	0.3846	-0.3312	0.8634
Slovakia	0.5038	0.8864	0.7997
Slovenia	0.5233	1.4797	0.8003

Source: Author

Reaching the conclusion with the help of a variation coefficient is ignored in this case because it has certain deficiencies. For certain countries, the arithmetic mean of a series of data is close to zero and the coefficient grows up to high values, which does not necessarily mean that the linear models are bad, while for certain countries the arithmetic

mean is negative, which implies the negative value of the coefficient itself. Since by definition its values are higher than zero, the ensuing result is its uselessness.

The determination coefficient is equal to the ratio of the sum of deviation squares calculated by the regression and the sum of total deviations. Its values

are relatively high, which is good and indicates a satisfactory representativity of the model (it is desirable that values are as close as possible to the unit).

The following is a test of the hypotheses about the significance of the regression variable (F-test), i.e. about the significance of the β parameter (t-test). The results are shown in Table 8.

Table 8 Hypotheses Tests – Economic and Social Globalization

Country	Testing of the Hypothesis on the Importance of the Regressor Variable $H_0 \dots y_i = \alpha + e_i$ $H_1 \dots y_i = \alpha + \beta x_i + e_i$		Testing of the Hypothesis on the Importance of the β Parameter $H_0 \dots \beta = 0$ $H_1 \dots \beta \neq 0$	
	$F = \frac{SP/1}{SR/(n-2)}$	p Value	$t = \frac{\hat{\beta}}{\sigma_{\hat{\beta}}}$	p Value
Bulgaria	91.7905	1.0445*10 ⁻⁸	9.5807	1.0445*10 ⁻⁸
Czech Republic	59.3901	2.9067*10 ⁻⁷	7.7065	2.9067*10 ⁻⁷
Croatia	129.9213	6.1458*10 ⁻¹⁰	11.3983	6.1458*10 ⁻¹⁰
Hungary	148.8636	1.9562*10 ⁻¹⁰	12.2010	1.9562*10 ⁻¹⁰
Romania	120.0963	1.1808*10 ⁻⁹	10.9589	1.1808*10 ⁻⁹
Slovakia	75.8480	4.6423*10 ⁻⁸	8.7091	4.6423*10 ⁻⁸
Slovenia	76.1434	4.5057*10 ⁻⁸	8.7260	4.5057*10 ⁻⁸

Source: Author

P represents a boundary level of significance, i.e., all the levels of significance α that are less than the p value of the realization of the test statistic do not fall into the critical range, so hypothesis H0 is accepted, and for those that are greater than the p value it is rejected. A small p value goes to the hypothesis of H1, which confirms the representativeness of the model. Table 8 shows that p values for F-test and t-test are equal, which is logical because these tests are equivalent and $t^2 = F$ is valid. The relevant p values are small for all countries, and on this basis H0 is discarded/rejected. Let us suppose that the level of significance be equal to 1%, i.e. 0.01. In the case of Croatia, the realization of F statistics is 129.9213. The corresponding F quantile distribution is 1% smaller than 129.9213 and the realization enters into the critical area, so H0 is rejected.

It can be concluded from the above that economic globalization has a social impact and can be described relatively well in a linear way, although it

would certainly be desirable to study data in more detail, to take a longer time frame into consideration, observe variables with a time shift to see if there is, for example, the influence of economic globalization in time t-1 on social globalization in time t, etc. Also, it would be desirable to examine whether in some cases more complex models would be a better choice, for example, in the case of the Czech Republic and Croatia, where it can be concluded from the scatter diagrams that the curves would be a better choice for approximation of the data, and the representativeness indicators would probably be more accurate.

Since linear models are relatively good, it makes sense to calculate the Pearson coefficient of correlation. The values are shown in Table 9. The coefficients are significant because they have reached high values and thus point to the correlation of variables (preferably closer to the unit because it is a positive relationship).

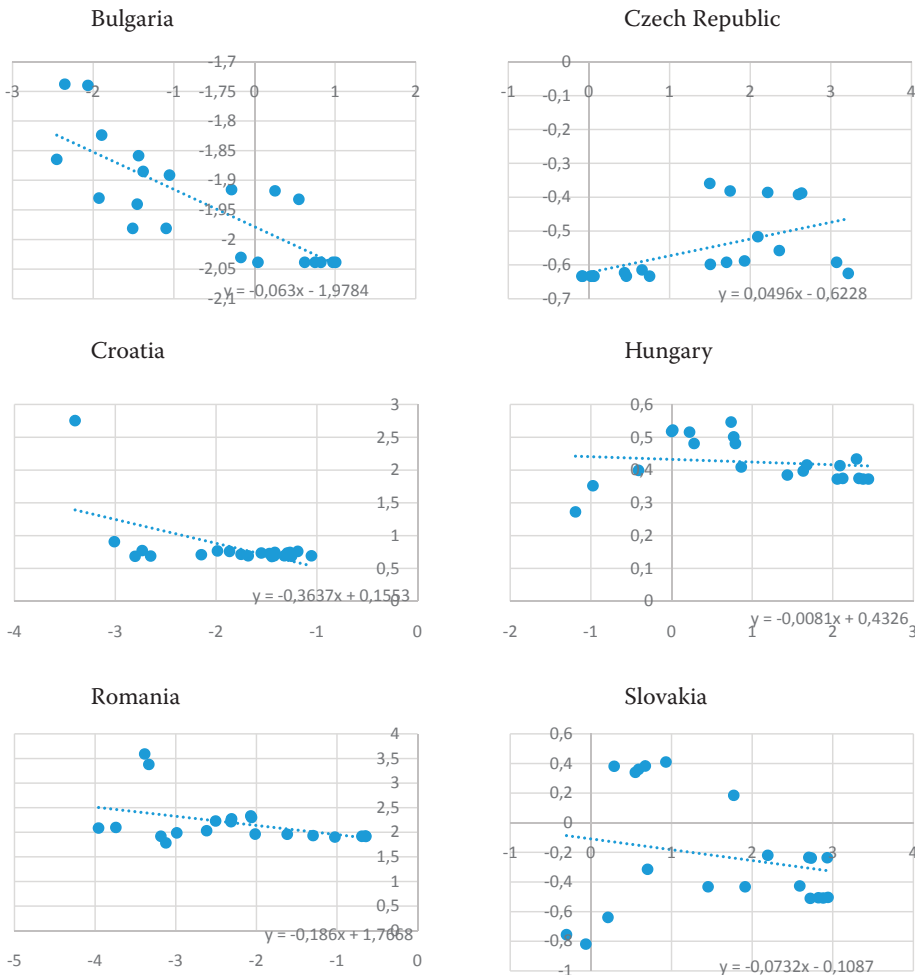
Table 9 The Pearson Correlation Coefficient – Economic and Social Correlation

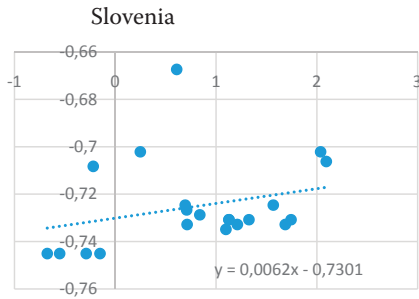
Country	Correlation Coefficient
Bulgaria	0.9102
Czech Republic	0.8704
Croatia	0.9340
Hungary	0.9417
Romania	0.9292
Slovakia	0.8942
Slovenia	0.8946

Source: Author

3.2 Influence of Economic Globalization on Political Globalization

Figure 6 Scattering (Dispersion) Diagrams – Economic and Political Globalization





Source: Author

A positive statistical link between economic and political globalization for the Czech Republic and Slovenia is visible from the scattering diagram (Figure 6), while for the remaining countries it is negative. It will be tested again whether the simple linear regression models are precise enough, although it can be guessed from the diagram that the data is more dispersed from the line than in the case of economic and social globalization. For the purpose of comparability with the remaining relationships, a linear approximation will be calculated and the final conclusions and recommendations for future research will be made.

The equations' parameters have been estimated by the least squares method:

Table 10 Regression Directions by Countries – Economic and Political Globalization

Country	Regression Directions
Bulgaria	$y = -1.9784 - 0.0630x$
Czech Republic	$y = -0.6228 + 0.0496x$
Croatia	$y = 0.1553 - 0.3637x$
Hungary	$y = 0.4326 - 0.0081x$
Romania	$y = 1.7668 - 0.1860x$
Slovakia	$y = -0.1087 - 0.0732x$
Slovenia	$y = -0.7301 + 0.0062x$

Source: Author

Since the regressive coefficients for the Czech Republic and Slovenia are positive, this means that

by increasing one unit of economic globalization, the political globalization is increased on average by 0.0496 units (Czech Republic) and 0.0062 units (Slovenia).

The first step in the calculation of representativity indicators is the variance analysis (the so-called ANOVA).

Table 11 Variance Analysis Table for the Simple Linear Regression Model – Economic and Political Globalization

Country	SP	SR	ST
Bulgaria	0.1130	0.0698	0.1828
Czech Republic	0.0598	0.1550	0.2148
Croatia	1.2353	2.7199	3.9552
Hungary	0.0017	0.0969	0.0986
Romania	0.7087	3.5123	4.2210
Slovakia	0.1402	3.0916	3.2318
Slovenia	0.0005	0.0065	0.0070

Source: Author

Table 12 Representativity Indicators – Economic and Political Globalization

Country	Standard Deviation σ	Variation Coefficient V	Determination Coefficient r^2
Bulgaria	0.0606	-0.0313	0.6183
Czech Republic	0.0903	-0.1628	0.2783
Croatia	0.3784	0.4581	0.3123
Hungary	0.0714	0.1683	0.0174
Romania	0.4230	0.1963	0.1679
Slovakia	0.4034	-1.7965	0.0434
Slovenia	0.0185	-0.0255	0.0753

Source: Author

The variation coefficient is negative for four countries because the corresponding arithmetic mean of a series of data is negative and cannot be interpreted. For Hungary, Romania and Croatia, it makes sense to take them into account and they point to the fact that the models are less precise because they are considered to be representative when the coefficient of variation does not exceed 0.1, i.e., 10%.

But it's certainly necessary to conduct a hypotheses test to bring about the ultimate conclusion. Determination coefficients are fairly low (except for Bulgaria), indicating inapplicable models, i.e. the linear approximation of data is not representative.

The realization of the test *F* and *t* statistics with the corresponding *p* values are given in Table 13.

Table 13 Hypotheses Tests - Economic and Political Globalization

Country	Testing the Hypothesis About the Regressor Variable's Significance $H_0 \dots y_i = \alpha + e_i$ $H_1 \dots y_i = \alpha + \beta x_i + e_i$		Testing the Hypothesis About the Significance of Parameter β $H_0 \dots \beta = 0$ $H_1 \dots \beta \neq 0$	
	$F = \frac{SP/1}{SR/(n-2)}$	p Value	$t = \frac{\hat{\beta}}{\sigma_{\hat{\beta}}}$	p Value
Bulgaria	30.7737	2.3763*10 ⁻⁵	-5.5474	2.3763*10 ⁻⁵
Czech Republic	7.3278	0.0140	2.7070	0.0140
Croatia	8.6288	0.0085	-2.9374	0.0085
Hungary	0.3371	0.5683	-0.5806	0.5683
Romania	3.8338	0.0651	-1.9580	0.0651
Slovakia	0.8613	0.3650	-0.9281	0.3650
Slovenia	1.5478	0.2286	1.2441	0.2286

Source: Author

The P value is small for Bulgaria, the Czech Republic, Croatia and Romania, which is in favour of the H1 hypothesis. The results correspond to the determination coefficients obtained (the highest are for the observed countries). It is concluded from the above that the linear models are average (worse than in the case of economic and social globalization relations). The remaining countries have high p values, which supports the H0 hypothesis; this is also confirmed by small determination coefficients.

The economic globalization has an influence on the political globalization, and it is interesting that this relationship is positive for some countries, while for others it is negative. Linear approximation for the observed states is worse than in the case of economic and social globalization, which is confirmed by the representativeness indicators and the hypothesis tests. The data should be studied in more detail and more complex models should be built that will give better results. It is evident that for a

larger number of countries, it would be sensible to form curve-based diagrams and therefore the Pearson coefficient had not been calculated.

4. Conclusion

The advancement of technology has facilitated the exchange of goods and made travelling faster and easier. However, it has exerted its greatest influence on the availability of information. The free streaming of information had the effect of slowly dissolving the old model of closed, self-sustaining countries that were created in the 19th century. The end of the 20th century was a turning point and the era when many sovereign states were forced to redefine their political frameworks or to change borders. Solid borders formed by the states have turned into a framework of political influence only, and what defines the states in the 21st century can be called "4 I" (Ohmae, 1995) – *investment, industry, individuals and information*. The processes of the "4 I"

represent elements that can remove obstacles and facilitate connectivity through their interaction. The synergistic effect of these elements makes the core of globalization.

Graphic representations of globalization indicators are based on the calculated values of the composite globalization index and it is possible to see how the index had been fluctuating between 1995 and 2015. For the Republic of Croatia, the index had recorded an increase throughout the whole observed period. In the first observed year, it was negative, while in the final year it reached a positive value. By observing the individual categories of globalization (economic, social, political and ecological), a continuous growth is visible within all categories, with the exception of political globalization. The regression and correlation analyses also support the abovementioned. Based on the Pearson coefficient, a strong positive relationship is visible between the economic and social globalization, while between the economic and political globalization it is medium-negative. Based on all of the above, it is possible to conclude that globalization has a positive effect on the economy of the Republic of Croatia. Based on the globalization index calculation for the countries surrounding Croatia, it is possible to conclude that globalization has had a positive effect on them too, which is also evident from the growth of the index in the observed period. By comparing the composite globalization index value for the Republic of Croatia and other states for which it is calculated, it is evident that the economic position of the Republic of Croatia was not as favourable as it was often presented in the media. During the entire observed period, the Republic of Croatia remained at the lowest position according to the index value.

By analysing the individual variables on the basis of which a composite globalization index was calculated, primarily foreign direct investments, portfolio investments or variables from the political globalization category, and by taking into account the growth of the composite globalization index, it is possible to conclude that global organizations are the drivers of globalization processes in individual

countries. By comparing the data and indicators for the Republic of Croatia and other countries from the region, it is evident that the countries are actively involved in the work of international organizations, and based on foreign direct investments, it is evident that foreign capital has been continuously entering the country. In most countries the investments in the observed period grew in line with the country's opening up, right until the outbreak of the 2008 global economic crisis. In the post-crisis period, a slight increase of direct foreign investments has been registered.

The European Union is an association aimed at transferring the local-level activities to the global level. Within the EU, the concept of free flow of goods and capital is applied, while labour migration is under a more stringent control and is limited to a definite time period for the newcomers. Croatia became a full member of the EU in July 2013, and the significant human capital migration, i.e. workforce leaving to work abroad, has already begun. By the opening up the labour market in countries that have become available to workers from Croatia, due to historical circumstances, a higher standard of living or better working conditions, the more significant migration has begun. Thus, for example, 90,488 Croatian citizens have relocated to Germany in 2014 and 2015⁴, and in 2015 about 5,500 Croatian citizens have moved to Ireland⁵. Migrations are part of human history, especially the ones caused by the weather, natural disasters or warfare, but today's migrations are predominantly caused by economic reasons, which is certainly due to globalization. Therefore, it can be claimed that it affects the importance of solid state borders and the migration of human resources.

The composite globalization index is one of the ways of measuring the impact of globalization. By combining different indicators within the index, it is possible to calculate indicators at different levels, such as an enterprise/company, a city, a province or a country. Globalization cannot be viewed as a separate phenomenon, but as the totality of influences, not only on the world economy, but also on global trends in society, politics and ecology.

REFERENCES

1. Al-Rodhan, N. R. F., Stoudmann, G. (2006). *Definitions of Globalization: A Comprehensive Overview and a Proposed Definition*. Geneva: GCSP.
2. Caselli, M. (2008), "Measuring... What? Notes on Some Globalization Indices", *Globalizations*, Vol. 5, No. 3, pp. 383-404.
3. Dreher, A., Gaston, N., Martens, P. (2008). *Measuring Globalization – Gauging its Consequence*. New York: Springer.
4. Dreher, A., Gaston, N., Martens, P., Van Boxem, L. (2010), "Measuring globalization – opening the black box. A critical analysis of globalization indices", *Journal of Globalization Studies*, Vol. 1, No. 1, pp. 166-185.
5. Friedman, T. L. (2000). *The Lexus and the Olive Tree*. New York: Anchor.
6. Hargittai, E., Centeno, M. A. (2001), "Defining a Global Geography", *American Behavioral Scientist*, Vol. 44, No. 10, pp. 1545-1560.
7. Kaluderović, Ž. (2009), "Poimanje globalizacije", *Filozofska istraživanja*, Vol. 29, No. 1, pp. 15-29.
8. Levitt, T. (1983), "The Globalization of Markets", *Harvard Business Review*, Vol. 61, No. 3, pp. 92-102.
9. Lockwood, B. (2004), "How Robust is the Kearney/Foreign Policy Globalisation Index", *The World Economy*, Vol. 27, No. 4, pp. 507-523.
10. Lončar, J. (2005), "Globalizacija – pojam, nastanak i trendovi razvoja", *Geoadria*, Vol. 10, No. 1, pp. 91-104.
11. Nardo, M., Saisana, M. (2009). *Handbook on constructing composite indicators. Putting theory into practice*. Paris: OECD.
12. OECD (2005). *Measuring Globalization: OECD Handbook on Economic Globalisation Indicators*. Paris: OECD.
13. Ohmae, K. (1995). *The End of the Nation States: The Rise of Regional Economics*. New York: Free Press Paperbacks.
14. Steger, M. (2003). *Globalization: A Very Short Introduction*. Oxford: Oxford University Press.
15. Vujaković, P. (2010), "How to Measure Globalization? A New Globalization Index (NGI)", *Atlantic Economic Journal*, Vol. 38, No. 2, pp. 237-237.

ENDNOTES

- 1 Pećina, M. (2006), "Metode multivarijantne analize", available at: http://www.agr.unizg.hr/multimedia/pdf/ds1905_metode_mva_osnove_2006.pdf (Accessed on: December 20, 2017)
- 2 Bahovec, V. (2008), "Analiza glavnih komponenti", available at: <http://web.efzg.hr/dok/sta/vbahovec/Analiza%20glavnih%20komponenti.pdf> (Accessed on: December 20, 2017)
- 3 Bogunović, N., Dalbelo Bašić, B. (2003/2004), "Otkrivanje znanja o skupovima podataka", available at: <http://www.zemris.fer.hr/predmeti/kdisc/bojana/biljeske-OZSP-pogl-1-2-3.pdf> (Accessed on: December 20, 2017)
- 4 "Konačno se zna koliko je Hrvata 2015. otišlo u Njemačku", available at: <http://www.moj-posao.net/Vijest/75766/Konacno-se-zna-koliko-je-Hrvata-2015-otislo-u-Njemacku/2/> (Accessed on: January 06, 2018)
- 5 Soudil, E. (2016), "Lani je u Irsku otišlo 5500 Hrvata, većina je uspjela i gotovo se nitko nije vratio", available at: <http://www.glas-slavonsije.hr/296181/1/Lani-je-u-Irsku-otislo-5500-Hrvata-vecina-je-uspjela-i-gotovo-se-nitko-nije-vratio>, (Accessed on: January 06, 2018)

Dražen Holmik

UTJECAJ GLOBALIZACIJE NA GOSPODARSTVO REPUBLIKE HRVATSKE

SAŽETAK

Globalizacija i globalizacijski procesi, koje je posebno moguće zamijetiti u posljednjih nekoliko desetljeća, utjecali su na prijenos centara moći i značajno promijenili geopolitičku sliku svijeta. Kako bi se utjecalo na globalizaciju potrebno je provesti mjerenje globalizacije, no prvi preduvjet je razumijevanje globalizacije, kako bi se uopće mogla pravilno mjeriti. Mjerenje složene pojave kao što je globalizacija zahtijeva uključivanje velikog broja elemenata kojima će se mjeriti, poput mjerenja društvene, ekonomske, političke i ekološke globalizacije. Određene elemente globalizacije teže je izmjeriti jer pokazatelji uključeni u pojedini element nisu u potpunosti odgovarajući. Ekonomsku globalizaciju uglavnom čine ekonomski pokazatelji koji su nedvosmisleni i usporedivi, dok društvenu ili političku globalizaciju čine pokazatelji koji ovise o gospodarskoj snazi i razvoju države. Proces globalizacije značajno su utjecali na gospodarstvo Republike Hrvatske i države u okruženju. Cilj rada je pružiti sveobuhvatan pregled globalizacijskih trendova u hrvatskom gospodarstvu i usporediti hrvatsko gospodarstvo s gospodarstvima susjednih zemalja koje su imale sličan tranzicijski put temeljem kompozitnog globalizacijskog indeksa. U radu su prikazani rezultati regresijske analize pojedinih elemenata unutar kompozitnog globalizacijskog indeksa.

Glavne riječi: globalizacija, kompozitni indeks globalizacije, regresijska analiza, Republika Hrvatska

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FINANCIAL MANAGEMENT AS A TOOL FOR SUSTAINABLE DEVELOPMENT OF NON-PROFIT SPORTS ORGANIZATIONS – ANALYSIS OF FUTSAL COMPETITIONS IN EASTERN CROATIA

ABSTRACT

The aim of this paper is to establish the impact of revenue and expenditure management on sports events organized by non-profit sports organizations. The subject of the case study is futsal, a team sport known also as five-a-side football which is popular at the recreational level in the Republic of Croatia, has a long history and relatively low organizational costs. The geographical area of the analysis includes five eastern counties of the Republic of Croatia, while the analyzed format of the competition is the one where teams compete for several months, i.e., an entire season. These are amateur competitions where the goal set by the organizer is the development and popularization of the sport, rather than profit. The primary research included in-depth interviews with responsible persons within county football centers and subsequently the organizers of the competitions being held. After the information was obtained, the revenue and expenditure structure, as well as costs of an individual team per played match, were analyzed. Based on this information, through secondary research, publicly available data on individual costs when organizing a sports competition were obtained, and a projection of a sustainable budget was made by balancing its revenue and expenditure aspects. The analysis of the expenditure structure established fixed and variable costs as well as their effect on project sustainability. In accordance with all the results obtained, the main factors of financial difficulties for the sports organizations organizing such competitions were detected, while the conclusion suggests several specific measures possible for overcoming such difficulties.

Keywords: Financial management, sustainable development, sports organizations, recreational sport, Eastern Croatia, futsal

1. Introduction

Every sports organization, as well as any other entity, must have high-quality financial management. Financial management is a process which requires a lot of responsibility, systematic approach and planning. When looking at financial and cost management systematically, in the context of life, it brings us to a conclusion that cost management begins during youth when all individuals must manage their own costs and organize the allowance received from their parents. Over time, incomes of individuals begin to grow, as well as their needs, which in turn increases their costs. After that, personal costs become an element of household finances and household costs, where the costs of the individual are added into household costs and are correlated with household revenues, regardless of whether or not all family members contribute to the budget.

The principle is the same with financial management within a business entity where every business unit or every individual has its own costs which are summed together and correlated with the total revenues of a business entity. Even though it can simply be concluded that one cannot spend more than one earns, and that this golden rule of long-term sustainability is very simple, it is obvious through many examples that poor financial management and poor planning result in a discrepancy between revenue and expenditure in favor of the expenditure, which must not be the case. In such situations, the business balance is disrupted and ultimately leads to bankruptcy of both the natural person and the business entity. The aforementioned is exactly why everyone can have a clear perception of the importance of cost management, regardless of the level on which it is discussed.

Sports organizations, as well as all business entities acting in the field of sports and the sports industry, have their specificities regarding the financial structure through own sources of revenue, public funding sources, financing by financial institutions, shareholding or other forms of financing. However, the rule for long-term sustainability, i.e., the fact that expenditures cannot be higher than revenues, must be at the business core of all sports organizations.

Sports finance can be defined as the study of the effective management of cash flows by sports organizations in pursuit of their organizational objectives. This definition highlights the four key aspects of this

subject, and those are: effective operation of sports organizations, effective management, concern with cash flow and coverage of sports finance (Beech, Chadwick, 2010: 155). The four aforementioned aspects reflect the importance of high-quality financial management for every sports organization.

In the case of football and futsal, Adams, Morrow and Thomson state “providing a generalized understanding of how football clubs determine their objectives and how they are structured, managed, financed and governed has proved difficult to capture with prior research suggesting that football is a site of complex social interactions” (Adams et al., 2017: 1).

For the effectiveness of financial management to be as high as possible, sports organizations increasingly use digital technologies and are transforming their operations towards a higher level of digitalization. Through research, this paper will try to identify the digital tools and digital technology which have an effect on financial management in sports organizations. Additionally, the paper will try to establish the intensity with which each digital tool affects a certain element in the structure and the method of financial management of sports organizations. A chronological perspective on the development of sports organizations, budget size and management methods easily lead to the conclusion that the development of sports organizations would inevitably mean a budget increase as well, and an increase in the complexity and extent of tasks through financial management.

For the effectiveness of financial management to be as high as possible, sports organizations must approach each business segment responsibly and analytically. The research of this paper will try to analyze the financial structure of sports organizations and perceive the relationship of certain costs, and with it the possibility of affecting them by applying particular strategies for better financial management. Within the structure of their costs, all sports organizations have certain costs which can be controlled, and some which cannot. Similarly, there are costs which cannot be avoided in order to organize sports organization activities, and these cannot be controlled, which technically means that they are a prerequisite for carrying out activities. Consequently, before carrying out a sports activity, a sports organization must determine those organizational costs that are essential to this activity, their

amount and the way they will be secured from the revenue.

Investigation into how sports organizations manage their finances has not been done so far in the Republic of Croatia, so there is no current research on this topic. The main reason is the fact that sports organizations are for the most part non-profit associations of citizens. Because of that fact, they do not have clearly defined mechanisms of financial control, and the mechanisms that exist are not effective. The only research that exists is the general study on sport financing in the Republic of Croatia, which gives only a general overview of sports in the country.

2. The Theoretical Part of the Paper

2.1 Sports Organizations and Their Structure

Discussing sports and those participating in it primarily implies athletes and sports organizations that compete in certain competitions or are organized in order to develop the sports activity of their members. However, the sport industry consists of far more entities, i.e., it consists of all those who in any way participate with their products and services in the process of carrying out sports and sports activities. Sports organizations and sports in general have a specific character, unique only to this human activity. Despite some general rules when managing sports organizations which are identical for all business entities, sports still have a specific quality that make them distinct, and therefore complex when it comes to management. This fact concerns sports in terms of a competition where the result is uncertain at the very beginning. Regardless of how hard the management structure tries to be successful in managing a sports organization, a major, perhaps even decisive impact, will be that of the result the team has on the field, and the sports organization management cannot influence this directly. Precisely this cooperation between the participants on the playing field and the sports organization management is key to ensuring the best possible sports result on the field. In terms of organization, sports can be divided into four areas (Bartoluci, 2003: 38):

- Physical education (area of education)
- Competitive sports (of all types and categories)
- Sports recreation (sports for all)
- Kinesiotherapy and adaptive sports.

There are certain divisions within each area, but for the purposes of this paper we will focus on competitive sports which cover the greatest number of sports organizations, and precisely this segment is usually in question when discussing management of sports organizations. Competitive sports can be divided into professional and amateur sports.

From the perspective of the sectors in which sports organizations operate, they can be sorted into three different categories. These are (Tomić, 2007: 57):

- Public (state) sector
- Volunteer (non-profit) sector
- Commercial (professional) sector.

What is particularly important to note is the great interdependence of certain organizations with regard to the sector of their operation. In certain segments of their work, many organizations combine two or even all three sectors.

Beech and Chadwick (2010: 155) define that, in the financial context, sports organizations include the direct providers of participation or spectator sports opportunities as well as the support providers supplying the multitude of ancillary goods and services required by sports organizations and their users/customers. Furthermore, these authors state that all those sports organizations may be large profit-seeking businesses or publicly-funded bodies or member clubs. It is important to note what all those sports organizations, regardless of their size, structure and function, have in common: it is the fact that they require financial management in order to achieve their goals.

2.2 Non-profit Sports Competitions

As stated above, sports organizations can be categorized on a different basis and, for the purposes of this paper, sports organizations that act in the category of competitive sports will be observed. Competitive sports can further be split into professional, i.e., amateur sports. For the purposes of this paper, the focus will be on amateur competitive sports.

Professional sports cover competitions, organizations and athletes that are receiving a salary for sports activities, and it is the primary source of income for them. Also, sports organizations have a goal of maintaining the best possible financial result. Amateur sports include all other types of competition at all levels where engaging in a sports activity is not the primary source of income for the com-

petitors. In the Republic of Croatia, it is amateur sports that are represented to the greatest extent when discussing sports activities. In some clubs, certain groups of competitors compete in professional sports, while other groups compete in the sphere of amateur sports within the same organization.

Analyzing sports organizations further, it may be said that amateur sports organizations organize competitions in which the ones who compete are athletes that do not receive a salary for participating in that competition. With this division, it is possible to differentiate between sports organizations that organize competitions with:

- the aim of making a profit by organizing an amateur sports competition
- the aim of developing a certain sport by organizing an amateur sports competition without making a profit.

Sports organizations that organize competitions with the aim of making a profit can be categorized into the profit sector, and they are characterized by a high degree of organization and structure. On the other hand, sports organizations that organize competitions with the aim of developing sports, without making a profit, are usually organizations for which the term “kitchen table” is used. “Kitchen table” organizations, as defined by Beech and Chadwick (2010: 203), are organizations where most decision-making in the organization and administration typically occurs around the kitchen table or something similar. The same authors state that these organizations typically share the following characteristics: an absence of a central office location and paid staff, heavy reliance placed on volunteers who hold a number of different roles within the organization, a structure with few hierarchical levels, little specialization of volunteer roles or tasks, sports organization is governed by few formal rules, and the decision-making is centralized around a few people.

Precisely in such non-profit sports organizations that organize amateur sports competitions there are frequently difficulties in financial management due to the fact that people organizing the competition, i.e., managing the non-profit sports organization lack adequate competences or tend to be overloaded with tasks. “When the sports institutions and organizations are considered as the businesses producing service in public field, it is necessary for these enterprises to adopt a valid quality management un-

derstanding in order to increase service quality and efficiency and to meet the expectations and needs of customers” (Yüceland, Karatas, 2019: 423).

2.3 *Financial Structure of Sports Organizations*

The costs of a sports organization may vary depending on the sport played by the athletes in that organization, but what they all have in common is the classification according to the following general criteria (Bartoluci, Škorić, 2009: 128):

- capacity utilization (fixed and variable)
- origin (subject of work, resources for work, manpower, service, taxes and contributions)
- locations and effects (direct and overhead)
- effect amount (total, individual, border).

Fixed costs are those costs that appear irrespective of the part of year, i.e., regardless of which part of the competition season the team is in and whether it is competing or is in the preparatory phase of training. When discussing sports events organized for team competitions in certain cycles, and their duration is often shorter than a month, there are certain fixed costs in those cases as well. In sports organizations such costs are frequently considered to be overhead expenses. Such costs can mostly be estimated for an upcoming period, making it easier to define the budget more precisely considering that these are the costs that appeared in the past period as well, and it may be assumed that they will also appear in some future period.

Unlike fixed costs, variable costs depend on which part of the organizational or competitive process this sports organization is in and what its short-term goals for a certain period are. If, for example, sports facilities are considered to be year-round fixed costs, it can be said that a certain part of the sports facilities costs is variable after all. This, for example, can be due to an unplanned repair of the building or sports equipment in a sports facility, unplanned costs as a consequence of unfavorable weather conditions or increased costs when organizing a certain sports event. If a sports organization organizes all its activities outdoors, in case of a certain competition and during unfavorable weather conditions, the competition may have to be held in an alternative indoor area, which will produce additional costs for the sports facility that have not been foreseen by the fixed costs, since it is not used throughout the year.

With sports organizations that are organizing sports competitions, variable costs also depend on the number of participants, since a bigger number of participants requires greater organizational costs as well, such as a bigger number of officials or greater costs for the officials, such as delegates or referees in a competition, increased costs of using sports facilities, increased travel, as well as meal and accommodation costs for both participants and officials.

Certain authors even introduce an additional division of costs, hence Karić (2008:9), based on cost response to the range of production, which for sports organizations would be the amount of sports activities organized or participated in, divides costs into:

- constant (fixed)
- changing (variable)
- mixed.

Naturally, when analyzing their costs, each sports organization can see to what extent a certain group of costs affects the total costs, i.e., what is the amount of these costs, regardless of whether they are fixed or variable. If a certain cost is fixed, but its part in the total costs of a sports organization is small, then the effort invested in its reduction will result in a smaller reduction of total costs, i.e., its increase will not result in significant harm in terms of total costs. Instruments of digital technology are precisely the ones that make detailed revenue structure analysis significantly easier and, in that way, make determining the focus of future activities of management structures of a certain sports organization easier.

2.4 *System of Financing and Financing of Sports in the Republic of Croatia*

“Sports finance can be defined as the study of the effective management of cash flows by sports organizations in pursuit of their organizational objectives. This definition highlights the four key aspects of this subject, and those are: effective operation of sports organizations, effective management, concern with cash flow and coverage of sports finance” (Beech, Chadwick, 2010: 155).

Effective operation of non-profit sports organizations that organize amateur competitions is reflected in successfully organizing and carrying out sports competitions. What is especially important here is the extent of financing of an amateur sports competition that is reflected in the structure of

revenues, which, as the research will show, greatly determines the quality, as well as the course of the competition itself.

In the Republic of Croatia, the sports umbrella organization is the Central State Office for Sport. Its primary task is to make a long-term strategy for the development of sports in the country and, through legal instruments and authorized legal persons, control the implementation of the strategy at all levels¹. In the institutional sense, the highest sports association in the Republic of Croatia is the Croatian Olympic Committee. Its mission is to permanently contribute to the promotion of sport as a universal civilization heritage; spreading of Olympic principles, as well as ethical and moral standards in sports; creating the top sports achievements of the Croatian athletes; promotion of the Republic of Croatia as a democratic state; fair relationships among the participants in sports². Despite the fact that the sports system in Croatia is organized well in the formal and theoretical sense, in practice, sports organizations are mostly left to their own devices, and in many aspects these organizations only survive thanks to the efforts and dedication of a small number of enthusiasts. Such a poorly organized approach is the most common reason for many difficulties in the financing of sports organizations, which ultimately leads to their termination. Such examples showcase the poor management of sports and sports organizations and hence, the non-existence of systematic sports development that can be implemented in practice. “It is not possible to identify the origins of funding in sport, i.e. the share of private and public sources. This is mostly due to the insufficiency of statistical data concerning sport” (Borbély, 2015: 32). Also, it should be noted that sports, in the more developed European countries, earn much more in the market compared to what the state invests in them. Sports organizations in developed countries, in terms of financing, are much more focused on the commercial sector by establishing cooperation with the business world, i.e., by generating revenue through certain commercial activities that provide funding for the development of sports activities they organize. Naturally, for such an approach, an educated staff that will manage sports organizations is necessary, as well as institutional support in terms of the legislative framework and cooperation with the sports umbrella organizations.

2.5 *Financial Management in Sports*

Theoretically, cost management can be defined as a “set of interconnected managerial tasks and activities focused on collecting money for financing of an organization and, based on the analysis of fund flows in an organization, consultation on how to use these funds” (Bahtijarević-Šiber, Sikavica 2001: 622). In line with this, cost management “can be defined as a proactive process of establishing the cause of costs with the fundamental aim of reducing total costs associated with providing products and services” (Potnik Galić, 2015: 11).

According to their legal structure, most sports organizations in the Republic of Croatia act as non-profit organizations in the form of citizens associations; therefore, legal regulations on accounting for non-profit organizations apply. According to these regulations, depending on the amount of annual turnover and the active years of an association, sports organizations are obligated to keep their financial records pursuant to these regulations³. Details of these regulations will not be mentioned here, but only the things relevant for this paper, i.e., that each sports organization needs to regularly record their revenues and expenditures. If cost management should be defined, then a definition applicable to cost management in sports may be used, which states: “Cost management can be defined as achievement of business goals on the basis of optimal costs in certain operating conditions” (Škrtić, 1997: 99).

2.6 *Financial Management through Cost Reduction*

In the context of financial management, maximum results can be achieved in two ways, one by reducing costs and the other by increasing revenue. Variable costs can often be influenced to a greater extent than the fixed costs, although it should be taken into consideration that reducing certain costs may cause a greater negative effect in terms of reducing revenue than if cost reduction had not been implemented. Whereas variable costs reduction can have a short-term effect on the finances of a sports organizations, reduction of fixed costs has a long-term effect because this is a cost that will, in reduced amount, be generated in the upcoming period. In the context of variable costs that can be influenced, several examples in sports will be provided that, through poor planning and poor management decisions can cause a negative effect and, ultimately, result in reduced revenue or, due to this reduction, produce other costs that will be greater than the amount of the ini-

tial reduced cost. In the same way, poor planning of fixed costs reduction and poor management of fixed costs can ultimately lead to unfavourable financial effects for the sports organization.

Investment in marketing and promotional activities is one of the costs that is frequently mentioned as a variable cost subject to correction, and it is frequently among the first on the list when it comes to economic rationalization, if the organization-level costs need to be reduced. However, it is vital to conduct an analysis of the marketing costs structure and assess the revenue they generate with regard to this structure. If, for instance, a sports organization generates most of its revenue through online activities and online ticket sales, it would not make any sense for them to reduce digital activities costs, since they generate most of the revenue. In the context of rationalization and optimization of costs, careful considerations should be made before reducing marketing costs so as not to, for example, reduce sports events ticket sales, or revenue generated by the sales of promotional merchandise sold through the online store.

Another item that can be considered as cost reduction are the costs of paying players, as well as the costs of agreed premiums and bonuses, depending on their performance. This can often cause poorer results if the cost reduction causes a player to leave or if players of lesser quality are bought who will not be able to accomplish the goals set for them.

Utilities costs are an example of fixed costs that can reduce total costs to a certain extent in the long term. However, it is important to see to what extent the reduction in utilities costs affects total costs, i.e., whether reducing costs will reduce the level of service. If, in the example of telecommunications, this means reducing the speed of the Internet that will hamper the work of the administrative staff, the question is how the reduction of this cost is justified and whether it makes sense.

Reducing security costs can lead to incidents at sports events that will later cause more far-reaching consequences for the sports organization in all aspects of operations, even financial ones. Reducing security costs can also result in injuries of match participants, and certainly nobody wants that.

There are many costs that can be influenced by a sports organization; however, one should be careful when it comes to the effects of a particular cost. These can be the costs of investing in the comfort

and maintenance of sports facilities, as well as their renting, costs of preparatory activities of a club or costs of demonstration activities.

Volunteering, on the other hand, can affect cost reductions of certain activities for which members or supporters of a club can be recruited with no financial reward. This style of operation is common in small and non-profit organizations where members and participants frequently do maintenance tasks for sports facilities, transport participants and carry out other organizational activities to improve the sports organization they are involved with.

2.7 Financial Management through Revenue Increase

As already stated, the financial result, besides reducing costs, can also be influenced through more efficient management with the aim of increasing revenue. Increasing revenue often entails certain investments and costs, however, ultimately, investment in an activity whose aim is increasing revenue must result in a financial gap between the invested amount and the result of that investment. In this context, there is a wide spectrum of activities that can result in revenue increase, but also, as is the case with financial management through costs reduction, it takes an analytical approach and responsible management to ensure that no negative effect occurs, i.e., that all efforts invested in revenue increase do not cause an increase in costs that surpasses the increase in revenue.

Marketing activities can surely lead to a revenue increase by improving sports event attendance, which will therefore lead to an increase in revenue generated by ticket sales. Furthermore, it is possible to increase the sales of the club's promotional merchandise by opening different advertising, sales and distribution channels.

The revenue increase can be ensured by enhancing the availability of consumable content within a sports facility, which may or may not require certain costs. If this is undertaken in a partnership with an operator that deals primarily in this activity, then the sports organization can leave the entire organization and additional content sales to another business entity and generate revenue through commission, depending on the amount of sold products. These can be different types of promotional merchandise, drinks or food.

In the context of the analyzed futsal competition, funding comes from private sources of income. "Pri-

vate financing may happen by means of participation, when an athlete finances sport activity on his own. In this case, more than fifty percent of the income for the owner of sports activity is financed by the athlete himself. The other case of private financing is external, where not only the athlete, but also other actors supply the greater part of returns (for instance sponsor or media)" (Becky-Nagy et al., 2015: 20). Efforts regarding the increase of revenue with sports organizations are frequently tied to a partnership with a business entity that has a certain interest in that cooperation as well, as explained in the aforementioned example. However, this cooperation can be achieved in a whole series of different forms, therefore it can work through sales of merchandise, advertising of products and services, through renting a part of the sports facility owned by the sports organization to a business entity for its needs or for activities organized by it, through different types of sponsorships, etc. "Sport organizations should investigate how to increase their brand attitude through sponsorship to increase revenue" (Alonso-dos-Santos et al., 2016: 34).

3. Research Part of the Paper

3.1 Research Methodology

For the purpose of this paper, in terms of methodology, primary and secondary research has been done. The aim of the research was to establish the revenue and expenditure structure of all futsal sports competitions that unfold over the course of several months during the year in eastern Croatia. By establishing the revenue and expenditure structure, it was attempted to establish the intensity of certain costs and how they affect total costs and, hence, the sustainability of revenue and expenditure part of the sports competition budget. The primary research was based on interviews with responsible persons in the Croatian Football Federation in all counties included in the analysis and additional interviews with responsible persons in competitions that are currently being held. The secondary research was based on finding publicly available and accurate data on certain cost items in the expenditure structure, such as renting a sports hall. All data received analytically will lead to certain conclusions that will, at the end of the paper, be specified as the final result of the research and theoretical parts of this paper.

For the purposes of this paper, seasonal amateur sports competitions in futsal were analyzed. In this region it is still known as five-a-side football, despite the fact that, in practice, these are two completely different sports. The geographical area of analysis is the east of the Republic of Croatia, i.e., the five counties in Slavonia:

- Osijek-Baranja County
- Vukovar-Srijem County
- Virovitica-Podravina County
- Požega-Slavonia County
- Brod-Posavina County.

The defining of the expenditure structure for the purpose of this research was based on information received from the organizers of the competitions and publicly available data on sports hall rental costs and, as a representative example, data on the preferential tariff for sports hall rental in the city of Osijek was used⁴. The preferential rental price refers to the lower rent based on the fact that the hall is reserved for training sessions of the members of the Union of Sports Associations of the City of Osijek. Considering the complexity of the calculation and the competition system, a figure of 10 teams per one competition that participate in a double-round system was considered. Most of the teams proportionally increase revenues and variable competition costs.

A limiting factor in the research is primarily the fact that not all geographic areas have a competition. Even more important is the low level of financial transparency. This is a characteristic of the entire sports system in the Republic of Croatia: since the functioning of the system is not fully defined, there is no transparency in revenue and cost records.

3.2 Research Results and Discussion

Amateur competitions in futsal can be divided into short-term tournament competitions during the summer and winter periods and continuous competitions taking place over an entire season. The challenges regarding the organization of amateur seasonal competitions prompted us to analyze these competitions and their financial structure. Seasonal competitions can include competitions that last several months or year-round. They have a clearly defined structure, competition system and rules pursuant to the official futsal rules of competition. It is interesting to note that in all five Slavonian counties there were only three active competitions in the last three competition seasons.

As can be seen from the table below, the competitions that are held are the County Futsal League of Vukovar-Srijem County (hereinafter: County League VSC), the County Futsal League of Požega-Slavonia County (hereinafter: County League PSC) and the Catholic Futsal League of Roman Catholic Archdiocese of Đakovo-Osijek. The Catholic Futsal League (hereinafter: CFL) is the greatest in number by far.

Table 1 Number of teams in the organized amateur futsal competitions in eastern Croatia

	CFL	County League VSC	County League PSC
Number of teams in season 2018/2019	54	8	16
Number of teams in season 2017/2018	45	9	17
Number of teams in season 2016/2017	52	8	17
Number of players per team	11	10	15
Matches per team in season	16	14	24
Total matches in a season	432	56	240

Source: Authors' research

If the income structure refers to revenue from registration fees paid by the teams exclusively, a certain difference in the registration fee amount can be noticed, however, if the registration fee paid by the team is considered in terms of matches they can play for this amount, then it can be noticed that

teams participating in the County Futsal League of Požega-Slavonia County have the highest cost per match played, while the teams in the Catholic Futsal League have the lowest cost per match, i.e., they can play the most matches for the money invested, i.e., for the paid registration fee.

Table 2 Revenue and costs ratio per match based on team registration fees

	CFL	County League VSC	County League PSC
Number of players per team	11	10	15
Matches per team in a season	16	14	14
Total matches in a season	432	56	112
Registration fee per team	1,500.00 HRK	1,500.00 HRK	2,500.00 HRK
Total revenue generated from the registration fees	81,000.00 HRK	12,000.00 HRK	40,000.00 HRK
Team cost per match	93.75 HRK	107.14 HRK	178.57 HRK
Organizer's revenue generated by registration fees per match	187.50 HRK	214.29 HRK	357.14 HRK

Source: Authors' research

As stated above, the costs and revenue projection was based on the double-round league system with 10 teams participating, i.e., paying the registration fee in the amount of 1,500 HRK each year. From Table 3 it can be noticed that the total revenue gener-

ated by the registration fees is insufficient to organize competitions. For the organizer to completely cover the costs with the revenue generated by the registration fees, the registration fee would have to be increased to 2,700 HRK per year, i.e., by 80%.

Table 3 Calculation of total revenue, expenditures and costs per match played

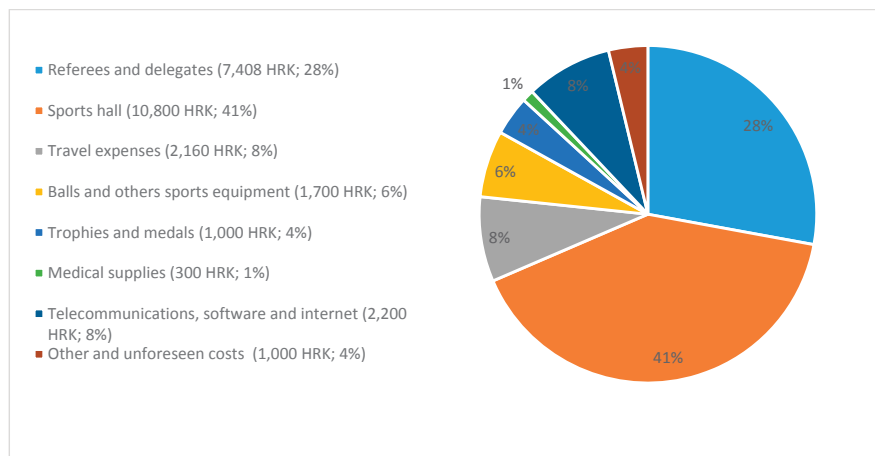
	Realistic situation	Sustainable situation	Without sports hall costs
Number of teams	10	10	10
Competition system	double-round	double-round	double-round
Matches in a season – total	90	90	90
Matches in a season – per team	18	18	18
Number of players – total	110	110	110
Number players – per team	11	11	11
Registration fee per team	1,500.00 HRK	2,700.00 HRK	1,500.00 HRK
Organizer's revenue generated by registration fees	15,000.00 HRK	27,000.00 HRK	15,000.00 HRK
Total expenditure	26,568.00 HRK	26,568.00 HRK	15,768.00 HRK
Team cost per match	83.33 HRK	83.33 HRK	83.33 HRK
Organizer's costs per match	295.20 HRK	295.20 HRK	175.20 HRK
Organizer's revenue generated by registration fees per match	166.67 HRK	300.00 HRK	166.67 HRK

Source: Authors' research

The analysis of the expenditure structure has shown that the greatest item in terms of costs is the renting of a sports hall, as much as 41% of total costs, fol-

lowed by the costs of official referees and delegates without whom it would be impossible to hold the competition⁵.

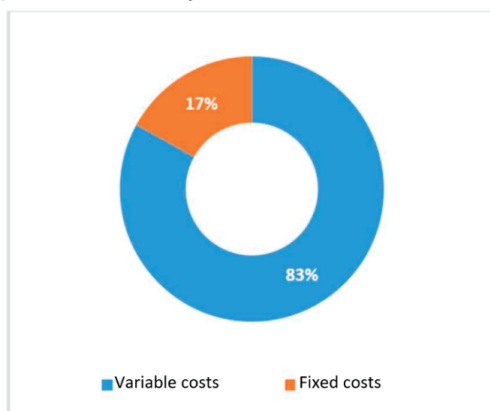
Figure 1 Structure of expenditures per items



Source: Authors' research

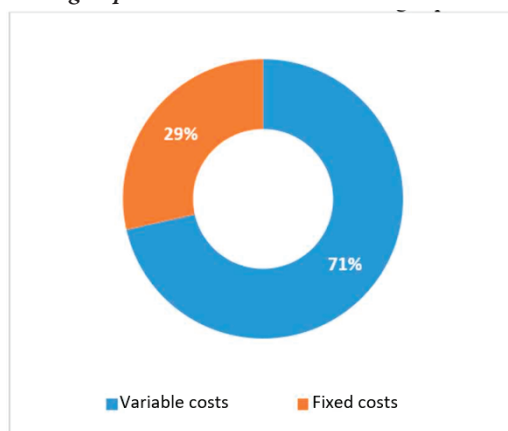
Looking at the dependence of the variable costs in Figure 2 (costs of referees and delegates, hall rental, travel expenses for officials, balls and other sports accessories), which change depending on the number of teams and fixed costs, it can be noticed that the variable costs amount to 83% of the total costs, and precisely these costs should be emphasized. Figure 3 shows that, if the costs of sports hall rental were to be removed, it would make the financial structure entirely sustainable based on the revenue generated by the team registration fee of 1,500 HRK, as presented in the last column of Table 3.

Figure 2 Representation of a realistic relationship between fixed and variable costs pursuant to the defined costs



Source: Authors' research

Figure 3 Representation of a relationship between fixed and variable costs without the costs of renting a sports hall



Source: Authors' research

If costs of referees, delegates and their travel expenses, that make up a significant 36% of the costs were to be represented in a similar manner, similar results would be shown, i.e., the system would be sustainable in the long term. Since this is not a realistic option, then the sustainability of the competition through financial management must be ensured by increasing revenue through larger registration fees for the teams or by ensuring revenue from some other sources. This increased revenue would ensure the settlement of sports hall rental

costs, otherwise all other possibilities would damage the regularity and quality of the competition.

4. Conclusion

As elaborated both in the theoretical and the research, i.e., practical part of the paper, financial management is a very important tool for long-term sustainability in all organizations. The same could be said for any sports organization that organizes a sports competition with the sole goal of organizing an amateur competition among participants for the purpose of popularizing a sport, in this case, futsal. With such organizations, where financial gain is not the purpose of the organization's activities, volunteers take on a large portion of the responsibility. Since these are non-commercial competitions, the public sector should have an interest in popularizing this type of sports since these competitions are the foundations on which higher ranks of competitions are built, all the way up to national teams. In this way, continuity in the work and development of a certain sport is generated. What is clear in this example is the fact that such competitions can be made sustainable in a very simple way, by having the public sector, as the owner of a sports hall, ensure free use of the sports hall and thus allow for the revenue to cover the total costs.

The second way of ensuring the sustainability of amateur sports competitions is through increased activity of the organizer in the market, finding a partner and ensuring a mutually beneficial cooperation. In this way the organizer can increase revenue for the organization and enable revenue for the partner through distribution of products or services during the competition. Corporate sponsors and donors that see a direct/indirect benefit for their company, employees or the broader community can be sorted in this category.

The third way of achieving sustainability of amateur sports competitions is by increasing the registration fees revenue, i.e., costs dispersion to teams, which drives the team to find additional sources of income by increasing personal donations of players or by finding a sponsor that will be prepared to settle greater costs of organization. This case is

not rare, however, the question of its sustainability lies in the ability of individuals in each team and how skilled they are in finding additional sources of funding, which cannot be directly influenced by the organizer or under the organizer's supervision.

The fourth way of achieving sustainability in amateur sports competitions, futsal specifically, as can be observed in the presented examples, is impairing competition quality as a way of compensating for the reduced revenue amount. An example of this is the Catholic Futsal League that gave up on organizing competitions in sports halls and is now organizing all its competitions at outdoor public playgrounds where there are no direct usage costs. It seems that such a model is sustainable in the area of eastern Croatia since the aforementioned competition has the greatest number of participants. It may be assumed that transferring the competition into a sports hall, while maintaining costs, would improve competition quality.

Finally, it may be concluded that this paper, after analyzing finances, presented several specific suggestions of solutions for long-term sustainability of amateur futsal competitions as well. There is a particular emphasis on the responsibility in financial management that is associated with competencies of persons organizing futsal competitions and their ability and willingness to make extra efforts in financial management. One of the reasons for the small number of amateur competitions in futsal in the eastern part of Croatia can be found in this fact. Another reason certainly lies in the fact that there is no systematic support by the national institutions for the development of futsal. However, some good examples showed that, with additional efforts, it is possible to manage costs and develop futsal competitions in the eastern part of Croatia.

In future research, the analysis needs to be extended to the entire country to see differences in the development of futsal and the number of participants in the regional context. Future research should also involve the participants themselves in order to analyze their needs, but also to determine their financial potential for the future development of futsal competitions in Croatia.

REFERENCES

1. Adams, A., Morrow, S., Thomson, I. (2017), "Changing Boundaries and Evolving Organizational Forms in Football: Novelty and Variety Among Scottish Clubs", *Journal of Sport Management*, Vol. 31, No. 2, pp. 161-175.
2. Alonso-dos-Santos, M., Calabuig-Moreno, F., Montoro-Ríos, F. J. (2016), "Effectiveness of the sponsors and sporting events website", *International Journal of Sport Management, Recreation and Tourism*, Vol. 25, pp. 22-44.
3. Bahtijarević-Šiber, F., Sikavica, P. (2001). *Leksikon menadžmenta*. Zagreb: Masmedia.
4. Bartoluci, M. (2003). *Ekonomika i menadžment sporta*. Zagreb: Informator, University of Zagreb, Faculty of Kinesiology.
5. Bartoluci, M., Škorić, S. (2009). *Menadžment u sportu*. Zagreb: Odjel za izobrazbu trenera Društvenog veleučilišta u Zagrebu, University of Zagreb, Faculty of Kinesiology.
6. Becsky-Nagy, P., Dékán, T., Szoke, R., Bács, Z. (2015), "The relevance of sports financing", *Applied Studies in Agribusiness and Commerce – APSTRACT*, Vol. 9, No. 1/2, pp. 19-22.
7. Beech, J., Chadwick, S. (2010). *Sportski menadžment*. Zagreb: Mate d.o.o.
8. Borbély, T. (2015), "Sports financing in Croatia", *AgEcon Search*, Vol. 9, No. 1-2, pp. 31-34.
9. Karić, M. (2008). *Upravljanje troškovima*. Osijek: Josip Juraj Strossmayer University of Osijek, Faculty of Economics in Osijek.
10. Potnik Galić, K. (2015). *Strateško upravljanje troškovima*. Požega: Polytechnic of Požega.
11. Škrtić, M. (1997), "Obračunavanje i upravljanje troškovima", in Pavlović, J., Škrtić, M. (Eds.), *Mikroekonomika*, Zagreb: Mikrorad, pp. 99-140.
12. Tomić, M. (2007). *Sportski menadžment*. Belgrade: DATA STATUS.
13. Yücel, A. S., Karatas, Ö. (2019) "Analysis on the Opinions of Employees Working in Provincial Directorates of Youth and Sports Regarding Six Sigma Management Model", *Universal Journal of Educational Research*, Vol. 7, No. 2, pp. 422-435.

ENDNOTES

- 1 Central State Office for Sport, "Djelokrug", available at: <http://www.sdus.hr/o-nama/djelokrug/> (Accessed on: September 18, 2018)
- 2 Croatian Olympic Committee, "O Hrvatskom olimpijskom odboru", available at: <https://www.hoo.hr/hr/hrvatski-olimpijski-odbor/o-hrvatskom-olimpijskom-odboru/1299-hrvatski-olimpijski-odbor> (Accessed on: September 18, 2018)
- 3 Institute of Public Finance (2012), *Financiranje sporta u RH*, Zagreb: Institute of Public Finance.
- 4 Športski objekti, available at: <https://www.sportski-objekti.hr/index.php/objekti/sd-zrinjevac> (Accessed on: September 28, 2018)
- 5 Isplate.info, available at: <https://www.isplate.info/kalkulator-ugovor-o-djelu-2017.aspx> (Accessed on: September 28, 2018)

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UPRAVLJANJE FINANCIJAMA KAO ALAT ODRŽIVOG RAZVOJA NEPROFITNIH SPORTSKIH ORGANIZACIJA – CASE STUDY FUTSAL NATJECANJA ISTOČNE HRVATSKE

SAŽETAK

Cilj je ovoga rada utvrditi utjecaj načina upravljanja prihodima i rashodima na organiziranje sportskih događaja koje organiziraju neprofitne sportske organizacije. Studija slučaja rađena je futsalu, timskom sportu poznatom kao „mali nogomet“, kao sportu duge povijesti, relativno niskih troškova organizacije i sportu koji je u Republici Hrvatskoj na rekreativnoj razini izuzetno popularan. Geografsko područje analize je pet istočnih županija Republike Hrvatske, dok je analizirani format natjecanja onaj u kojem se ekipe natječu u višemjesečnom, odnosno cjelosezonskom natjecanju. Natjecanja su amaterskog tipa te organizator kao primarni cilj postavlja razvoj i popularizaciju sporta, odnosno profit nije cilj organizacije. Primarno istraživanje obuhvatilo je intervjuiranje odgovornih osoba u županijskim nogometnim sjedištima te nakon toga i intervju s organizatorima natjecanja. Nakon dobivenih informacija napravljena je analiza strukture prihoda i rashoda te troškova pojedine ekipe po odigranoj utakmici. Na temelju tih podataka kroz dodatno sekundarno istraživanje dobiveni su javno dostupni podatci o pojedinim troškovima prilikom organizacije sportskog natjecanja te je napravljena i projekcija održivog proračuna kroz uravnoteženje njegove prihodovne i rashodovne strane. Analizom strukture rashoda utvrđeni su fiksni i varijabilni troškovi te njihov utjecaj na održivost projekta. Sukladno svim dobivenim rezultatima utvrđeni su glavni čimbenici financijskih poteškoća sportskih organizacija koja organiziraju ovakvu vrstu natjecanja te je u zaključnom dijelu kroz nekoliko konkretnih mjera predloženo i na koji način se takve poteškoće mogu prevladati.

Gljučne riječi: upravljanje financijama, održivi razvoj, sportske organizacije, rekreativni sport, istočna Hrvatska, futsal

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BELIEFS ABOUT EFFECTS OF ORGANIC PRODUCTS AND THEIR IMPACT ON INTENTION TO PURCHASE ORGANIC FOOD

ABSTRACT

Globally, there is a growing number of studies focused on discovering the factors that influence the intention to purchase organic products. The present research aims to investigate beliefs about the direct effects of organic food on health, lifestyle, enjoyment of food, environment and the local economy and their influence on the intention to purchase this type of products. It is expected that this relation will be stronger if those factors capture the consumers' beliefs on how effective organic food products are in contributing to specific important issues rather than capturing their general attitudes towards those issues, which were predominantly investigated in previous research.

The study is based on the results of a questionnaire completed by a sample of 411 primary household shoppers from Eastern Croatia. Regression analysis results reveal that intrinsic variables have a stronger influence on the intention to purchase organic food, meaning that it would be most beneficial for organic food marketers and other involved stakeholders to foster the consumers' beliefs regarding personal benefits gained from organic food consumption. The strongest influence thereby relates to health benefits, followed by enjoyment of food and positive influences on adopting a desired lifestyle. The results related to extrinsic variables reveal that organic food consumption may also be increased by emphasising multiple benefits to be gained by the local economy from this type of production. However, when it comes to the effects of individual consumption on the environment and society, it is obvious that consumers must be further educated.

Keywords: Organic food, intention to purchase, behavioural beliefs, attitudes, extrinsic variables, intrinsic variables

1. Introduction

The segment of environment-conscious and health-conscious consumers has proven to be highly attractive to modern marketers, especially in the food industry which supplies this segment with the increasingly desirable organic food. According to Martić Kuran and Mihić (2014: 181), *“organic food is food produced without the use of chemical pesticides and fertilizers, which does not contain any synthetic hormones. It is produced under legally defined methods, and its composition should match general laws and regulations on food quality”*. Organic food is one of the fastest-growing segments of agriculture and retail. The value of the European organic food market has grown from EUR 7 billion in 2000 to EUR 29.8 billion in 2015 (FIBL and IFOAM, 2017¹).

Because of many advantages and multiplicative positive effects on the economy and society as a whole, even national economic strategies of many countries strive to encourage the production of and demand for organic food. Scientists claim, and the modern practice confirms, that the best way to stimulate production is by stimulating consumption. Basic economic principles then give the necessary incentive to the supply side of the market and bring many benefits in the form of sustainable production, jobs, higher incomes, health benefits for the population, support to sustainable tourism, development of desirable social values, etc. Therefore, academic experts try to make a contribution by examining and discovering all the factors that influence the decision to purchase and consume organic food.

Globally, there is a substantial and growing number of studies focused on discovering the factors that influence the intention to purchase organic products. There is also a growing interest of interdisciplinary experts in Croatia looking into attitudes related to the purchase of environmentally friendly food products (Faletar et al., 2016; Brčić-Stipčević, Petljak, 2011; Renko, Bošnjak, 2009; Štefanić et al., 2001) The paper by Martić Kuran and Mihić (2014) was aimed at defining the factors which influence the intention of Croatian consumers to purchase organic food. That paper was based on the theory of planned behaviour (TPB), which has proved to be a highly applicable theoretical framework for

studying this issue. As such, it has been widely used by numerous authors around the globe (Salleh et al., 2010; Voon et al., 2011; Saleki et al., 2012; Saleki, Seydsaleki, 2012; Phuah et al., 2012; Shariff et al., 2012; Ham et al., 2015; Ham et al., 2018). TPB is based on the assumption that most human behaviour is a result of an individual's intention to adopt a particular behaviour and to make a conscious decision about it.

Some of the relations in previous research were found to be weak in spite of the strong assumption that the influence should be strong, which is based on common sense and everyday experience. Some experts claim that the reason for that could be the fact that research usually captures attitudes at a very general level (attitudes on health, environment, etc.) and tries to measure their influence on very specific behaviours. Due to the possibility that consumers could express, for example, highly positive attitudes towards the environment, but remain unconvinced that individual consumption decisions could make an actual impact on environmental issues, their attitudes could not be adequately reflected in their behaviour. Also, when it comes to other factors, for instance attitudes towards the local economy, consumers might lack sufficient information or education to fully understand the effects of organic food consumption on the local economy. They could be very ethnocentric, but, at the same time, that factor could be insignificant for forming their intention to purchase organic food.

The present research aims to investigate the beliefs about direct effects of organic food products on health, lifestyle, enjoyment of food, environment and the local economy and their influence on the intention to purchase and consume this type of products. It is expected that this relation will be stronger if attitudes capture the consumers' beliefs on how effective organic food products are in contributing to specific important issues. Thereby, this research attempts to broaden the knowledge on the facts relevant for promoting and fostering purchases of organic food.

2. Theoretical background

Based on a widely used and confirmed theory of planned behaviour proposed by Ajzen (1991), intention is the best predictor of actual behaviour. Intention to buy represents a plan to purchase a particular good or service in the future (Business dictionary, 2016²). Intention to buy can be further operationalised as a related behaviour, while on the other hand, potential buyers may experience some obstacles that will prevent them from making the actual purchase. The final decision depends on whether the motives for purchase or barriers to purchase had a more powerful impact on the potential buyer. It has been confirmed that the relation between attitude and intention is stronger than the relation between intentions and actual behaviour (Kim, Hunter, 1993). This is expected, considering that the relation between intentions and behaviour is under the powerful influence of external factors. Some authors, for example Stone and associates (1995), refer to this variable as “willingness to act”, while Maloney and Ward (1973) named it “verbal commitment” and defined it as a measure of probability of an individual’s future actions. In this paper, the intention to buy relates to the purchase of organic food.

Fishbein and Ajzen’s theory of attitudes and values (Ajzen, Fishbein, 1975) states that an attitude is formed based on the beliefs that an individual has about a particular object (other person, object, place or event) and is represented by attributes that are tied with the observed object. In the case of an attitude towards a certain behaviour, each belief links a particular behaviour with a specific outcome, consequence, or some other attribute (such as the cost of adopting a specific behaviour). Since each attribute is evaluated in advance as positive or negative (emotional component of the attitude), the behaviour is therefore automatically perceived as desirable (if it has predominantly positive outcomes) or undesirable (if it is linked with predominantly negative outcomes).

Previous studies have associated organic food consumption with behavioural attitudes such as health consciousness, environmental consciousness, trust in organic food claims, desirability of organic food attributes, such as taste, texture, freshness (Michaelidou, Hassan, 2008; First, Brozina, 2009; Salleh et

al., 2010; Voon et al., 2011), and other attitudes, such as attitudes about the local origin of products, fair trade (Tanner et al., 2003) and reference knowledge (Amran, Nee, 2012; Saleki et al., 2012).

As organic food is generally believed to be more nutritious, healthier and safer than conventional food, it is likely that a health-conscious consumer will have positive attitudes towards organic food, which will drive a greater demand for this type of products. Żakowska-Biemans (2009: 770) conducted a research in Poland about the motives and barriers related to organic foods. The survey, besides the motive of health, also discussed five other factors that should be mentioned: safety, taste, environmental impact, contribution to animal welfare and appearance. In that paper, the author concluded that health and safety concerns are the primary motives.

Intention to eat healthily is determined by intrinsic motives, including “feeling better” and “staying healthy” (Michaelidou et al., 2011: 20). According to their research, motives to eat healthily can be classified as intrinsic or extrinsic and they comprise three categories of motives, including self-image (e.g. looking attractive), health (e.g. enhancing health, preventing disease) and social pressure (e.g. pressure of others to eat healthily).

Numerous studies have found that health benefits are the main motives for buying organic food products (Wier, Calverly, 2002; Roitner-Schobesberger et al., 2008). Salleh and his associates (2010) determined that the impact of health consciousness on customers’ purchase intention to buy organic food products is stronger than the impact of environmental concerns. According to the research by Voon and associates (2011), health and environmental concerns, combined with trust in organic food claims and desirability of organic food attributes, form the attitude of Malaysian consumers towards organic food. The importance of health and environmental concerns reflects the growing affluence of consumers. Rising educational levels coupled with better access to worldwide communication and information channels have raised their awareness of health and environmental issues.

It is useful to point out that, although the health aspect of organic food is the most common motive for buying organic food among respondents in that type of research, other research has shown that the correlation between attitudes about organic products and health awareness is insignificant (Tomić et al., 2015: 12).

Besides the already mentioned elements which affect the intention to buy organic food and other organic products, safety of food, nutritional value, taste, freshness, appearance and other sensory characteristics also affect consumer's preferences of organic food (Gil et al., 2000). The choice of organic over conventional food is usually driven by many motives, including those related to social and environmental responsibility, economic incentives and barriers and factors related to one's own well-being and altruistic concerns for the well-being of family members (Urban et al., 2012: 728).

Following Tanner and Wölfling Kast (2003), it is also important to consider attitudes towards the local origin of products. According to Plummer (1974: 36), in predicting consumer behaviour, experts argued that a person's lifestyle will determine his/her consumption behaviour.

On a general level, it is important to point out that, according to research, measures of specific attitudes (e.g. opinions about products or behaviours) are more likely to be manifested in environmental behaviour than general measures of environmental concern (e.g. opinions about environmental problems) (Tanner, Wölfling Kast, 2003). According to Newhouse (1990), inconsistency between attitudes and behaviour occurs most frequently when measurement of general attitudes is applied for predicting specific (concrete) behaviours. Namely, variables used for measuring attitudes about specific behaviours (attitudes about activities) are better predictors of environmentally oriented behaviour than those variables used for measuring general attitudes about the environment (Bodur, Sarigöllü, 2005: 504). Furthermore, it must be taken into account that consumers' attitudes about various environmental issues, as well as about various environmental behaviours may vary.

What is more, it is often indicated that certain discrepancies between attitudes towards the environment and behaviour can be described by cognitive dissonance. Cognitive dissonance is a mental state, often a conflict, in which a person experiences two

or more contradictory beliefs or cognitively processes a lot of information. In an individual, it usually leads to a feeling of psychological discomfort that lasts until the person resolves the issue. Based on research results, we can conclude that people often experience cognitive dissonance with regard to their behaviour towards environmental issues (Ham et al., 2016). If the conflict between environmental attitudes and behaviour does lead to perceived dissonance, a potential strategy for its reduction could be to channel one's concern for the environment through specific behaviours that require less or no special sacrifice, thus creating an alibi for one's own consciousness (Bratt, 1999: 28).

Finally, as stated earlier, consumers may be sceptic or simply not educated enough to understand the effects of a certain behaviour on a relevant issue. It is therefore important to also investigate the beliefs on the actual effects of certain behaviours on a specific environmental issue. The research question could thereby be stated as: Which beliefs about effects of organic products have the strongest impact on the intention to purchase organic food?

3. Research methodology

3.1 Participants and procedure

The research is based on an in-person survey conducted on a convenience sample of 411 primary household shoppers from five counties in the Slavonia and Baranja regions in Croatia. According to Tanner and Wölfling Kast (2003: 85), primary household shoppers are defined as "*the people who make purchasing decisions and regulate what the other members of the household eat*", therefore representing the most relevant source of information. In this research, primary shoppers were selected by placing a filter question (Are you the person who does the most grocery shopping for your household?) at the very beginning of the questionnaire.

The information obtained was analysed using the SPSS statistical software package version 18.0. Statistical techniques of univariate analysis (frequency distribution, central tendency measures), multivariate analysis (reliability analysis, linear regression) and comparative analysis (ANOVA, t-test) were used. Table 1 shows the sample description.

Table 1 Sociodemographic characteristics of the sample (N=411)

		%
Gender	M	20.7
	F	75.2
Age at the time of the survey (years)	<30	25.4
	30-39	14.3
	40-49	31.8
	50-59	22.3
	>60	6.2
Education	Primary school	10
	Secondary school	56.9
	University degree	10.2
	Master's degree	17.5
	Doctorate	3.9
Place of residence	Village	29.2
	Suburb	17
	Town/city	51.6
Standard of living in a household	Below the country's average	20.2
	At the country's average	69.6
	Above the country's average	9.2
Employment status	Student	6.6
	Unemployed	24.8
	Employed	56.4
	Retired	11.7
Household size	1-2	22.7
	3-4	53.5
	>5	23.9
Children in the household under 15 years of age	0	70.8
	1	15.8
	2	9.5
	>3	3.9
Household income (EUR/month)	<500	16.1
	501-1000	31.9
	1001-1500	25.5
	1501-2000	14.4
	2001-2500	6.6
	>2500	5.1

Source: Author's work

3.2 Instrument and measurement

To explore the relation between the beliefs on the direct effects of organic food products on one hand, and organic food purchase intention on the other, six measurement scales were employed to capture an individual's beliefs on the effects of organic products on health, lifestyle, enjoyment of food, environment and society and the local economy, as well as an individual's intention to purchase organic food products. Measurement scales were created by the author or adapted from previous studies in this field (Tanner et al., 2003; Voon

et al., 2011). Each scale comprised a set of statements presented in a Likert-type format with a five-point scale to capture the extent to which respondents agree or disagree with the statements in the questionnaire. Mejovšek (2003: 42) states that a five-point Likert-type scale is especially suitable for collecting data on populations that have educational systems with grades from 1 to 5, as individuals are used to thinking about and evaluating things in terms of that range. The list of items included in each construct and the reliability measure Cronbach's Alpha are provided in Table 2.

Table 2 List of items and reliability measures

Variable	Items	Cronbach's Alpha
Intention to purchase organic food products	I will definitely purchase some organic food in the next few months.	.902
	I will actively seek organic food in the stores so I could purchase it.	
	I intend to purchase organic food in the near future.	
	I am willing to do what it takes to get to organic food.	
	My personal goal is to consume as much organic food as possible.	
Effects of organic products on health	Purchasing organic food enables me to contribute to my health and my family's health.	.721
	Purchasing organic food makes me feel sure that the food I eat will not harm me with chemicals and pesticides.	
	I am willing to buy organic food because the health benefits outweigh the cost.	
	When making purchases, the fact that organic food products do not contain unhealthy substances is important to me.	
	Organic food does not contain genetic modifications, additives, artificial flavouring or pesticides.	
Effects of organic products on lifestyle	Purchasing organic products enables me to be consistent with the modern lifestyle.	.842
	Purchasing organic products enables me to be different from others and makes me stand out with my different lifestyle.	
	Purchasing organic food is an important part of my personality.	
	Organic food is a part of my desired lifestyle.	
Effects of organic products on enjoyment of food	Organic food tastes better.	.702
	Purchasing organic food enables me to eat tastier food and enjoy it more.	
	Consuming organic food would give me great pleasure.	
	Consuming organic food seems attractive to me.	
Effects of organic products on the environment and society	Purchasing organic food enables me to be socially responsible.	.848
	Purchasing organic food enables me to make an impact on environmental protection.	
	Purchasing organic food enables me to calm my conscience regarding the harm we are doing to plant and animal life.	
	Purchasing organic food enables me to calm my conscience in relation to the harm we are doing to future generations.	
Effects of organic products on the local economy	Supporting local farmers when making a purchase is important to me.	.834
	It is good to support Croatian agriculture by buying regional products.	
	When it comes to food, it is extremely important to me that it is produced in Croatia.	
	If there is a Croatian alternative of a product, I will always choose a Croatian instead of a foreign product.	
	I will buy a Croatian product even if a particular foreign product is on sale.	

Source: Author's work

Cronbach's Alpha coefficient indicates that all constructs have an adequate level of internal consistency, in accordance with the Nunnally's (1978) suggestion that the value of the said coefficient should be above 0.7.

4. Research results

The aim of the paper was to determine the beliefs on the effects of organic food products or the fac-

tors that positively influence the intention to buy this type of products. Linear regression tests using the standard regression method were subsequently conducted to find out which determinants could influence the intention to purchase organic food products according to their level of importance.

The proportion of explained variance as measured by R-Squared for the regression is 61.5%, as depicted in Table 3.

Table 3 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.784 ^a	.615	.610	.62896	.615	126.186	5	395	.000

a. Predictors: (Constant), effect_economy, effect_lifestyle, effect_enjoyment, effect_environment, effect_health
Source: Authors' work

ANOVA results in Table 4 show that the model reaches statistical significance (Sig = 0.000).

Table 4 ANOVA results

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	249.592	5	49.918	126.186	.000 ^b
Residual	156.260	395	.396		
Total	405.852	400			

a. Dependent Variable: intention

b. Predictors: (Constant), effect_economy, effect_lifestyle, effect_enjoyment, effect_environment, effect_health
Source: Authors' work

Regression analysis results are presented in Table 5. Based upon the results, the predictive power of the following constructs was confirmed: beliefs on the effects of organic products on lifestyle, on enjoy-

ment of food, on health and on the local economy. Only the influence of the beliefs on the effects of organic products on the environment and society was found to be insignificant.

Table 5 Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.591	.177		-3.342	.001
Effect_lifestyle	.137	.030	.190	4.601	.000
Effect_environment	.052	.046	.049	1.120	.264
Effect_enjoyment	.344	.054	.298	6.374	.000
Effect_health	.433	.065	.329	6.708	.000
Effect_economy	.087	.040	.077	2.173	.030

a. Dependent Variable: intention

Source: Authors' work

The overall multiple regression model worked well for explaining the variation in the effects of organic food products ($F=126.186$; $d.f.=5$; $p=.000$).

As presented in Table 5, Effects on health were found to have the largest significant positive influence on the intention to purchase organic food ($t=6.708$; $p=0.000$; $\beta=0.329$), followed by Effects on enjoyment of food ($t=6.374$; $p=0.000$; $\beta=0.298$). Significant positive effect was also found in other independent variables: Effects on lifestyle ($t=4.601$; $p=0.000$; $\beta=0.190$) and Effects on local economy ($t=2.173$; $p=0.030$; $\beta=0.077$). The influence of the variable Effects on environment and society was found to be weak and insignificant ($t=1.120$; $p=0.264$; $\beta=0.049$).

5. Discussion

Study findings reveal that the most important predictors of the intention to purchase organic food products are the beliefs about the effects of organic food products on health. This means that, in order to foster purchasing and consuming of organic food, the most important task is to educate consumers and convince them that food without pesticides and other toxic substances has many positive effects on their health and the health of their family.

In addition to health aspects, people will be inclined to switch their dietary preferences to organic and environmentally friendly food if they are convinced that they will enjoy organic food more and that it will suit their taste. Since previous experience with organic products will presumably have the greatest influence on the beliefs regarding enjoyment of food, this finding stresses the point that quality control is extremely important in the marketing of organic food products. As proven in extensive previous research, people are ready to pay more for an organic product, but are usually not ready to give up the standard of living and enjoyment of food and life in general. They expect environmentally-friendly products to perform equally well or better than conventional products. The above is also related to the third construct according to the strength of the influence – Effects on lifestyle.

This study proves that the intention to purchase organic products will be stronger if consumers believe that such products will enable them to adopt a desired lifestyle and demonstrate their environmental awareness and/or wellness-oriented lifestyle to the members of their reference group. Organic prod-

ucts can also be a factor for demonstrating social status and wealth. Here lies the connection with the previously mentioned enjoyment of food and life.

The first three constructs represent internally or self-oriented variables (intrinsic), while the remaining two are externally oriented (extrinsic). Effect on local economy was found to have the weakest, but a statistically significant influence on the intention to purchase organic food products. This finding strengthens the view that promoting locally grown foods and educating consumers on how organic production contributes to the development of local economy can foster the intention to purchase organic food products.

The final proposed construct, Effects on environment and society, was found to be insignificant. This finding suggests that the intention to purchase organic food products will not be directly influenced by the conviction that organic products have a positive effect on society and the environment. This influence is probably moderated by other factors. Moreover, this could be also caused by the fact that consumers are not convinced that individual purchasing behaviour can make a significant difference in resolving current environmental and social issues.

Based on the overall results, it can be concluded that consumers will be more interested in organic products if they are convinced that those products provide personal benefits rather than benefits to the society as a whole.

6. Conclusion

In order to foster organic food consumption and consequently achieve economic, environmental and societal benefits, it is necessary to deeply understand the factors influencing the decision to purchase organic food products. Besides the influence of general attitudes (i.e. about health, environment, local products, etc.) that were proven to be relevant in previous research, it is also necessary to look into beliefs on how purchasing and consuming organic food actually affects specific important issues.

The present study investigated two groups of factors. The first group of factors represents intrinsic variables, while the remaining two factors are extrinsic or externally oriented variables. The findings reveal that intrinsic variables have a stronger

influence on the intention to purchase organic food products, meaning that it would be most beneficial for organic food marketers and other involved stakeholders to foster the consumers' beliefs regarding personal benefits gained from organic food consumption. The strongest influence thereby relates to health benefits, followed by enjoyment of food and positive influences on adopting a desired lifestyle. The results related to extrinsic variables reveal that organic food consumption may also be increased by emphasising multiple benefits to be gained by the local economy from this type of production. However, when it comes to the effects of individual consumption on the environment and society as a whole, it is obvious that consumers must be further educated.

Regarding theoretical implications, relatively high indicators of internal reliability of the measurement scales used in this study indicate that there is potential for these measurement scales to be retested and further amended to create an instrument that will provide a reliable and valid tool for assessing attitudes and intentions for this type of behaviour. Also, this paper puts forward the suggestion that, besides general attitudes on relevant issues, re-

search should encompass beliefs on the effects of certain behaviours on resolving those issues.

Future research could be directed towards resolving some of the main limitations of the present research regarding its sample and scope. Cross-cultural research would enable testing and revealing the differences that could possibly stem from an educational or experiential background. In addition, other factors could also be tested to increase the percentage of explained variance of the model. To provide marketers with further insights relevant for designing appropriate marketing strategies, future research could encompass the variables influencing the measured beliefs (i.e. the influence of experience or other sources of information on beliefs about enjoyment of food). Furthermore, establishing the main sources of information relevant for forming other measured beliefs would also be beneficial. Future research could also include a different methodology to discover some mediating or moderation effects and, finally, it could introduce demographics as a control variable, which could also reveal particular differences (i.e. differences in various age or income groups).

REFERENCES

1. Ajzen, I., Fishbein, M. (1975). *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*. Reading: Addison-Wesley.
2. Amran, A., Nee, G. (2012), "Determinants of behavioural intention on sustainable food consumption among consumers of low-income group: Empirical evidence from Malaysia", in *Proceedings of the WEI International European Academic Conference*, Zagreb, pp. 84-93.
3. Bodur, M., Sarigöllü, E. (2005), "Environmental Sensitivity in a Developing Country: Consumer Classification and Implications", *Environment and Behavior*, Vol. 37, No. 4, pp. 487-510.
4. Bratt, C. (1999), "Consumers' Environmental Behavior: Generalized, sector-based, or compensatory?", *Environment and Behavior*, Vol. 31, No. 1, pp. 28-44.
5. Brčić-Stipčević, V., Petljak, K. (2011), "Research on organic food purchase in Croatia", *Tržište: časopis za tržišnu teoriju i praksu*, Vol. 23, No. 2, pp. 189-207.
6. Faletar, I., Cerjak, M., Kovačić, D. (2016), "Odrednice stava i namjere kupnje ekološkog mlijeka", *Mljekarstvo*, Vol. 66, No. 1, pp. 59-65.
7. First, I., Brozina, S. (2009), "Cultural influences on motives for organic food consumption", *EuroMed Journal of Business*, Vol. 4, No. 2, pp. 185-199.
8. Gil, J. M., Gracia, A., Sanchez, M. (2000), "Market segmentation and willingness to pay for organic products in Spain", *International Food and Agribusiness Management Review*, Vol. 3, No. 2, pp. 207-226.
9. Ham, M., Jeger, M., Frajman Ivković, A. (2015), "The role of subjective norms in forming the intention to purchase green food", *Economic Research*, Vol. 28, No. 1, pp. 738-748.
10. Ham, M., Mrčela, D., Horvat, M. (2016), "Insights for measuring environmental awareness", *Ekonomski vjesnik: Review of Contemporary Entrepreneurship, Business, and Economic Issues*, Vol. 29, No. 1, pp. 159-176.
11. Ham, M., Pap, A., Stanić, M. (2018), "What drives organic food purchasing? –Evidence from Croatia", *British Food Journal*, Vol. 120, No. 4, pp. 734-748.
12. Kim, M. S., Hunter, J. E., (1993), "Relationships Among Attitudes, Behavioral Intentions, and Behavior - A Meta-Analysis of Past Research, Part 2", *Communication Research*, Vol. 20, No. 3, pp. 331-364.
13. Maloney, M. P., Ward, M. P. (1973), "Ecology: Let's Hear from the People. An Objective Scale for the Measurement of Ecological Attitudes and Knowledge", *American Psychologist*, Vol. 28, No. 7, pp. 583-586.
14. Martić Kuran, L., Mihić, M. (2014), "Applying the Theory of Planned Behavior in the Purchase of Organic Food", *Tržište: časopis za tržišnu teoriju i praksu*, Vol. 26, No. 2, pp. 179-197.
15. Mejovšek, M. (2003). *Uvod u metode znanstvenog istraživanja u društvenim i humanističkim znanostima*. Zagreb: Naklada Slap.
16. Michaelidou, N., Christodoulides G., Torova, K. (2011), "Determinants of healthy eating: a cross-national study on motives and barriers", *International Journal of Consumer Studies*, Vol. 36, No. 1, pp. 17-22.
17. Michaelidou, N., Hassan, L. M. (2008), "The role of health consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food", *International Journal of Consumer Studies*, Vol. 32, No. 1, pp. 163-170.
18. Newhouse, N. (1990), "Implications of attitude and behavior research for environmental conservation", *Journal of Environmental Education*, Vol. 22, No. 1, pp. 26-32.
19. Nunnally, J. C. (1978). *Psychometric Theory*. New York: McGraw-Hill.
20. Phuah, K. T., Rezai, G., Mohamed, Z., Shamsudin, M. N. (2012), "Consumers' awareness and consumption intention towards green foods", *African Journal of Business Management*, Vol. 6, No. 12, pp. 4496-4503.

21. Plummer J. (1974), "The concept and application of life style segmentation", *Journal of Marketing*, Vol. 38, No. 1, pp. 33-37.
22. Renko, S., Bošnjak, K. (2009), "Aktualno stanje i perspektive budućeg razvoja tržišta ekološke hrane u Hrvatskoj", *Ekonomski pregled*, Vol. 60, No. 7-8, pp. 385-386.
23. Roitner-Schobesberger, B., Darnhofer, I., Somsook, S., Vogl, C. R. (2008), "Consumer perceptions of organic foods in Bangkok, Thailand", *Food Policy*, Vol. 33, No. 2, pp. 112- 121.
24. Saleki, Z. S., Seydsaleki, S. M. (2012), "The Main Factors Influencing Purchase behaviour of Organic Products in Malaysia", *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 4, No. 1, pp. 98-116.
25. Saleki, Z. S., Seydsaleki, S. M., Rahimi, M. R. (2012), "Organic Food Purchasing Behaviour in Iran", *International Journal of Business and Social Science*, Vol. 3, No. 13, pp. 278-285.
26. Salleh, M. M., Ali, S. M., Harun, E. H., Jalil, M. A., Shaharudin, M. R. (2010), "Consumer's Perception and Purchase Intentions Towards Organic Food Products", *Canadian Social Science*, Vol. 6, No. 6, pp. 119-129.
27. Shariff, A. H. M., Amran, A., Nee, G. Y. (2012), "Determinants of behavioural intention on sustainable food consumption among consumers of low-income group: Empirical evidence from Malaysia", *Journal of WEI Business and Economics*, Vol. 1, No. 1, pp. 29-38.
28. Štefanić, I., Štefanić, E., Haas, R. (2001), "What the consumer really wants: organic food market in Croatia", *Die Bodenkultur*, Vol. 52, No. 4, pp. 243-248.
29. Stone, G., Barnes, J. H., Montgomery, C. (1995), "ECOSCALE: A Scale for the Measurement of Environmentally Responsible Consumers", *Psychology & Marketing*, Vol. 12, No. 7, pp. 595-613.
30. Tanner, C., Wölfling Kast, S. (2003), "Promoting sustainable consumption: Determinants of green purchases by Swiss consumers", *Psychology & Marketing*, Vol. 20, No. 10, pp. 883-902.
31. Tomić, M., Matic, K., Matic, Ž., Cerjak M. (2015), "Čimbenici kupnje ekološkog kruha i pekarskih proizvoda", *Agroecnomia Croatica*, Vol. 5, No. 1, pp. 11-20.
32. Urban, J., Zverinova, I., Ščasny I. (2012), "What Motivates Czech Consumers to Buy Organic Food?", *Czech Sociological Review*, Vol. 48, No. 3, pp. 709-736.
33. Voon, J. P., Ngui, K. S., Agrawal, A. (2011), "Determinants of Willingness to Purchase Organic Food: An Exploratory Study Using Structural Equation Modelling", *International Food and Agribusiness Management Review*, Vol. 14, No. 2, pp. 103-120.
34. Wier, M., Calverly, C. (2002), "Market penetration for organic food products in Europe", *British Food Journal*, Vol. 104, No. 10, pp. 45-62.
35. Żakowska-Biemans, S. (2009), "Factors underlying consumption of organic food in the opinion of Polish consumers", *Agronomy Research*, Vol. 7, Special Issue II, pp. 768-774.

ENDNOTES

- 1 FIBL, IFOAM (2017), "The world of organic agriculture – statistics and emerging trends 2017", available at: <http://www.fedeorganicos.com/wp-content/uploads/2017/03/3503-organic-world-2017.pdf> (Accessed on: June 01, 2017)
- 2 Business dictionary, (2016), available at: <http://www.businessdictionary.com/definition/purchase-intention.html> (Accessed on: January 11, 2018)

Marija Ham

ŠTAVOVI O UČINCIMA EKOLOŠKIH PROIZVODA I UTJECAJ NA NAMJERU KUPNJE ORGANSKI UZGOJENE HRANE

SAŽETAK

Na globalnoj razini sve je više istraživanja usmjerenih na identificiranje čimbenika koji utječu na namjeru kupnje organski uzgojene hrane. Cilj je ovoga rada istražiti stavove o izravnim učincima organski uzgojene hrane na zdravlje, životni stil, uživanje u hrani, okoliš i lokalno gospodarstvo te utjecaj ovih čimbenika na namjeru kupnje i konzumiranja ove vrste proizvoda. Pretpostavka je da je moguće očekivati kako će utjecaj biti jači u slučaju kada se mjere stavovi o učinkovitosti organski uzgojene hrane na specifična važna područja, nego u slučaju kada se mjere općeniti stavovi o tim područjima, a koji su predmet većine istraživanja.

Istraživanje je provedeno na uzorku od 411 ispitanika iz istočne Hrvatske koji predstavljaju osobe koje obavljaju kupovinu većine namirnica za kućanstvo. Rezultati provedene regresijske analize pokazali su da intrinzične varijable imaju jači učinak na namjeru kupnje organske hrane, što znači da je za marketere organske hrane i druge dionike najučinkovitije poticati stavove vezane uz osobne koristi koje proizlaze iz konzumiranja organske hrane. Pri tome najjači učinak odnosi se na koristi za zdravlje, a slijede ih koristi vezane uz uživanje u hrani i pozitivni učinci na izgradnju željenog životnog stila. Rezultati koji se odnose na ekstrinzične varijable dovode do zaključka da bi se potrošnja organske hrane mogla povećati isticanjem višestrukih koristi za lokalno gospodarstvo koje proizlaze iz ovakve proizvodnje. Međutim, kada je riječ o učincima pojedinačne potrošnje na okoliš i društvo u cjelini, očigledno je potrošače potrebno dodatno educirati.

Ključne riječi: organska hrana, namjera kupnje, stavovi o ponašanju, stavovi, ekstrinzične varijable, intrinzične varijable

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MARKET ORIENTATION AND ENTREPRENEURIAL EFFECT OF WINEMAKERS

ABSTRACT

The method of interviews was used to conduct a case study whose objective was to determine the market orientation and entrepreneurial effect of four winemakers in Osijek-Baranja and Vukovar-Srijem Counties. The study showed that the four interviewed winemakers did not have a marketing orientation in the sense of the marketing budget and capacity or in the sense of market orientation. Even though the winemakers are aware of the importance of using marketing in the modern world, their inadequate knowledge of marketing and the absence of a marketing department make them mostly sales-oriented. If the winemakers wish to be competitive in the Croatian and international markets and compete against European winemakers, they must increase their market orientation and turn their sales orientation into marketing.

Keywords: Wine, market orientation, entrepreneurial effect, Croatia

1. Introduction

In recent decades, changes in the consumers' way of life and changes in food products on the one hand and increased globalisation of the market on the other have had a significant impact on the wine sector, modifying the production, marketing and distribution of products (Castellini et al., 2014). The global wine market faces fundamental changes that affect wine production and consumption (OIV Statistical Report on World Vitiviniculture¹; Kalazić et al., 2010; Pomarici et al., 2017). Wine consumers in developed countries have reduced their per capita wine consumption in favour of other alcoholic beverages, unlike consumers in "new" winemaker countries (Argentina, Chile, Australia, New Zealand, USA, South Africa), who have increased their consumption (OIV Statistical Report on World Vitiviniculture). Wines from other regions of the world,

which consumers find highly attractive in terms of quality and price, are now available on the European market, formerly the largest wine producer and consumer (Vrdoljak, 2009)². The Croatian wine market is characterised by a large number of operators and by the fierce competition between large and small winemakers as well as between locally produced and imported wines (Kalazić et al., 2010). According to Vrdoljak (2009) and Kalazić et al. (2010), there are 1,032 registered winemakers in Croatia. The ten largest have a combined market share of 70% and the remaining 1,000 small winemakers hold 10% of the market. The average vineyard surface in Croatia is below 1 ha. About 14% of winemakers have a vineyard surface of up to 10 ha, and only 25 winemakers have a vineyard surface above 50 ha. Vrdoljak (2009) underlines the high price of wine, especially in the category of quality wines, as the

biggest problem of the wine industry. According to Milat (2005), to be able to compete in the European market, Croatian winemakers must increase their share of premium wines to 10-20%. The fierce competition between Croatian and foreign winemakers and large and small Croatian winemakers in the Croatian wine market is the reason why Croatian winegrowers need a marketing approach to survive in the market (Kalazić et al., 2010). Modern winemakers are “forced” to diversify their products to attract as many buyers as possible and to stand out among other wine brands. Marketing is a process that starts with the idea of a need and ends with the feeling that the customer has had their wishes fulfilled. Traditionally, it is divided into four components (product, price, distribution, promotion) and its ultimate objective is to satisfy the needs of both the buyer and the producer (Samardžija et al., 2017). The objective of this paper is to determine the extent of market orientation of the winemakers and their use of marketing in their daily business.

2. Review of past studies

2.1 Viticulture and viniculture in the Republic of Croatia

Viticulture and viniculture are strategic industries of special importance for the Republic of Croatia, especially in the coastal regions and in Northwest

Croatia. The disappearance of the grapevine leads to the abandonment of the last remaining rural homes. It is the Government’s stand that the grapevine must be returned to the areas where it used to be cultivated, which spanned nearly 200,000 ha of land (Milat, 2005). In spite of small vineyard surface areas and small wine production volumes in comparison with the international market, wine is unquestionably a strategic agricultural and food product for the Republic of Croatia (Alpeza et al., 2014). The data in Table 1 for the period 2012-2016 show that areas under vine, yield, and wine production in hectolitres are all on a decline in Croatia. In this five-year period, wine production decreased by as much as 70 percent in comparison with 2012. Another alarming revelation is that yield decreased in the same period from 6.4 ha/t in 2012 and 6.9 ha/t in 2013 to 5.3 ha/t in 2016. These statistics correspond to the study by Alpeza et al. (2014), who also found that the areas under vine and production volumes were decreasing in the leading European countries and worldwide under the influence of production conditions and climate conditions, which have been particularly difficult in recent years and have continued to influence a downward trend in production. Wine consumption in Croatia 2012-2016 decreased from 1,293 thousand hectolitres to 760 thousand hectolitres (Table 1).

Table 1 Wine and grape production in Croatia 2012-2016

Year	Wine ('000 hl)	Total vineyard surface area (ha)	Production total (t)	Yield (ha/t)	Wine consumption (million hl)
2012	1,293	29,237	187,550	6.4	1.4
2013	1,249	26,100	181,096	6.9	1.4
2014	842	26,164	134,941	5.2	1.2
2015	992	25,587	154,227	6.0	1.1
2016	760	23,400	123,651	5.3	1.2

Source: Statistical Yearbook of the Republic of Croatia 2017, pp. 260 and 266, OIV Statistical Report on World Vitivini-culture 2017, p. 13³

Wine production worldwide decreased by 1.1% in 2016 (241 million hl) compared to 2012 (244 million hl) (OIV Statistical Report on World Vitivini-culture). “New” winemaker countries (Argentina, Chile, Australia, New Zealand, USA, South Africa) have the opposite situation, having increased their wine production in recent years. Accordingly, the

global increase in production is not asymmetrical to the global increase in demand, which leads to fierce competition in the global wine market (OIV Statistical Report on World Vitivini-culture, Pomarici et al., 2017 and Kalazić et al., 2010). The latest sources indicate that the surfaces under vine in Croatia, registered in the Vineyards Register in the

ARKOD (PAAFRD)⁴ system on 31 December 2017, amounted to 19,670.73 ha. According to the information from the Vineyards Registry, the majority of agricultural producers in Croatia have between 0.1 and 5 ha of vineyards. Croatia has over a hundred wineries with capacities above 1,000 hl. Accordingly, Milat (2005) states that about 20 leading wineries account for over 80 percent of the total turnover and that Croatia needs 10,000 wine growers with vineyard surface of 2-10 ha, while wineries must serve the function of grape production. According to Kalazić et al. (2010), 84 percent winegrowers have less than 1 ha of vineyards, whereas a minimum of 3 ha is required for profitable wine production. Croatia exports around 3 million litres of wine per year, but it imports three times as much. Wine production must be increased substantially to neutralise imports, which are objectively continually increasing. Competitive production is the only way to counter wine imports, in particular in the categories of quality and table wines (Milat, 2005). The Republic of Croatia is an interesting market for an ever-increasing number of exporters; on the other hand, it has excellent wine export potential, especially in small-series quality and premium wines for so-called “boutique wineries” (Alpeza et al., 2014).

2.2 Wine marketing

The higher the degree of processing of a product and the closer the product is to the consumer, as it is the case with wine, the greater the importance of marketing (Leko Šimić, 2002). Modern winemakers are “forced” to diversify their products to attract as many buyers as possible and to stand out among other wine brands (Samardžija et al., 2017). Marketing plays several significant roles in modern economy: it helps bridge the gap between the producers’ and the consumers’ needs, it helps the producers better understand the consumers’ requirements, and it allows the producers to decide what, when and how to produce for the market (Leko Šimić, 2002; Samardžija et al., 2017). In spite of the obvious globalisation process and the emphasis on the tastes and preferences of the consumers, the number of products with a high level of adaptation, in particular food products, that are being produced and sold is higher today (Kalazić et al., 2010). The marketing segment is therefore very important in food marketing. Marketing allows the consumers to learn about the offer and to get the products they seek and want at the desired time

in the desired place under acceptable conditions (Leko Šimić, 2002).

Even though wine is counted among food products, it is also an alcoholic beverage. Accordingly, there are legal regulations governing the advertising of wine. It is regulated by the Ordinance on the advertising of wines, based on the Wine Act of 2004 (Official Gazette No. 96/03)⁵. Under the Ordinance, advertising of wine is prohibited in Croatia in facilities engaging in healthcare or educational activities and events and in their surrounding premises, as well as in printed and electronic publications and TV programmes primarily designed for juveniles. In comparison, most EU member states enforce stricter and more systematic alcohol policies that also include wine. In Croatia, this policy applies primarily to wine advertising and distribution.

Croatia has hundreds of years of tradition in the grape and wine production industry. The high level of winemaker know-how and expertise, the positive climate conditions for wine production and the freedom of import result in a high level of wine offer in the Croatian market. All stakeholders in the market are working to maximize their product and their marketing mix in order to improve their communication with the customers in the conditions described above (Samardžija et al., 2017). Considering such high-quality offer potential, one would expect the customers to remain loyal to one winemaker in the long term. However, winemakers must invest continuous efforts in maintaining the consumers’ focus on their product. Consumers must be given a reason to seek out a wine made by a specific winemaker, a wine that inspires emotions in them and a wine they identify with through its “story” (Kristić, 2012). According to Meler and Horvat (2018), the so-called segmented approach must be applied in meeting consumers’ needs, considering that consumers are not homogeneous, but heterogeneous and have widely diversified needs and motives. Once the market segments are identified, winemakers need to diversify their production programmes to the extent that will allow them to meet the wine consumers’ needs in terms of both quality and quantity in each of the identified and chosen market segments (Meler, Horvat, 2018). Market segmentation facilitates the choice of communication resources and market research allows winemakers to anticipate and monitor the trends in the market (Samardžija et al., 2017). The concept of marketing is often identified with the basic compo-

ment of promotion. Promotion, however, accounts for only a quarter of the total marketing mix. Its purpose is to improve the communication between producers and consumers, inspiring interest in the product in order to encourage consumers to buy (Markovina et al., 2004). Wine marketing has been covered by a number of studies. Traditionally, we could discuss the 4P elements of the marketing mix (product, place, price, promotion). However, wine marketing is much more complex because wine is a very complex product (Hall, Mitchell, 2008).

According to a survey by Castellini et al. (2014), 33 percent of 708 Italian winemakers encompassed in the survey use wholesalers and exporters as their sales channels. Modern retail does not play the leading role at the moment, and direct sales are rather important. This sales method is justified by low production volumes and it is desirable in the production launch phase because it allows producers to maintain sales at low prices and establish contact with the consumers (Castellini et al., 2014). However, the survey surprisingly showed that the internet was used very little as a communication tool and that wine tastings and guided tours were the producers' key promotion tools. Gil and Sanches (1997) identify the price, production location and vintage as the most important factors affecting consumers' preferences. The choice of the most significant distribution channel is very important (Szabó, Szolnoki, 2002). According to Szabó, continuous use of marketing tools, including market research and follow-up communication and feedback from the consumers, is also important.

The study by Kristić et al. (2012) leads us to the conclusion that Croatian winemakers, in addition to the other elements of the marketing mix, can take advantage of the fact that the respondents consider the origin of the wine (if it is imported or locally produced) when making their purchase, and that they perceive Croatian wines as superior in quality to imported wines. This can be viewed as a competitive advantage in taking on the aggressive and cheaper imported competition.

3. Methodology

The paper uses the data and the results of studies by authors who explored similar topics, obtained through the use of available relevant and recent reference works dealing with this paper's research subject. The interview method was used to collect

primary data for the study. The study was conducted in June 2018. The interview questions were divided into two content groups: valuation of external and internal factors in the examination of market orientation and entrepreneurial effect of winemakers. The case study encompassed a total of four winemakers from the Osijek-Baranja and Vukovar-Srijem Counties. Two bigger winemakers (vineyard surface of 513 ha and 990 ha, respectively) and two smaller winemakers (vineyard surface of around 20 ha) from the above counties were encompassed in the study. Open and closed questions were used in the interview. The questions regarding the respondents' perception of their market orientation and entrepreneurial effects were measured using the 5-point Likert scale. Quantitative analysis was used as the analysis method. Secondary sources of information from the Croatian Bureau of Statistics and the Croatian Institute of Viticulture and Enology were used as well in data collection.

4. Results and discussion

The case study encompassed four winemakers from the Osijek-Baranja and Vukovar-Srijem Counties. Interviews were conducted with winemakers from the above counties for the purposes of this study. The questionnaire consisted of three sections. The first section comprised the valuation of the external factors for the agricultural operators at the existing level of market know-how and operations. The second part comprised the valuation of internal factors: position and organisation of the marketing sector, investigation of marketing budgets, capacities, orientation and the financial and marketing performances of the operator. The final questions comprised data about the agricultural operator itself (size, ownership structure, type of operation and revenue). The case study encompassed two larger winemakers, one from the Osijek-Baranja and one from the Vukovar-Srijem County, with vineyard surface of 513 ha and 990 ha, respectively, as well as two smaller winemakers with vineyard surface of 20 ha from the same counties. The larger winemaker from the Osijek-Baranja County has the structure of a limited liability company and has 513 ha of vineyards, 88 percent of which are leased (concessions). In terms of its number of employees, it is a medium-sized company with 60 full-time employees and 60 seasonal employees. This economic operator generates a revenue of 50-100 million HRK a year, same as the winemaker from the Vukovar-Srijem County.

These two were among the five largest Croatian winemakers in 2017 and held a substantial market share in the Republic of Croatia. The second larger economic operator is based in the Vukovar-Srijem County and has the structure of a joint-stock company. In terms of its number of employees (250), it is a medium-sized company. This company is the proprietor of 350 ha of vineyards and has grape purchase agreements for another 640 ha. The smaller winemaker in the Osijek-Baranja County is registered as a family farm and has 21 ha of vineyards (which it owns). In terms of its number of employees, it is a micro company with 2 full-time employees and 10 seasonal employees. This winemaker gener-

ates an annual revenue of under 10 million HRK, same as the other small winery, which is based in the Vukovar-Srijem County. According to its structure, the winemaker from the Vukovar-Srijem County is a sole proprietorship registered for the agricultural activity of grape growing and processing, with 20 ha of vineyards that are the company's property. This company is also a micro company with three employees. The objective of the case study was to determine if the winemakers were market-oriented and to what extent they used marketing in their business. We also wanted to establish if there was a difference in the application of marketing strategies depending on the size of the winemaker.

Table 2 Evaluation of external business factors by winemakers encompassed in the case study

External business factors	Mean value
Suppliers	4.5
Society	4.4
Customers	4.1
Technological environment	3.9
Trade	3.4
Government and political environment	3.3
Competition	2.6

Evaluation on a scale of 1 to 5, where 1 means don't agree, and 5 means completely agree.

Source: Authors' calculations

The questions asking the respondents to assess the external business factors were structured in the form of a Likert scale, asking the respondents to answer to what extent they agreed with the statements (1 - completely disagree, 5- completely agree). As shown in Table 2, the average rating of the question about the government and political environment was 3.3 (neither agree nor disagree with the statement). However, all respondents agree that the government bodies are too bureaucratic, the average rating of this question being 2.5. They also agree (average rating of 3.5) that the applicable regulations governing their business are adequate. The economic operators gave the technological environment an average rating of 3.9. As far as suppliers and customers are concerned, the respondents gave the highest average ratings (4.5 and 4.1, respectively) in these categories, agreeing that they had long-standing cooperation and fair business relations with their suppliers and customers, as well

as that their number of regular customers increased over the past two years. The economic operators encompassed in the study also believe that the entire Croatian society is heading in a good direction and that consumers prefer local wines to imported wines. Their average rating of the society factor was 4.4. When valuating external factors such as competition and trade, the winemakers gave the competition an average rating of 2.6 and trade an average rating of 3.4, which means that they agree with the statements that the retail networks' product quality requirements are too high and that producers have a hard time getting access to retail networks (Table 2).

The second part of the interview concerned the companies' internal factors: position and organisation of the marketing sector, marketing budgets and capacities. The interview results for the sample encompassed in the study showed that the existing marketing know-how in the companies was inad-

equate. Among the four interviewed winemakers, only one, the larger winemaker from the Vukovar-Srijem County, has a marketing department and employs a person trained in marketing, unlike the other three winemakers, who have an employee in charge of marketing, but this person has no formal marketing education. Among the interviewed winemakers, two specified experience and specialized reference works as the source of their marketing know-how. Two winemakers (the larger winemaker from the Vukovar-Srijem County and the smaller winemaker from the Osijek-Baranja County) specified formal education as the source of their marketing know-how. Among four inter-

viewed agricultural operators, only one had a formal marketing department and an employee with marketing training. In the other three agricultural operators, the sales department is in charge of marketing and marketing activities are under direct control of the general management or the owner in smaller economic operators. In terms of marketing organisation, Meler and Horvat (2018) underline that marketing should be at a higher organisational level than sales because sales is one of the activities or a subfunction of marketing, and marketing and sales absolutely cannot be at the same organisational level.

Table 3 Evaluation of market orientation and entrepreneurial effect of winemakers encompassed in the case study

Internal business factors	Mean value
Market orientation	4.2
Customer orientation	4.2
Consumer satisfaction	4.2
Financial success	3.9
Marketing capacities	3.6
Marketing strategy	3.5
Marketing budgets	3.3

Evaluation on a scale of 1 to 5, where 1 means don't agree, and 5 means completely agree.

Source: Authors' calculations

Table 3 shows that winemakers encompassed in the case study gave the statements related to market orientation, customer orientation and consumer satisfaction the highest average rating of 4.2, which means that they consider the statements related to the above internal business factors very important. The average rating of the replies to the questions regarding financial success is 3.9. The four winemakers encompassed in the study gave the lowest rating to the statements in the areas of new product development and perceived successfulness in comparison with their competitors (3.3). In terms of fulfilment of financial and sales targets, the four interviewed winemakers believe their overall business result, product quality and ability to retain existing customers are the same as their competitors'

and that their employee turnover is lower than at their counterparts.

The average rating of the importance of marketing strategies for the winemakers is 3.5 (Table 3). They gave higher average ratings to statements regarding new product development, price, quality, wide product range and introduction of new brands to the market, which they identified as important (4.1). However, the rating is much lower when it comes to efforts invested in raising the bar in promotional activities, exploitation of production capacities, and business plan development (2.8).

The case study also showed that the four interviewed winemakers believed that there was no difference in marketing budgets between them and

their competitors, giving them an average rating of 3.3 (Table 3). Furthermore, in statements regarding marketing budgets, the respondents gave the highest average ratings to the statements regarding good contacts with the key accounts (4.5), contacts with suppliers (4.1) and provision of high-level services to consumers (4.0). On the other side of the spectrum were the statements about the existence of a developed cost control system (3.0), the existence of a developed marketing information system (3.0), market access through strategic alliances and partnerships (2.3) and development of common technology with strategic partners (1.9).

In terms of their marketing capacities, it is interesting that the average rating was 3.6 (Table 3), which indicates that the winemakers believe they have an advantage over their competitors. Accordingly, the statements regarding the understanding of consumers' requirements (4.5 percent), good contacts with customers (4.4) and suppliers (4.3) and management of distribution channel members (4.3) proved the most important. The marketing capacities pertaining to financial management, marketing management, product development skills and design skills, as well as common involvement and common goals with partners, received the lowest average rating of 3.4. According to the study by Meler and Horvat (2018), economic operators should cooperate with one another and network in order to maintain stability and decrease competition within their environment. The winemakers also gave a high average rating (4.2) to market orientation, customer orientation and consumer satisfaction.

The above results correspond to the results obtained by Leko Šimić and Štimac (2013), who studied the marketing orientation of 60 food companies in Croatia, and found statistically significant correlations between the existence of a person responsible for marketing and the number of employees (the more employees a company has, the higher the probability that it will have a marketing department and an employee responsible for marketing; in smaller companies, marketing department is often a part of the sales department). Spawton (1990) states that marketing planning and choice of marketing strategy are very important for winemakers, whether they are small boutique wine manufacturers or large wineries, as factors such as pricing, communication mix, advertising, wine branding, market positioning and choice of distribution channels can ensure higher profits for winemakers. That state-

ment is confirmed by the findings of the study by Leko Šimić and Štimac (2013). The authors found that companies that had a marketing department that was independent of and not integrated into the sales department had a much higher net income.

The study shows that winemakers are not market-oriented in the sense of carrying out marketing activities or in the sense of marketing behaviour. Accordingly, Moulton and Lapsley (2001) state that winemakers should be primarily market-oriented because market orientation is an important marketing strategy, since winemakers deal with wine sales by encountering primarily distributors, wholesalers and retailers, and only then customers. This corresponds to the findings of the study by Skuras and Vakrou (2002), who state that winemakers can help increase the price of their product by using marketing strategies. It would be illusory to expect smaller winemakers to be able to organise a marketing business function. However, it is important that they understand marketing and its purpose and that they start thinking in marketing terms. Bigger winemakers are also facing difficulties in using marketing. Producers believe that marketing is not applicable in their operations and that it is enough to include public relations, key accounts relations, planning and development in their operations. Other winemakers are too small or believe that it would be too expensive to hire a marketing specialist. For this reason, Meler and Horvat (2018) believe that vertical and horizontal networking of winemakers is necessary to achieve the common marketing goals.

On the basis of the interviews with the four winemakers, an analysis of winemakers was made founded on macroeconomic criteria (this pertains to the winemakers' perception of the government and political environment, technological and market criteria, and social and demographic characteristics of the interviewed winemakers). All four winemakers agree that the authorities are too bureaucratic and that the current political system does not establish favourable conditions for the development of entrepreneurial activities (the small winemakers ranked the social and political environment particularly low). Winemakers from the Vukovar-Srijem County have a more positive stand on the government, political and technological environment than the winemakers from the Osijek-Baranja County. The analysis found the interviewed winemakers to be insufficiently market-oriented and to be more focused on the technology of grape and wine pro-

duction. Even though the two larger winemakers from both counties have the capacities to conduct market research as well as competitiveness and customer research because they are among the leading winemakers in Croatia, they do not conduct such research at all or do not conduct it sufficiently.

The data obtained by qualitative analysis of the interviews with the four winemakers with respect to the sociological and demographic characteristics show that winemaking is still a man's business: out of the four interviewed winemakers, only one is a woman, and their average age is over 40. All four interviewed winemakers have higher education, but only two of them (the larger winemaker from the Vukovar-Srijem County and the smaller winemaker from the Osijek-Baranja County) have formal education in marketing. The two smaller wineries from the Osijek-Baranja and Vukovar-Srijem Counties employ only their immediate family members, which means that the winemakers serve as owners, managers and technologists. This corroborates the findings of Čengić et al. (2013)⁶, whose survey conducted among the winemakers of the Požega-Slavonija County led them to the same conclusion. Furthermore, the authors claim that the type of multiple jobs and management roles in small farms and companies is a special feature that makes it much more difficult to plan their business, develop a market strategy, develop their marketing and improve their sales. In the interviews with winemakers, we chose winemakers for whom wine sales is their sole source of income. This means that their business and family livelihood depend on market trends. Three out of the four interviewed winemakers are planning to increase their surfaces under vine, expand their product range, and improve their product quality. The two small winemakers and the bigger winemaker from the Osijek-Baranja County are selling their wines in the Croatian market only. Only the larger winemaker from the Vukovar-Srijem County is export-oriented and recognised in the international market. A positive aspect is that all four interviewed winemakers said that they expected to increase their wine exports to foreign markets in the next five years. However, to make this possible, the winemakers need a specific business and marketing strategy. They also need to increase their market orientation and to turn their sales orientation into marketing.

5. Conclusion

The wine industry has become more competitive than ever before. With an annual wine production of 36 billion bottles worldwide and with more than a million different wine labels, the winemakers are struggling to stand out and secure a position in the market. The Croatian and the European wine markets are characterized by a large number of competitors and fierce competition among the winemakers. Croatian winemakers need a marketing approach that will make them competitive in the market. This study identified the use and the role of marketing among winemakers in Osijek-Baranja and Vukovar-Srijem Counties. The main conclusion of the study is that the interviewed winemakers are not market-oriented, especially in terms of making marketing plans and conducting research about their competitors. Most of the marketing activities performed by the interviewed economic operators are undertaken on an operating rather than on a strategic level, as evidenced by the position and the role of their marketing departments. Among the four interviewed winemakers, only the larger winemaker from the Vukovar-Srijem County has a marketing department independent of its sales department and employs a person with a high-level formal marketing education. In contrast, the remaining three winemakers have no marketing departments and believe that the marketing department should be a part of the sales department. Most of their marketing knowledge comes from experience, participation in industry conferences or specialised reference books. We may conclude from our research that the size of the economic operator is not a decisive factor with respect to marketing orientation. Accordingly, the absence of marketing departments and inadequate knowledge of marketing make winemaking exclusively sales-oriented, and such orientation creates restrictions inhibiting further development of production. If winemakers want to be competitive in the Croatian and international market and compete with the European winemakers, they must increase their market orientation and turn their sales orientation into marketing.

REFERENCES

1. Alpeza, I., Prša, I., Mihaljević, B. (2014), "Vinogradarstvo i vinarstvo Republike Hrvatske u okviru svijeta", *Glasnik zaštite bilja*, Vol. 37, No. 4, pp. 6-13.
2. Castellini, A., Mauracher, C., Procidano, I., Sacchi, G. (2014), "Italian market of organic wine: A survey on production system characteristics and marketing strategies", *Wine Economic and Policy*, Vol. 3, No. 2, pp. 71-80.
3. Gil, J. M., Sánchez, M. (1997), "Consumer preferences for wine attributes: A conjoint approach", *British Food Journal*, Vol. 99, No. 1, pp. 3-11.
4. Hall, M., Mitchell, R. (2008). *Wine Marketing: A practical guide*. Oxford: Elsevier Ltd.
5. Kalazić, Z., Leko-Šimić, M., Horvat, J. (2010), "Wine market segmentation in continental Croatia", *Journal of Food Products Marketing*, Vol. 16, No. 3, pp. 325-335.
6. Kristić, J. (2012), "Students' attitudes towards the influence of promotional mix on wine purchasing decisions", *Ekonomski vjesnik: Review of Contemporary Entrepreneurship, Business, and Economic Issues*, Vol. 25, No. 1, pp. 98-105.
7. Kristić, J., Sudarić, T., Lončarić, R. (2012), "Zemlja podrijetla vina kao determinirajući čimbenik pri odlučivanju o kupnji", in Pospišil, M. (Ed.), *47th Croatian and 7th International Symposium on Agriculture*, University of Zagreb, Faculty of Agriculture, Opatija, pp. 198-201.
8. Leko Šimić, M. (2002). *Marketing hrane*. Osijek: Faculty of Economics in Osijek.
9. Leko Šimić, M., Štimac, H. (2013), "Marketing Orientation of Croatian Food Industry", *The Journal of Ege University Faculty of Agriculture, Special Issue Vol. 1*, pp. 315-320.
10. Markovina, J., Kovačić, D., Radman, M. (2004), "Uključenost pri donošenju kupovnih odluka – primjer tri prehrambena proizvoda", *Journal of Central European Agriculture*, Vol. 5, No. 3, pp. 151-159.
11. Meler, M., Horvat, Đ. (2018). *Marketing vina u teoriji i primjeni*. Zagreb: Edukator d.o.o.
12. Milat, V. (2005), "Stanje u vinogradarstvu i vinarstvu Republike Hrvatske", *Glasnik zaštite bilja*, Vol. 28, No. 6, pp. 5-15.
13. Moulton, K., Lapsley, J. (2001). *Successful Wine Marketing*. Boston: Springer Science Business LLC.
14. Pomarici, E., Lerro, M., Chrysochou, P., Vecchio, R., Krystallis, A. (2017), "One size does (obviously not) fit all: Using product attributes for wine market segmentation", *Wine Economics and Policy*, Vol. 6, No. 2, pp. 98-106.
15. Samardžija, L., Soukup, D., Kuzmanović, S. (2017), "Analysis of buying habits – wine segment", *International Journal – VALLIS AUREA*, Vol. 3, No. 2, pp. 103-110.
16. Skuras, D., Vakrou, A. (2002), "Consumers' willingness to pay for origin labelled wine: A Greek case study", *British Food Journal*, Vol. 104, No. 11, pp. 898-912.
17. Spawton, T. (1990), "Marketing Planning for Wine", *International Journal of Wine Marketing*, Vol. 2, No. 2, pp. 2-49.
18. Szabó, Z., Szolnoki, G. (2002), "Different ways to consumers for Hungarian wine producers", in *Proceedings of International PhD Students Conference MendelNet 2002/3*, Mendel University in Brno, Brno, pp. 295-300.
19. Szabó, Z. (2018), "Event Marketing – The Driver of Wine Culture", *Management Studies*, Vol. 6, No. 2, pp. 121-126.

ENDNOTES

- 1 OIV Statistical Report on World Vitiviniculture (2017), "World Vitiviniculture Situation", available at: <http://www.oiv.int/public/medias/5479/oiv-en-bilan-2017.pdf> (Accessed on: June, 11, 2018)
- 2 Vrdoljak, J. (2009), "Borba do posljednje kapi vina", Privredni vjesnik, available at: <https://dugirat.com/novosti/76-gospodarstvo/10138-Borba-do-posljednje-kapi-vina-v15-10138> (Accessed on: June 11, 2018)
- 3 Croatian Bureau of Statistics (2017), "Statistical Yearbook of the Republic of Croatia 2017", available at: https://www.dzs.hr/Hrv_Eng/ljetopis/2017/sljh2017.pdf (Accessed on: May, 18, 2018)
- 4 Paying Agency for Agriculture, Fisheries and Rural Development (PAAFRD) (2018), "Data from the vineyard registry for 2017", available at: <https://www.apprrr.hr/registri/> (Accessed on: June, 4, 2018)
- 5 Ordinance on the advertising of wines with a protected geographic indication and fruit wines (Official Gazette No. 96/03), available at: https://narodne-novine.nn.hr/clanci/sluzbeni/2004_07_105_2055.html (Accessed on: June 4, 2018)
- 6 Čengić, D., Tomljenović, R., Boranić-Živoder, S. (2013), "Vinari Požeško-slavonske županije i izazovi europskoga tržišta", Institut društvenih znanosti Ivo Pilar, Zagreb, January-March 2013.

Sanja Jelić Milković

TRŽIŠNA ORIJENTACIJA I PODUZETNIČKI UČINAK VINARA

SAŽETAK

Provedena je studija slučaja putem intervjua s ciljem utvrđivanja tržišne orijentacije i poduzetničkog učinka četiri proizvođača vina u Osječko-baranjskoj i Vukovarsko-srijemskoj županiji. Provedeno istraživanje pokazalo je da kod četiri intervjuirana proizvođača vina ne postoji marketinška orijentacija, niti u smislu marketinških sredstava i sposobnosti proizvođača niti u smislu tržišne orijentacije. Iako proizvođači znaju koliko je primjena marketinga danas značajna, neadekvatno znanje o marketingu kojim raspolažu i nepostojanje marketinškog odjela čine ih uglavnom orijentiranima na prodaju. Ukoliko proizvođači žele biti konkurentni na domaćem i međunarodnom tržištu i konkurirati europskim proizvođačima vina, neophodno je da se više orijentiraju tržišno i prodajnu orijentaciju pretvore u marketing.

Ključne riječi: vino, tržišne orijentacija, poduzetnički učinak, Republika Hrvatska

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LIMITATIONS AND DEVELOPMENT OPPORTUNITIES OF DENTAL TOURISM: THE CASE OF CROATIA

ABSTRACT

Many countries are developing dental tourism as a major segment of the growing medical tourism in the world. In Europe dental tourists represent more than 30% of all medical tourists. The objective of this paper is to understand dental tourism in Croatia from the perspective of dental providers by identifying limitation and opportunities in providing dental tourism services. In order to get an overview of the dental market in Croatia from the clinics involved, two researches were conducted. The first was conducted by a systematic review of leading private dental clinics websites and the second via an online survey in October 2018. The findings show that Croatia's market identity is based mainly on excellent price-quality ratio of products and services in dental care, staff competence, high professional standards, lower prices and quality of support services. According to the opinion of dental clinics managers, the main limitations on the development of dental tourism in Croatia are lack of EU funding and incentive measures for the development of medical tourism, inadequate promotion of dental tourism, and lack of strategic planning and development vision at the national level. For further development it is extremely important to carry out accreditation and international certification of clinics and to continuously invest in employee training, quality of services and equipment/technology. The findings also point out that Croatia must build competitive advantage on dental treatment with tourism experience as a product. The quality of Croatian supporting tourist facilities add value to the core product and help to differentiate it from the competition.

Keywords: Dental tourism, key factors of success, Croatia, limitations, opportunities, competitive advantage

1. Introduction

There is above average worldwide growth of medical tourism. Due to population aging, increasing standards of living and turning to a healthy lifestyle, demand for the use of medical tourism is expected to increase. Significant investments in the development of health tourism, especially medical tourism, are recorded by many European countries. Many

European countries are developing dental tourism as a major segment of the growing medical tourism in Europe. In Croatia, mainly private clinics / practices are involved in dental tourism.

Their competitive advantage is based on the quality of dental services, affordable prices and attractiveness of the destination. They invest in promotion to become recognizable on the market. Considering

the quality of dental services and equipment, staff expertise and favorable prices as well as a long tourist tradition, Croatia has all the prerequisites for the development of this particular form of tourism. The aim of the paper is to explore the factors of the success of dental tourism development in neighboring European countries, current business activities of Croatian dental clinics, services offered, equipment, marketing activities, etc., limitations and development possibilities and to suggest some marketing recommendations that will increase the competitive advantage of the Croatian dental tourism industry.

In order to get an overview of dental market supply in Croatia two researches were conducted. The first was conducted by a systematic review of websites of leading dental care providers, and the second via an online survey in October 2018.

2. Literature review

According to Geić (2011), increasingly pronounced contemporary mass tourism migrations influence many aspects of social life with their characteristics; among other things there is a significant interaction between the tourism phenomenon, health and health culture in the emitting and receptive tourist areas, thus creating a selective form of health tourism. Worldwide health tourism grows between 15% and 20%, making it the fastest growing tourism sector (Gregorić, Musliu, 2015). It is a product that accounts for above-average annual growth rates at this moment, and trends in aging populations and orientation to healthy lifestyle indicate that health tourism has the potential to become the leading motive for travel in the future (Ivandić et al., 2016).

Demand for health tourism in Europe is focused on several specialties. Although data on the importance of some specialist services vary depending on the source, it is undisputed that aesthetic surgery and dentistry are the most sought-after medical services, while body treatments and fitness are the most popular segments of the wellness.¹ The health tourism umbrella covers traditional resources like spas with healing waters as well as medical ones – the practice of people travelling from their own country to another to undergo surgery, dentistry and other medical procedures.²

Although the primary motive for individuals traveling to other destinations is to use medical services in medical practices, clinics / polyclinics and spe-

cial hospitals, medical tourism also encompasses a wide range of tourist facilities at the destination. The main reasons for the growth in demand and travel to other countries to have medical services, operations, dental or cosmetic treatments are good quality of medical services at a lower cost but also the ability to travel at increasingly lower prices.

The basic characteristics of medical tourists (motivated by the need to improve health and quality of life) are:³

- they are ill or don't feel well and travel for the sake of health preservation
- they seek better medical treatment than they have in their own country
- they travel to other destinations for reasons that include professional medical staff and higher quality of services than those in the home country
- many of them travel to distant destinations because of lower medical care costs.

According to the study "Medical Tourism, International Trends and Perspectives", interest in the use of medical services outside of one's own country is higher in younger people (up to 35 years of age). This is not the case in all countries - compared to their younger compatriots, older Russians or Germans are, at a larger rate, ready to consider possible international travel with a "medical motive". In general, medical tourism represents a relatively small niche in the context of the global "tourism industry", a niche that has growing indicators, but is largely regionally defined, i.e. defined by numerous cultural elements as well as the element of quality and accessibility.⁴

Dental tourism is an important segment of the medical tourism trend which is developing worldwide. It has been growing at a fast rate thanks to the aging population, higher consumption of certain dental services with rising income, and supply shortages in many developed countries (Loubeau, 2009). A well-known dental tourism destination is Mexico, which is a consequence of its proximity to the United States, from where 25% of the worldwide dental tourists are coming. The second place is shared between India and Hungary. Hungary is aiding more European patients while India cares for the Asian patients and they share some of the US citizens (Kamath et al., 2015).

Chandu (2015) classified dental care tourists into two types. First, the classic dental tourists are among those who travel to a foreign country to access dental treatment, either for the sole purpose of dental treatment, or dental treatment as part of a holiday package. Second, migrant tourists are among those who return to their native country for a holiday or to visit relatives and who then access dental treatment during their visit.

The main motives for seeking dental treatment abroad are lack of availability at home, dissatisfaction with dental treatment at home, lower prices, high quality care coupled with vacation. For example, Jaapar et al. (2017) discovered that dental care quality, dental care information access and cost-savings were the most important motivation factors among dental tourists in Malaysia. In Germany, Panteli et al. (2015) found the top three dental tourists' travel motivations were cost savings followed by good previous experience with treatment abroad and trust in a certain healthcare provider in the EU. Cuamea Velazquez et al. (2017) investigated the factors by which the tourists of a border region choose the clinics of a foreign city for their dental treatments in the city of Tijuana, bordered to the north by the county of San Diego, California, United States. The results show five key factors influencing the decision: Quality-Price, Facilities and Technology, Length of Time and Price of Treatments, Credit and Urban Image. Adams et al. (2018) examine the perspectives and experiences of industry stakeholders working and living in dental tourism industry site in northern Mexico to develop a better understanding of the ways in which common discourses of the industry are taken up or resisted by various industry stakeholders and the possible implication of these practices on health equity. Interviews with a range of industry stakeholders suggest that care provision in this particular location enables international patients to access high quality dental care at more affordable prices than typically available in their home countries. One qualitative research on Canadian medical tourists show that during the decision-making process about treatment abroad a crucial factor is reliable information about the reputation of surgeons abroad and hearing testimonials from other patients who had gone to the same facility.⁵

3. The factors of European destination countries' success in dental tourism

In Europe, dental tourists represent a large proportion of medical tourists. In the 2013 *Treatment Abroad Medical Tourism Survey* involving over 1.000 participants, dental tourists represented 32% of all medical tourists.⁶ The leading dental tourism destination is Hungary. Many other European countries are developing dental tourism as a major segment of the growing medical tourism in Europe.

Hungary is a remarkable destination country in dental tourism for foreign patients. According to Kovacs et al. (2013)⁷ there are several reasons why Hungary could gain the leading position in dental tourism. First, the cost-benefit ratio is outstanding. Secondly, the high quality of dental training plays a significant role. Thirdly, the quality of materials used in dental practices is high – European-level quality. The rate of complications in dental care stays around 5% similarly to other European countries. In terms of quality a guarantee is provided. The majority of dental offices ensure quality by ISO and other European and American Quality Assurance Certificates. Also, previous treatment experiences are positive, patient satisfaction level is high. Zoltan & Maggi (2011)⁸ pointed out how Hungary can keep its leading position with respect to the eastern competitors which are sometimes cheaper, but less experienced in this sector. At the moment, Hungary can beat them by providing guarantees for its high-quality dental services and an emphasis on high professional standards with more agencies, bigger clinics, more doctors, state-of-the-art technology and language skills.

Romania is becoming one of the most popular destination of dental tourism. Private clinics provide the same high standard treatments and procedures as any other developed country for a fraction of their cost. Dentistry in Romania is well suited both for tourists visiting the country, and for business travelers. Romanian clinics offer a wide range of services, from dental implants to cosmetic surgery. The doctors are specialized in all areas of dentistry, they are constantly attending training courses in order to always be up to date with the latest technologies. Clinics provide a completely organized trip, from accommodation, travel arrangements, to a list of places their patients might like to visit during they stay and treatment in Romania. Patients from Asia also have options to benefit from high

quality dental services at very affordable prices in partner dental clinics in Thailand or in Dubai. They also have partners in Mexico for patients living in the USA.⁹

The Czech Republic, and in particular its beautiful and historic capital, Prague, is one of the emerging dental tourism destinations offering high standards of dental treatment combined with significant savings on the costs of restorative and cosmetic dental treatment. Cosmetic dental treatment in a private clinic in the Czech Republic can cost less than 60% of the same treatment in the UK. Furthermore, the quality of the treatment is top class and with dentists qualified and experienced at an outstanding level, it makes the overall price in the Czech Republic even more attractive. In the Czech Republic, dentistry clinics and medical tourism agencies offer packages for various treatments which often include transfer to and from the airport and luxury accommodation.¹⁰

In Poland dental and aesthetic surgery are the most popular services for medical tourists. Poland highlights the availability of low-cost flights, inexpensive accommodation and attractive tourist destinations in promoting medical services. To simplify the procedure for its clients, an increasing number of clinics and hospitals offer packages that include transportation to and from an airport, as well as accommodation in apartments or hotels. The cost of treatment in Poland can be up to 40% lower than in Germany or the United Kingdom.¹¹

Many countries in Croatia's neighborhood are also developing medical tourism, especially dental tourism. Slovenia is positioned as a new destination for medical tourism, emphasizing specialization in dentistry, orthopedics and sports medicine and ophthalmology. Health tourism is the fastest growing segment of Slovenian tourism.¹² Bosnia and Herzegovina is one of the countries with low prices of dental services. The prices of porcelain crowns and prosthetic services are among the lowest in the region and the prices for dental implants are also very competitive. A great number of dentists in the Sarajevo region provide dental services mainly to Bosnia and Herzegovina citizens living outside the county during the vacation period (Tihi, Peštek, 2009). In Serbia the lower prices of medical services, compared to more developed countries in Europe, are the motive for patients' usage of medical services and various surgical treatments. Apart from the use of dental treatment, patients come for cheaper

cardiac interventions or hip and knee replacements and aesthetic surgeries (Jovanović, 2015).

4. The case of dental tourism in Croatia

In Croatia, the development of medical tourism was insufficiently encouraged, although health tourism was defined as one of the key tourism products in the past period in the Croatian Tourism Development Strategy 2012-2020.¹³ The contribution to the development of medical tourism in Croatia was provided by the Association for the medical tourism development, which brings together medical and tourist experts with the aim of promoting the medical tourism services of the members of the Association on the domestic and foreign markets¹⁴ and the Health Tourism Association at the Croatian Chamber of Commerce as a professional trade association gathering members from the medical, spa and wellness tourism (three sections) with the aim of designing, encouraging and coordinating the development and improvement of the quality of service provision, profiling of health tourism products etc. By adopting the new Act on the Provision of Tourism Services¹⁵, which came into force on 1 January 2018, health institutions are able to organize the health and tourism part of the stay for patients who come for medical treatment, dental treatments etc.

Before this Act came into force, only travel agencies were authorized to sell a complex package (including a complex health tourism product), which made it considerably more difficult to sell because there was a small number of medical tourism agencies and facilitators on the market. There was also total lack of an effective promotion at the national level. Recently the Croatian Chamber of Economy, in cooperation with the Croatian Tourist Board, has launched a project of national promotion of health tourism under the joint slogan Croatia - Full of well-being on the portal Health and Wellness - Full of well-being.¹⁶

The development of dental tourism in Croatia was based on investment of private clinics in the quality of dental care product/services, staff competence and marketing. Most dental clinics are located in Istria, Zagreb, Primorje-Gorski Kotar County and counties of Northern Croatia. Travel motivation for dental care is mainly related to lower prices, quality of dental care services and combination of dental treatment and tourist experience.

Table 1 Average treatment costs in Croatia and other countries

Treatment	Croatia	Italy	Germany	UK	USA
DENTISTRY					
Implant	720 €	1,500 €	1,550 €	2,000 €	3,100 €
Sinus lift	650 €	820 €	800 €	1,770 €	3,500 €
Prostheses	580 €	1,250 €	1,600 €	1,200 €	3,100 €
Whitening	280 €	450 €	598 €	650 €	775 €
Crowns	275 €	550 €	518 €	570 €	1,150 €
Veneers	300 €	570 €	572 €	450 €	1,150 €
Fillings	40 €	130 €	110 €	100 €	155 €

Source: Split-Dalmatia County Tourist Board, available at: https://www.dalmatia.hr/hr/zdravstveni_turizam (Accessed on: April, 15, 2018)

Jurišić & Cegur Radović (2017) pointed out that foreign patients mostly visit dental clinics in Primorje – Gorski Kotar County, which has a long tradition in health tourism, due to an excellent price-quality ratio, in 67% of clinics, and due to cheaper dental service when compared to their domicile country, in 33% of the cases. The core market for incoming patients is Italy (89%) and the significantly lower percent (11%) come from Slovenia. The extent to which marketing activities affect the decision of patients on the use of dental service clinics is 67%, and a marked influence was recorded in 11% of the cases. According to the survey findings in selected dental clinics located in Zagreb (Kesar, Mikulić, 2017), the two most important attributes that influence dental tourist satisfaction are the quality of dental care product/services and staff professionalism and competence, while the price of the service and honoring the appointment schedule have a relatively weak influence on patients' overall experience related to the provision of dental care service (according to the place of residence of international patients covered in this case study, 48.2% come from Italy, 44.0% from the UK market, and 7.9% from Slovenia).

4.1 Research methodology

The researches have been conducted on the supply side of the dental providers in Croatia. The aim is to understand dental tourism from the perspective of dental providers by identifying limitations, opportunities and strengths in providing dental care: current business activities in dental providers practice, services offered, equipment, dental care

quality, marketing activities, dental care information access, supporting services, actors involved, how they co-operate with different partners, their satisfaction with national promotion, specialized travel agencies, available tourist attractions and the limitations and opportunities of dental tourism development in Croatia. In order to get an overview of dental market supply in Croatia two researches were conducted.

The first research was conducted by a systematic review of websites of ten leading dental care providers. The websites of leading dental care providers were examined using eleven key dimensions: dental facilities, types of treatment, dentist's professionalism, technology offered, guarantee, quality assurance, dental fee, supporting services and available tourist attractions and marketing activities.

The second research was conducted using an anonymous online survey in October 2018. Invitations to participate in the research were sent to electronic addresses of the managers of dental care providers who in 2017 were ranked as the largest ones according to the criterion of more than 15 employees and the total income realized higher than HRK 4 million (ca. 540 000 €) with the purpose of collecting quantitative information about their business activities, limitations and opportunities in providing dental care services. The research according to the mentioned criteria included 33 clinics.

The questionnaire consisted of 11 questions and it was divided into three parts. The first part deals with determining the limitations on the development of dental tourism in Croatia. The second part

of the questionnaire includes questions about elements that can stimulate the development of dental tourism. The first and the second part of the questionnaire included multiple choice questions using a five-point Likert scale, where respondents expressed their level of satisfaction. The third part refers to general information about the dental institution. The questionnaire was developed using the Qualtrics Survey software. From 35% of the dental institutions that responded, 54.5% of them operate in the City of Zagreb, 36.4% in Primorje-Gorski Kotar County and 9% in Istria County.

4.2 Results and discussion of findings

Findings on websites survey

All of the providers' websites contain information such as dental facilities and types of treatment. Clinics offer a wide range of services, from dental implants to cosmetic surgery. On all providers' websites there is a clear statement that dental consultative service is available. The contact and consultations are available via email, SMS, free call, modern mobile apps (WhatsApp, Viber etc.). Free first visit includes a consultation and examination by a dentist; in one case it includes some additional benefits: free transportation to the clinic, possibility of free accommodation, the restaurant with tailor-made offer within the clinic and free parking for patients who decide to arrive by their own means of transport.

80% of the providers' sites contain details of dentists' experience and how long they had been practicing. Internationally recognized qualifications and competences are also frequently listed, as well as full CVs, copies of certification, attended professional training courses, international conferences and languages they speak fluently.

On the 90% of the providers' websites there is a clear statement of technology offered, the name of certified manufacturers of equipment and materials used in their practices to ensure a high level of quality and safety for patients. Some providers have their own laboratory that simplifies the communication between the patient, the dental technician and the doctor. All the procedures are carried out with international certificate standards and the materials of the highest quality, provided by renowned manufacturers. The patients can access online photos of the interior of the clinic; on one website, for example, they can make a virtual tour of the clinic.

All of the providers' sites contain details of a guarantee. The guarantee applies to quality of work/dentures delivered to the patients. More than 50% clinics give lifetime warranty for implants; the others give 5 to 10 years. For all prosthetic works the warranty is usually from 2 to 5 years.

The majority of the providers' sites contain (more than 50%) the information on quality assurance by ISO and other European and American Quality Assurance Certificates. The relevant international certification represents the confirmation of quality of services and it is an important factor for successful positioning in the dental tourism market.

On 80% of the providers' websites the prices of dental services and terms of payment are presented (credit card payment, consumer credit, possible discounts, special offers etc.). One provider presents a comparison of dental fees in Croatia, Great Britain and Germany, the other in Great Britain and Croatia with a clear statement that a complete treatment in the clinic is saving up to 70% on the UK cost. Some clinics offer a variety of payment benefits and discounts on dental services (family discounts, members of various associations, etc.).

The majority (90%) of providers' websites contain the information about offered packages for various treatments which often include accommodation and transfer to and from the airport, ferry ports and bus stations as well. The clinics co-operate with different partners and provide assistance regarding the travel organization, transfer and accommodation of patients. 70% of providers offer free accommodation during therapy in their own facilities that are situated only a short walk away from the clinic, and free transportation. For example, to make the arrival and stay more enjoyable, and recovery more efficient and less painful, one clinic offers accommodation in their own suites, and another in single or double rooms in a facility inside the clinic with 0-24 assistance or, for patients who want to stay at a hotel, they provide a 25% discount for the 4-star hotel and transportation from the accommodation to the clinic. Another provider offers free accommodation during treatment not only for the patients but also for their companions in fully equipped suites situated within a walking distance from the clinic and in case all the suites are taken, free accommodation in a hotel, free transport from airport, railway station and bus station to the suites and/or clinic etc.

On the 90% of sites there are other useful information for potential dental travelers – details about travelling to Croatia by plane, car, boat, train or by bus, list of places they might like to visit, details about Croatia's natural beauties, climate, beaches, untouched nature, rich history, cultural heritage, national parks, excellent cuisine and wines, events, friendly people etc. By promoting supporting services and available tourist attractions they emphasize the benefits of dental care and leisure in Croatia.

All dental care providers use the internet and their websites as the main source of information and advertising. Websites are the key link between the potential foreign dental tourists and treatment providers. Innovative communications with e-marketing, Twitter, Instagram, blog, Facebook and reviews of satisfied patients are the key factors of advertised information. In one case the clinic has created its own Facebook campaign based on statistical data of foreign patients who visited the clinic in the past five years (Krajnović et al., 2013). Dental tourists are using the likes of Facebook and Twitter to read and post comments about their experiences.

Many of the sites (80%) contain a rewards program for recommendations from patients to their friends and family, dental gift cards for people who want to give a unique and special gift to their family members, friends, colleagues etc. as well as a gallery with photos of patients showing their oral cavity before and after therapy, presenting the difference in the condition before and after a dental treatment in the clinic etc. All the providers' sites contain patients' testimonials. The reviews help dental tourist to compare patient satisfaction and quality of dental care. Word-of-mouth is a very important marketing tool.

Findings of online survey

The findings indicate that the main limitations to the development of dental tourism in Croatia are the following: lack of EU funding and lack of incentive measures for the development of medical tourism. They are followed by inadequate promotion of dental tourism at the national level, lack of strategic planning and development vision at the national level, small number of specialized medical tourism agencies and insufficient cooperation of clinics with other service providers and travel agencies.

Table 2 Evaluation of the influence of limitation factors on the development of dental tourism in Croatia

	Mean	Std Deviation	Variance
Inadequate promotion of dental tourism at the national level	4.45	1.16	1.34
Lack of strategic planning and development vision at the national level	4.36	1.15	1.32
Small number of specialized agencies for medical tourism	4.18	1.11	1.24
Uncoordinated legal acts in medicine and tourism	3.64	0.98	0.96
Insufficient strength of clusters and associations for the development of medical tourism	3.45	0.89	0.79
Insufficient number of qualified medical staff	3.73	1.05	1.11
Insufficient cooperation of clinics with other service providers at the destination	3.73	1.05	1.11
Lack of tenders for EU funds	4.64	1.15	1.32
Lack of incentives for the development of medical tourism	4.64	1.15	1.32

Source: Author's research

For further development of dental tourism it is extremely important to carry out accreditation and international certification of clinics, as well as to continuously invest in employee training, quality of service and equipment/technology. It is followed by the call for tenders for EU grants, branding Croatia as a destination for medical tourism,

increased investment of the Croatian National Tourist Board in advertising, possibility of using the incentives of the Agency for Investments and Competitiveness, connecting to insurance companies, and better public and private sector co-operation and systematic promotion of dental tourism at the national level.

Table 3 Evaluation of the importance of certain activities for further development of dental tourism in Croatia

	Mean	Std Deviation	Variance
Branding Croatia as a medical tourism destination	4.82	0.39	0.15
Systematic promotion of dental tourism at the national level	4.55	0.66	0.43
Increased investment in advertising by the Croatian National Tourist Board	4.82	0.39	0.15
Better cooperation of clinics with other tourism service providers	4.27	0.45	0.20
Partnerships and strategic alliances of service providers	4.27	0.45	0.20
Accreditation and international certification	5.00	0.00	0.00
Continued investment in employee education and quality of service	5.00	0.00	0.00
Continued investment in equipment/technology	5.00	0.00	0.00
Stronger connection with the Croatian diaspora	3.64	0.88	0.78
Adjustment of visa regime	3.73	0.96	0.93
Connecting to insurance companies	4.55	0.66	0.43
Better public and private sector cooperation	4.55	0.66	0.43
Tenders for EU grants	4.91	0.29	0.08
Incentives of the Agency for Investments and Competitiveness	4.64	0.48	0.23

Source: Author's research

Research findings suggest that the investment of dental institutions in marketing, employees/ equipment/ technology has been recognized by foreign patients. In 66.6% of the dental clinics surveyed, more than half are foreign patients. Most patients come from Italy, Slovenia, Austria and Germany, and a smaller number from the UK, the Netherlands, Scandinavia, USA, Switzerland and Bosnia and Herzegovina. In most of the surveyed dental clinics (80%), patients from abroad are coming throughout the year.

According to the respondents, the most effective forms of promotion are websites (average value

4.91), word of mouth (4.91) and social networks (4.63). It is followed by ads on search engines, while emails, blogs, YouTube, banners, and mobile marketing are rated as less effective in communicating with patients.

All the respondents consider that the priority is to improve the accessibility of the destination (direct flights, etc.). Following are the wealth of eno-gastronomic offer, quality of the accommodation offer, wealth of cultural and entertainment facilities and shopping opportunities.

Table 4 Evaluation of the importance of improving the supporting services in the destination for further development of dental tourism

	Mean	Std Deviation	Variance
Improve the accessibility of the destination (direct flights, low cost carriers etc.)	5.00	0.00	0.00
Better quality of the accommodation offer	4.00	0.43	0.18
Wealth of cultural and entertainment facilities	4.00	0.74	0.55
Wealth of eno-gastronomic offer	4.18	0.57	0.33
Shopping opportunities	3.91	0.67	0.45

Source: Author's research

In addition, the research sought to identify the elements for building Croatia's distinctiveness on the market as a country of dental tourism. The views of most surveyed dental clinics managers (64%) are that competitiveness needs to be built on the high quality of the dental tourism product (tourism experience and quality of dental services/clinics), while others consider competitiveness to be built on top quality dental services/clinics.

5. Conclusion

In this study the attention was given to understanding dental tourism in Croatia from the perspective of dental care providers by identifying their current business activities, as well as limitations and opportunities in providing dental care services.

Despite the limitations of the research with a small sample size, the key findings are very indicative given the state and enormous potential of dental tourism in Croatia. Great opportunities for development have not been exploited.

The findings show that dental tourism in Croatia, as well as in the neighboring countries, has competitive advantage based mainly on excellent price-quality product/services ratio of dental care, highly educated and experienced medical and professional staff, high professional standard, solutions for dental problems in a short time at lower cost, communication with patients in foreign languages, quality of supporting services and tourist facilities, good geographical position and easy accessibility of the country.

According to the opinion of dental clinics managers, the main limitations to the development of dental tourism in Croatia are lack of EU funding tenders and incentive measures for the development of medical tourism, inadequate promotion of dental tourism, and lack of strategic planning and development vision at national level. The following factors are considered to be particularly important for further development of dental tourism in Croatia: accreditation and international certification of clin-

ics, continuous investment in employee training, quality of services and equipment/technology, tenders for EU funds, branding Croatia as a destination for medical tourism and higher Croatian National Tourist Board investments in advertising. The findings also emphasize that Croatia, as a country with a long tradition in tourism, must build competitive advantage on the basis of high quality dental tourism products (dental treatment with tourism experience as a product). Integration of dental care and leisure, the quality of supporting tourism services/facilities/attractions built around the dental treatment as a core product will enable Croatia to create a recognizable identity. This requires a multidisciplinary approach to the development of dental tourism and higher degree of cooperation between dental providers, the public sector and all stakeholders in the supply chain.

Marketing communication should focus on the industry strengths, which is the dental tourism product. Quality of Croatian supporting tourist facilities add value to the core product and help to differentiate it from competition. The Ministry of Tourism and Tourist Boards should be more strongly involved in promoting the advantages of dental tourism products in Croatia compared to other countries, using modern forms of communication (e-marketing, social media, Facebook, Twitter etc.).

The survey findings provide information that can be used for taking action to stimulate the development of dental tourism in Croatia. This study is a foundation for further research. The interviews with dental clinics managers should be conducted to gain a better insight into their opinions and needs. It is also necessary to systematically conduct research to better understand dental tourists' profiles, travel motivations, what patients take into account when they choose their dentists, the level of satisfaction with dental care services, supporting services and tourist facilities in order to make appropriate management and marketing recommendations.

REFERENCES

1. Adams, K., Snyder, J., Berry, N. S., Crooks, V. A. (2018), "A critical examination of empowerment in medical tourism: The case of dental tourism industry in Los Algodones, Mexico", *Globalization and Health*, Vol. 14, No. 1, pp. 1-10.
2. Chandu, A., (2015), "Dental Tourism" in Lunt, N., Horsfall, D. (Eds.), *Handbook on Medical Tourism and Patient Mobility*, Edward Elgar Publishing, Cheltenham, pp. 403-410.
3. Cuamea Velazquez, O., Morgan Medina, J. C., M., Estrada Gaxiola, A. R. (2017), "Dental Tourism: Key Factors that Influence the Selection of a Dental Clinic in a Border Region", *International Journal of Advanced Research (IJAR)*, Vol. 5, No. 7. pp. 2713-2721.
4. Geić, S. (2011). *Menadžment selektivnih oblika turizma*. Split: University of Split.
5. Gregorić, M., Musliu, T. (2015), "Lječilišni aspekt zdravstvenog turizma u Republici Hrvatskoj", *Zbornik radova Međimurskog veleučilišta u Čakovcu*, Vol. 6, No. 2, pp. 59-66.
6. Ivandić, N., Kunst, I., Telišman-Košuta, N. (2016), "Pretpostavke održivosti zdravstvenog turizma u Republici Hrvatskoj – načela razvoja i ključni činitelji uspjeha", *Radovi Zavoda za znanstveni rad Varaždin*, No. 27, pp. 25-46.
7. Jaapar, M., Musa, G., Moghawemi, S., Saub, R. (2017), "Dental tourism: Examining tourist profiles, motivation and satisfaction", *Tourism Management*, Vol. 61, pp. 538-552.
8. Jovanović, V. (2015). *Tematski turizam*. 2nd amended and revised edition. Belgrade: Singidunum University.
9. Jurišić, E., Cegur Radović, T. (2017), "Dental Tourism – an Opportunity for Croatian tourism", in Barković, D. (Ed.), *Interdisciplinary Management Research XIII*, May 18-20, 2017, Faculty of Economics in Osijek, Osijek, pp. 297-311.
10. Kamath, K., Hugar, S., Kumar, V., Gokhale, N., Uppin, C., Hugar, S. S. (2015), "The business and pleasure of teeth: Dental tourism", *International Journal of Contemporary Dental and Medical Reviews*, Vol. 2015, pp. 1-4.
11. Kesar, O., Mikulić, J., (2017), "Medical tourist satisfaction and dissatisfaction with dental care service: An exploratory case study", *Tourism in Southern and Eastern Europe*, Vol. 4, pp. 243-258.
12. Krajnović, A., Babić, R., Bosna, J. (2013), "Medicinski turizam – neki marketinški i etički aspekti", *Oeconomica Jadertina*, Vol. 3, No. 1, pp. 16-30.
13. Loubeau, P. R. (2009), "The globalization of dental care: An opportunity for Croatian tourism", *Tourism*, Vol. 57, No. 2, pp. 193-199.
14. Panteli, D., Augustin, U., Rottger, J., Struckmann, V., Verheyen, F., Wagner, C., Busse, R. (2015), "Informed consumer or unlucky visitor? A profile of German patients who received dental services abroad", *Community Dentistry and Oral Epidemiology*, Vol. 43, No. 5, pp. 415-423.
15. Tihi, B., Peštek, A. (2009), "Razvoj dentalnog turizma na području Sarajeva", *Acta turistica*, Vol. 21, No. 2, pp. 210-229.
16. Urbančić, M. (2016). *Internet marketing u turizmu: Vodič za bolju popunjenost smještajnih kapaciteta*. Rijeka: Paradox d.o.o.

ENDNOTES

- 1 Institute for Tourism (2014), "Nacionalni program - Akcijski plan razvoja zdravstvenog turizma RH", available at: https://mint.gov.hr/UserDocsImages//arhiva//150608_AP_%20Zdravstveni%20turizam.pdf (Accessed on: June 2, 2018)
- 2 Mintel Group Ltd. (2017), "Medical and Wellness Tourism Trends in Europe", available at: <http://academic.mintel.com/display/835097/> (Accessed on: June 2, 2018)
- 3 Mintel Group Ltd. (2016), "The Evolution of Wellness Tourism", available at: <http://academic.mintel.com/sinatra/oxygen/print/id=786392> (Accessed on: June 17, 2018)
- 4 Croatian National Tourist Board (2016), "Medicinski turizam, međunarodni trendovi i perspektive", available at: www.htz.hr/sites/default/files/2016-11/Medicinski-turizam-Medunarodni-trendovi-i-perspektive.pdf (Accessed on: May 28, 2018)
- 5 European Hospital and Healthcare Federation (2015), "Medical Tourism", available at: http://www.hope.be/wp-content/uploads/2015/11/98_2015-HOPE-PUBLICATION-Medical-Tourism.pdf (Accessed on: July 21, 2018)
- 6 Mintel Group Ltd. (2017), "Medical and Wellness Tourism Trends in Europe", available at: <http://academic.mintel.com/sinatra/oxygen/print/id=835089> (Accessed on: June 29, 2018)
- 7 Kovacs, E., Szocska, G., Torok, B., Ragany, K. (2013), "Why is Hungary the main destination country in dental tourism? Why do patients choose Hungary for dental care?", Hungarian Case Study on dental care and patient flow, available at: http://semmelweis.hu/emk/files/2013/02/Final_case_study_web.pdf (Accessed on: June 7, 2018)
- 8 Zoltan, J., Maggi, R. (2011), "What is Tourism in Dental Tourism?", available at https://ssl.lu.usi.ch/entityws/Allegati/pdf_pub5354.pdf (Accessed on: May 22, 2018)
- 9 "Romanian Dental Tourism", available at: www.romaniadentaltourism.com (Accessed on: July 3, 2018)
- 10 "Dentistry in Czech Republic", available at: <http://healthczech.build.eibs.co.uk/treatments/dentistry/> (Accessed on: July 6, 2018)
- 11 Croatian National Tourist Board (2016), "Medicinski turizam, međunarodni trendovi i perspektive", available at: www.htz.hr/sites/default/files/2016-11/Medicinski-turizam-Medunarodni-trendovi-i-perspektive.pdf (Accessed on: May 28, 2018)
- 12 Institute for Tourism (2014), "Nacionalni program - Akcijski plan razvoja zdravstvenog turizma RH", according to (1) www.slovenia.info; (2) www.hr.slovenia-terme.si; (3) Vesenjaj, P., 4th Balkan Spa Summit, 2014, available at: https://mint.gov.hr/UserDocsImages//arhiva//150608_AP_%20Zdravstveni%20turizam.pdf (Accessed on: June 2, 2018)
- 13 Institute for Tourism (2013), "Strategija razvoja hrvatskog turizma do 2020", available at: <http://iztg.hr/hr/institut/strategija-razvoja-turizma-rh/> (Accessed on: March 27, 2018)
- 14 Udruga za razvoj medicinskog turizma, available at: http://www.umt.hr/o_nama.html (Accessed on: April 23, 2018)
- 15 Act on the Provision of Tourism Services, Official Gazette No. 130/17, available at: <https://www.zakon.hr/z/343/Zakon-0-pru%C5%BEnju-usluga-u-turizmu> (Accessed on: April 23, 2018)
- 16 Croatian Chamber of Economy, Tourism Sector, available at: <https://www.hgk.hr/javni-poziv-za-sudjelovanje-u-nacionalnoj-promociji-zdravstvenog-turizma-na-podstranici-croatia-full-of-well-being> (Accessed on: June 18, 2018)

Doris Peručić

OGRANIČENJA I PERSPEKTIVE RAZVOJA DENTALNOG TURIZMA, PRIMJER HRVATSKE

SAŽETAK

Mnoge zemlje razvijaju dentalni turizam kao značajan segment rastućeg medicinskog turizma u svijetu. U Europi dentalni turisti čine više od 30% ukupnog broja medicinskih turista. Cilj rada je analizirati razvijenost dentalnog turizma u Hrvatskoj sa stajališta pružatelja stomatoloških usluga identificiranjem ograničenja i mogućnosti za pružanje usluga dentalnog turizma. Kako bi se dobio uvid u razvijenost tržišta dentalnog turizma u Hrvatskoj provedena su dva istraživanja. Prvo istraživanje provedeno je sustavnim pregledom internetskih stranica vodećih privatnih dentalnih klinika, a drugo putem online ankete provedene u listopadu 2018. godine. Nalazi istraživanja ukazuju da se tržišna prepoznatljivost Hrvatske uglavnom temelji na izvrsnom odnosu cijene i kvalitete dentalnih usluga/proizvoda, stručnom osoblju, visokim standardima, nižim cijenama i kvaliteti dodatnih usluga. Prema mišljenju menadžera dentalnih klinika glavna ograničenja razvoja dentalnog turizma u Hrvatskoj su: nedostatak natječaja za dodjelu bespovratnih sredstava iz EU fondova i izostanak poticajnih mjera za razvoj medicinskog turizma, zatim nedostatna promocija dentalnog turizma i nedostatak strateškog planiranja i razvojne vizije na nacionalnoj razini. Za razvoj dentalnog turizma izuzetno je važno provesti akreditaciju i međunarodno certificiranje klinika i kontinuirano ulagati u usavršavanje zaposlenika, kvalitetu usluge i opremu/tehnologiju. Nalazi također ukazuju da Hrvatska svoju konkurentsku prednost treba graditi na kvaliteti dentalno turističkog proizvoda. Kvaliteta usluga/sadržaja uključenih u turistički dio boravka daje dodanu vrijednost osnovnom proizvodu i omogućuje da se diferencira od konkurencije.

Gljučne riječi: dentalni turizam, ključni čimbenici uspjeha, Hrvatska, ograničenja, mogućnosti, konkurentna prednost

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THE IMPACT OF THE APPLICATION OF THE ACCOUNTING CONCEPT OF FAIR VALUE ON THE QUALITY OF FINANCIAL STATEMENTS OF BUSINESS ENTITIES IN BOSNIA AND HERZEGOVINA

ABSTRACT

The primary objective of financial reporting in a modern market economy, which is based on the capital market, is to inform the investor about the financial position of a business entity. The unavoidable theme in modern accounting research is the valuation of balance sheet positions, regardless of the type and size of the business entity whose reports are the subject of this paper. The purpose of the research is to investigate whether there is a connection between the frequency of applying the accounting concept of fair value in valuing property positions and the quality of financial statements for businesses in Bosnia and Herzegovina. The target population comprises 34,515 small, medium and large enterprises registered as joint stock companies and limited liability companies in Bosnia and Herzegovina, and the questionnaire will be used as the empirical research instrument. The questionnaire is structured in parts to obtain knowledge about which technique or approach business entities use when using the fair value for the valuation of balance sheet items, and consequently how it affects the relevance, comprehensibility, comparability and credibility of the information presented in the financial statements.

Keywords: Fair value, quality of financial reports, relevance, comprehensibility, comparability, credibility

1. Introduction

In scientific discussions on accounting, the subject of the "concept of evaluating balance sheet positions" is often raised, which provides quality information for external users. The most commonly used measure of value is the historical-cost method, but its shortcomings came to light in the late 1990s, due to the crisis of US financial and savings institutions. As an alterna-

tive that largely eliminates the discovered shortcomings, the concept of fair value for balance sheet positions has been proposed by competent institutions. In almost all IAS (International Accounting Standards) and IFRS (International Financial Reporting Standards), some form of fair value is applied, either as an option or mandatory requirement to evaluate balance sheet items/success rates. In recent years,

more specifically in 2011, IFRS 13 - Fair Value Measurement was published, whose role was to eliminate all the uncertainties regarding the concept of fair value in financial reporting. According to this standard, fair value is defined as the price that would be realized by selling some item of property or paid to transfer a liability in an orderly transaction between market participants on the measurement date, the so-called output price. In order to increase consistency and comparability in determining fair value and related disclosures, IFRS 13 establishes a hierarchy that categorizes an in-house valuation technique in three levels, with the highest priority given to quoted prices in existing markets for an identical asset or liability (Level 1 inputs), quoted prices for similar assets or liabilities (Level 2 inputs), and the lowest priority is given to inputs that are not available on the market (Level 3 inputs). The overall goal of the present research is to determine whether and to what extent business entities in Bosnia and Herzegovina prefer the use of some technique of fair value in valuing property positions and how it affects the quality of information presented in the financial statements. In this regard, the research hypothesis reads as follows:

The application of the accounting concept of fair value significantly influences the quality of financial statements of business entities in Bosnia and Herzegovina.

In addition to the key issue being investigated, and the question whether applying the accounting concept of fair value contributes to improving the quality of financial reports of business entities in Bosnia and Herzegovina, it would be useful to include the following issues in the research:

1. To what extent is the application of the concept justified for the financial reporting of business entities on the capital market?
2. Which technique of the accounting concept of fair value is most often used when valuing property positions?
3. What is the structure of the surveyed business entities according to the branch of the economy to which they belong, the size and the export orientation?
4. Are the surveyed businesses subject to a mandatory audit of financial statements?
5. What are the limits of applying the accounting concept of fair value?

Primary research will be conducted using a written test method, i.e. a questionnaire for accountants of the business entities. The test sample will be formed on the basis of a list of registered business entities in the form of joint stock companies or limited liability companies, in accordance with the obligation to apply all IFRSs and IASs. Small companies are not obliged to use all IFRSs and IASs, but in the past years they have been submitting a full set of financial reports. Because of that, small companies will not be excluded from the sample of this research in Bosnia and Herzegovina. The questionnaire will be divided into several groups of questions. The first group will refer to general information about a business entity. The next group of questions will cover issues related to the quality of financial reports. A third set of questions will be formulated for the purpose of verifying information on the application of the fair value concept, in the form of a Likert scale with accountants agreeing with the above-mentioned assertions, which cannot be obtained on the basis of financial and auditor reports. The software package offered by the Statistical Package for Social Sciences (SPSS v. 21.0) will be used to analyze the collected data. Correlation and regression analysis will be used to determine the relationship between the defined variables.

2. An overview of current research

The fundamental qualitative characteristics of the financial statements are relevance and credibility. In order to understand the role of the qualitative characteristics of the financial statements, it is necessary to start from the basic objective of financial reporting.

In order for the financial statements to fulfill their objective, it is necessary that the information provided by them is usable, which means that they have the following characteristics: comprehensibility, importance, significance, reliability, credibility, essence of form, neutrality, intelligibility, completeness, comparability, timeliness, balance of benefits and costs, truthfulness and fair presentation (Novalija Islambegović, 2015).

According to IASB, the important principle of assessing the quality of financial reporting relates to the credibility of the objectives and the quality of published information in the financial statements of a business entity. Qualitative characteristics improve and facilitate the estimates of the usefulness

of financial statements, which will also lead to a higher level of quality of financial reporting itself. In order to achieve this level, the financial statements must be credible, comparable, verifiable, timely and understandable (Gajevszky, 2015).

Protecting investors' interests by disclosing relevant and reliable information is one of the segments of harmonization of regulations within the European Union. In this regard, in an effort to harmonize the already existing requirements with respect to the reporting of the company whose securities are traded on the capital markets within the EU, in the past few years there has been intensive work on the adoption of directives, regulations and other acts by the European Commission and its bodies. Transparent reporting by companies in the capital markets implies that, in addition to the classical set of financial statements, other reports, such as the Management Report (Zajmi, 2011), will be made available to the public, and above all to investors.

Relevance as the basic criterion of information contained in the financial statements indicates the usefulness and necessity of this information when making business decisions. It's actually an information feature to enable and help their users to understand the essence of business events and their repercussions on the business, as well as to eventually anticipate future events.

Accounting information, on the one hand, should confirm the occurrence of business events, and, on the other hand, enable the forecasting of business events and their effects. Laux and Leuz (2009) consider that it is nevertheless better to use fair value as the concept of valuation and to supplement these values with additional disclosures in terms of explanations in the financial statements, rather than to evaluate property positions at historical cost, since the underlying problems are clouded due to the lack of up-to-date accounting information. However, in order to obtain a clearer picture of the impact of the accounting concept of fair value on the quality of financial statements, it is necessary to consider the qualitative characteristics of relevance. Hirst et al. (2004) and Beretta-Bozzolan (2004) are trying to develop a test for a comprehensive assessment of the quality of financial reporting, which will include both financial and non-financial information about the business.

Hodder, Hopkins and Wahlen (2006) consider that for the various estimates and assumptions in the

annual report it is very important to examine the reasoning. If the arguments are valid, then they are probably economic phenomena without prejudice. Information without prejudice is one of the indicators of the credibility of the information.

In addition, valid and well-founded arguments explaining accounting principles increase the likelihood that users will fully understand the measurement methods. This will reduce the possibility of unintentional material errors in the financial statements (Maines, Wahlen, 2006). They also claim that an unconditional audit opinion is a condition that cannot be perceived information from financial reports and their reliability and credibility. When the selected accounting principle is clearly described and well-grounded, the likelihood of reaching consensus and the disclosure of significantly misrepresented data for the user of the financial report, but also for the auditor, increases. Another notion that explains the authenticity of information is neutrality, and it is defined as the absence of prejudice that it intends to achieve a predetermined result or to trigger certain behavior. Poor management and internal control reduce the quality of financial reporting. More specifically, information provided by corporate governance increases the credibility of information (Rezaee, 2003).

Comparability is the requirement that the financial statements comply with the prescribed schemes and accounting standards. In case of frequent changes in the balance sheets, the problem of comparability will arise. The users of the financial statements perform their comparison over several time intervals to determine business trends and plan business processes in the coming period. When compared, the financial statements schemes between two years must have correspondence data. One of the conditions of data comparability between the two time intervals is the consistent application of adopted accounting policies, and if their change occurs then it is necessary to announce the effects of these changes.

Comparability requires that identical events in two situations reflect identical accounting facts and figures, and different events will be reflected in different accounting facts and figures in a comparable and easily understandable way (Cheung et al., 2010).

The intelligibility of the information implies good classification and organization of information in

the report, the number of narrative explanations in the notes to the financial statements, and the number of tabular and graphic formats in the report. If annual reports are well organized, it is easier to understand where to look for specific information. Detection of information in notes can be very valuable in terms of explaining and providing a better insight into earnings figures. In particular, descriptive explanations are useful in increasing the intelligibility of information. In addition, the presence of tabular and graphic formats can also improve the intelligibility of information (Beest et al., 2009).

Claims that assets are measured at current market prices date back to the 19th century. The term fair value was first mentioned in 1844 when the first Joint Stock Companies Registration and Regulation Act was adopted, which was followed by a new law in 1856. These laws required that the financial statements of business entities (companies) were made fair and complete so that it can be seen that the business of a company is being conducted prudently and honestly. Prior to the introduction of compulsory accounting standards, the companies themselves could choose their accounting policies for valuation, so US companies in the 1920s used market rates in the accounting valuation (Šodan, 2014).

The '80s and '90s are marked by repeated initiatives for defining and introducing values that should be considered as a fair measure of presentation of elements in financial reporting. Although the reasons for standardization were clear and justified, there were also numerous implementation problems that can be reduced to differentiating the definition of fair values in different conditions and for different elements of financial statements, the scattered and inconsistent requirements for fair valuation according to different standards, of which is the area of the standard, and very often the incomprehensibility and complexity of determining the fair value (IASB, 2006).

In explaining the concept of fair value, preference is given to market values, which are considered to fully cover the characteristics of future economic benefits; the fair value matches the market prices stemming from the market of perfect competition. They reflect the assessment of market participants who participate in the sale of assets and include the time value of money in the calculation (Knežević, 2009).

Stipic (2015) states that the International Accounting Standards Board has adopted the International Standard on Financial Reporting 13 - Fair Value Measurement, which establishes a single framework for measuring fair value for all IFRSs. Due to frequent manipulations with property values and property investments, it was necessary to define a single standard for measuring fair value and determining its mandatory use. IFRS 13 applies when other IFRSs require or permit fair value measurements or disclosures about fair value measurements, as well as measurement and impairment of fair value sales costs or disclosure of those measurements. This is characteristic for developed markets, however, in recent papers, the importance of open market margins is emphasized by reference to the concept of fair value (Ngueyen, 2014).¹

Empirical research by various authors on the relationship between the engagement of large audit firms and the quality of the published information in the financial reports has given different results. Ahmed and Nicholls (1994) and Wallace and Naser (1995) find a positive relationship between the size of the auditing house that exerts an external audit and the quality of disclosure in the financial statements. In contrast, Rupic and Bonic (2015) did not find any evidence of a statistically significant relationship in their research.

Businesses operating on the international market are more motivated to publish more quality information in their financial statements in order to better present themselves to different stakeholders. Business entities operating in several geographical areas have systems of control over the superior administration due to the complexity of their business activities. Such supervisory management provides reliable and accurate information in its financial statements (Cooke, 1989).

A survey conducted on 222 large, small and medium-sized businesses in Bosnia and Herzegovina, by means of a random sample, showed that the lack of an active market and expert evaluators is not an obstacle to making an estimate of the value of the property. Rather, the problem lies in the large costs that are an obstacle to business entities trying to reevaluate tangible assets in accordance with the requirements of the international accounting standard (Kapić, Bajraktarević, 2015).

Elfaki and Hammad (2015) investigate the impact of the application of fair value accounting on the

quality of accounting information and come to the conclusion that fair value contributes to the provision of useful information to users of financial statements and helps in making business decisions. Other authors (Savić, 2014) consider the subsequent valuation at fair value to be in collision with at least two accounting principles, the principle of caution and the principle of realization, since the prudence principle requires that the assets are stated at a lower value in the balance sheet, whereas liabilities should be stated at a higher value. However, in the case of an estimate at fair value, assets are stated at a higher, not lower value. Regarding the principle of realization, when accounting for an increase in the value of investment property resulting in an increase in income, early recognition of profits that are not yet confirmed on the market are carried out. In such cases, an estimate at fair value is not in line with the principle of realization.

Negovanović (2007) also highlights the lack of access to fair value in a situation where the asset is sold, disposed of, gifts exchanged or otherwise disposed of. The corresponding amount of revaluation reserves can be transferred to undistributed profits, and only the portion that represents the difference in depreciation calculated, revalued and depreciated are calculated on the cost.

3. Methodology

The survey was conducted with the aim of examining the relationship between the frequency of applying the accounting concept of fair value and the quality of financial statements of business entities in Bosnia and Herzegovina, registered as limited liability companies (d.o.o.) and joint stock companies (d.d). The list of registered business entities representing the population is downloaded from the Register of Business Entities in Bosnia and Herzegovina.²

The total population of small, medium and large business entities registered as limited liability companies and joint stock companies is 34,515, of which 34,050 are limited liability companies and 465 are joint stock companies. Empirical research was conducted through a survey questionnaire on a sample of hundreds of small, medium and large business entities in Bosnia and Herzegovina in 2017.

In order to determine the fair value in more detail and more precisely, valuation techniques are used

to estimate the price at which the property could be sold, and the obligation transferred in a regular transaction between market participants at a specific date when the measurement is carried out. The condition for using a particular technique is a sufficient amount of data to measure. If transactions are directly visible in the market, the determination of fair value is easy; however, if transactions are not directly visible, particular valuation techniques are used. The chosen technique must be consistently applied (Green, 2015; Tan, 2015).

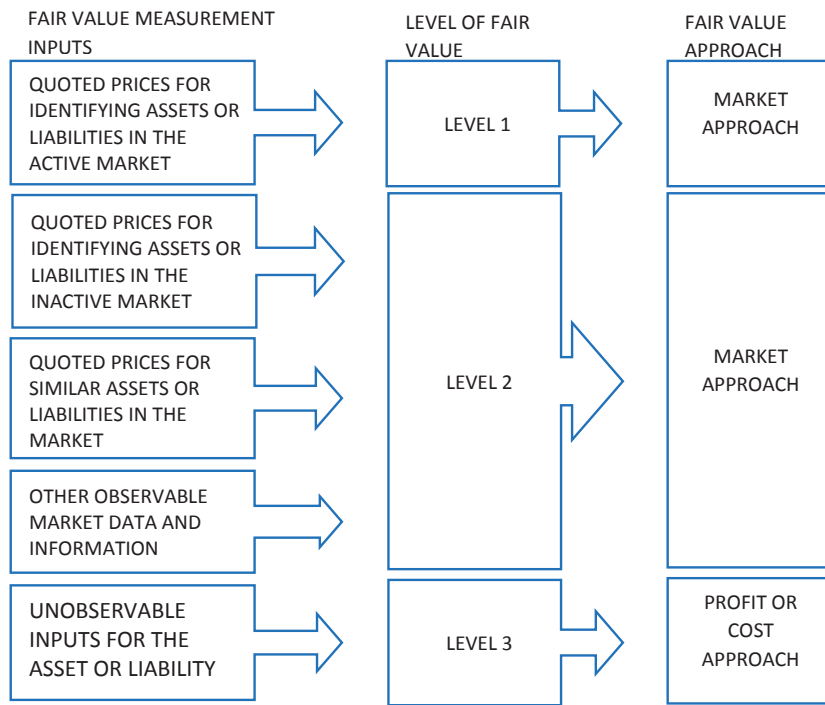
IFRS 13 lists three valuation approaches that business entities can use to determine fair value: the market, profit and cost approach. The market approach implies that a market operator uses prices and other essential information from market transactions with the same or similar assets / liabilities or a group of assets or liabilities. It is a primary approach and it is very important that the information is available on an active or inactive market. Furthermore, the gain (approach) implies that a market entity will reduce its future amounts (e.g., cash or income and expenses) to one current or discounted amount. It is mainly used for the valuation of tangible and intangible assets and liabilities, as well as for valuing a business entity as a whole. A cost approach means that using this technique gets the amount that would be needed in the present to replace the service capacity of an asset. The cost approach is used mainly for the determination of tangible assets in those cases where the market is inactive and when it is difficult to estimate future cash flows expected from that asset (Šodan, 2014).

The indicators we used to measure the frequency of using the accounting concept of fair value with business entities in Bosnia and Herzegovina relate to the following three situations:

- a. measurement based on the price available on the market
- b. measurement based on the price available on the market for similar positions
- c. measurement based on the estimation of future cash flows.

The following schematic view shows the relationship between the availability of fair value measurement inputs and the hierarchical levels, and the approach or technique of measurement applied in that situation.

Figure 1 Adjusted to IFRS 13 – Measurement of fair value



Source: Authors' review

The quality of the financial statements, which is a dependent variable in performance, is measured by indicators of relevance, credibility, comprehensibility and comparability of information. All measurements of quality were investigated by the Likert scale from 1 to 5, where 1 represents absolute disagreement and 5 absolute agreement with the stated claim. The relevance is measured for the question of whether the information provided by the financial statements helps to assess the future of a business entity and whether non-financial information is important under the estimates of the relevance of the financial statements. The credibility is measured by the claim that information is based on the concept of fair value credible to users, because the image of the future and information based on the concept of historical cost are not credible to users since they are a picture of the past. Understandability is measured to better understand the information based on a fair concept rather than at historical cost. Comparability is measured by the claims that the application of the fair value concept contributes

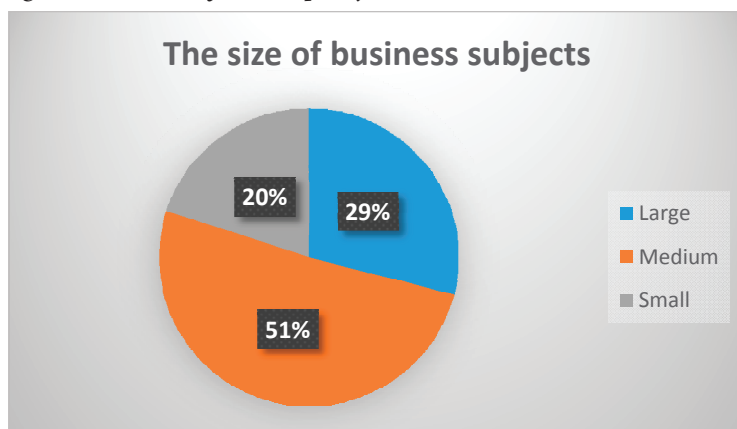
to the comparison of positions from one period to another, and fair value valuation allows users of financial reports to be comparable with others from the branch and the environment (Agcun, 2016; Kovacs, 2013).

The central research hypothesis reads:

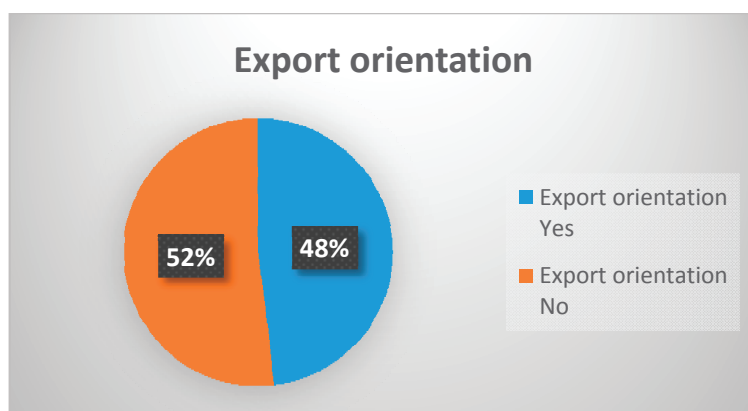
The application of the accounting concept of fair value significantly influences the quality of financial statements of business entities in Bosnia and Herzegovina.

4. Research results

The structure of the sample of business subjects in which the written questionnaire was conducted through the survey questionnaire, according to size, looks like this: 20% small, 51% medium and 29% large companies. The affiliation with different branches of industry in the area of production, trade and service activities is represented. 52% does not have an export orientation, while 48% is export-oriented.

Figure 2 Structure of the sample by size

Source: Authors' review

Figure 3 Sample structure according to export orientation

Source: Authors' review

The question of the normal distribution of the dependent and independent variables in the population was established on the basis of the standard Kolmogorov-Smirnov and Shapiro-Wilk tests of the normal distribution of variables in the population.

It can be seen that $P < 0.05$ in the Sig column, so the test can be used to calculate the correlation between the dependent and the independent variables defined in the model.

Table 1 Examination of the normal distribution of a dependent and independent variable

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Financial reports quality	0.165	100	0.000	0.896	100	0.000
Frequency of fair value application	0.107	100	0.007	0.958	100	0.003

Source: Authors' review

The model for calculating the coefficient of single linear regression is:

$$\text{Compute KFI} = \alpha_0 + \beta * \text{Compute FV}$$

Compute KFI = weighted average of attitudes to improve the relevance, reliability, comprehensibility and comparability of the financial statements of business entities shown on the Likert scale from 1 to 5 (1 absolute disagreement, 2 disagreement, 3 neutral position, 4 agreement, 5 absolute agreement). Compute FV = weighted

average of attitudes about the frequency of applying individual techniques for measuring balance positions shown on the Likert scale from 1 to 5 (1 never used, 2 rarely used, 3 used, 4 often used, 5 always used).

Given that it has been previously established that the phenomenon is normally distributed, the Pearson's correlation coefficient will show us that the application of fair value correlates with the quality of financial statements in business entities in Bosnia and Herzegovina.

Table 2 Correlation analysis

		Financial reports quality	Fair value
Financial reports quality	Pearson	1	0.560
	Sig.		0.000
	N	100	100
Fair value	Pearson	0.560	1
	Sig.	0.000	
	N	100	100

Source: Authors' review

Based on the data from the table, it can be concluded that the dependent variable positively correlates with the independent variable. The correlation is very strong and we will see below whether

there is a causal relationship between the variables mentioned, so that the research hypothesis can be confirmed or disproved.

Table 3 Regression analysis

Model	R	R Square	Adjust R Square	Std. Error of the Estimate
1	0.560	0.314	0.307	0.568

Source: Authors' review

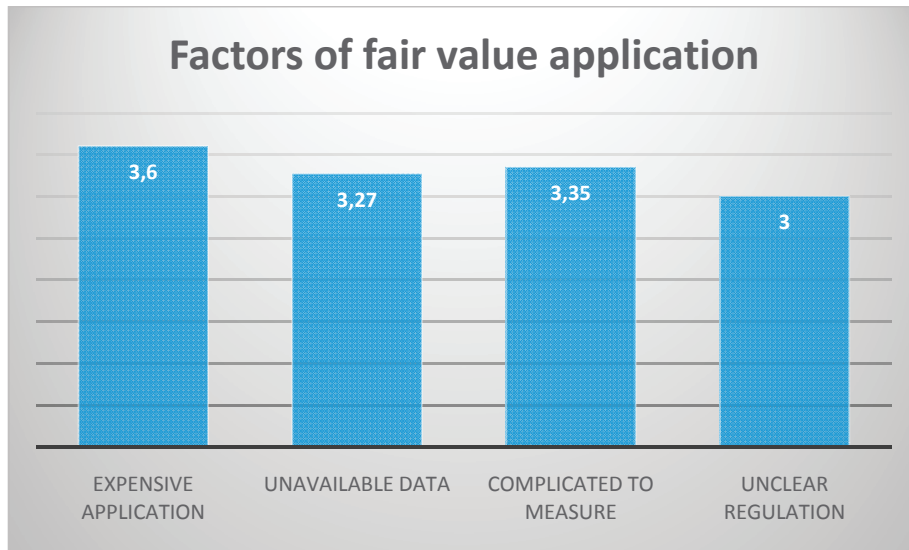
The single linear regression coefficient is shown in column R, the coefficient of determination is shown in the R square column, and the corrected determination coefficient in the Adjust R Square column. The corrected determination coefficient is a less biased indicator in relation to the determination coefficient. This means that 30.70% of individual differences in terms of the quality of financial statements can be predicted or explained based on differences in terms of the frequency of applying the accounting concept of fair value in the financial statements of business entities in Bosnia and Herzegovina.

5. Conclusion and discussion

The results of the survey indicate that the application of the accounting concept of fair value positively influences the quality of financial reports of business entities in Bosnia and Herzegovina. Although the results are promising, there are additional factors to be considered.

Factors that determine the application of fair values are also important information for further research.

Figure 4 Factors of fair value application



Source: Authors' review

The most important factor in choosing the application of the accounting concept of fair value is that of the application of the set. The least important factor is the unclear regulations. Namely, in recent times regulations were clarified through the introduction and application of comprehensive IFRS 13, the purpose of which was to simplify the application and use of this concept.

As noted in the previous research, the application of the accounting concept of fair value finds its place on the marginal capital markets. It has been proven that the size of a business entity affects the level of the application of the accounting concept of fair value in the above-mentioned companies in Bosnia and Herzegovina (Delić, Gadžo, 2017), and even though the level of companies in the structure of business entities is very small, from year to year this number has increased, and thus the capital market is increasing and developing.

As was expected, in this research the most commonly used technique for valuing property positions in business entities in Bosnia and Herzegovina is the market approach, which corresponds to a price-based measurement for the same or similar positions, while measurement based on the estimation of future cash flows is less represented. This is

supported by the fact of the underdeveloped financial market and the capital market.

80% of the surveyed businesses are subject to a mandatory audit of financial statements, so future research can focus on that aspect when it comes to the application of fair value and the quality of financial statements.

Since the quality of the financial statements in this paper was measured only by the qualitative characteristics of the information, it would be useful to include the quantitative characteristics of the information in financial statements for further research in order to get a complete picture of the quality of financial reporting under the influence of fair value. Also, in terms of applying fair value, other indicators that measure the level of implementation of this concept, such as detailed analysis of property positions and calculation of the index of disclosure of information at fair value, must be taken into account. As the paper has focused on the impact of the application of the accounting concept of fair value on the quality of financial statements of business entities, the data that may support the research are missing, and they are related to financial statements. In future research it is necessary to include value indicators from the profit items, which reflect the use of the concept of fair value.

REFERENCES

1. Agcun, A. (2016), "Quality of the Financial Reporting in the IFRS: Research on Determining the Attitudes and Evaluations of Financial Information Users", *The Journal of Accounting and Finance*, Vol. 2016, No. 69, pp. 169-188.
2. Ahmed, K., Nicholls, D. (1994), "The Impact of Non-Financial Company Characteristics on Mandatory Disclosure Compliance in Developing Countries: The Case of Bangladesh", *The International Journal of Accounting*, Vol. 29, No. 1, pp. 62-77.
3. Beest, F., Braam, G., Boelens, S. (2009), "Quality of Financial Reporting: measuring qualitative characteristics", NiCE Working Paper 09-108, Nijmegen Center for Economics, Institute for Management Research, Radboud University, Nijmegen, April 2009.
4. Beretta, S., Bozzolan, S. (2004), "A framework for the analysis of firm risk communication", *The International Journal of Accounting*, Vol. 39, No. 3, pp. 265-288.
5. Cheung, E., Evans, E., Wright, S. (2010), "An Historical Review of Quality in Financial Reporting in Australia", *Pacific Accounting Review*, Vol. 22, No. 2, pp. 147-169.
6. Cooke, T. E. (1989), "Voluntary Corporate Disclosure by Swedish Companies", *Journal of International Financial Management & Accounting*, Vol. 1, No. 2, pp. 117-195.
7. Delić, E., Gadžo, A. (2017), "Impact of size of joint stock companies and ownership structure in the application of accounting concept of fair value in FB & H", in Kozarević, E. et al. (Eds.), *Proceedings of the 5th International Scientific Conference "Economy of Integration"*, University of Tuzla, Faculty of Economics.
8. Elfaki, A., Hammad, S. (2015), "The Impact of the Application of Fair Value Accounting on the Quality of Accounting Information. An Empirical Study on a Group of Companies Listed on the Khartoum Stock Exchange", *International Journal of Academic Research in Accounting, Finance and Management Sciences*, Vol. 5, No. 1, pp. 148-160.
9. Gajevszky, A. (2015), "Assessing Financial Reporting Quality: Evidence from Romania", *Audit Financiar*, Vol. 13, No. 121, pp. 69-80.
10. Green, K. (2015). *Can Fair Value Accounting Create a Cognitive Bias? The Effects of Recognized Level 3 Fair Value on Manager Selling Decisions*. Doctoral dissertation. Richmond: Virginia Commonwealth University.
11. Hirst, D., Hopkins, P., Wahlen, J. (2004), "Fair Values, Income Measurement and Bank Analysts Risk and Valuation Judgements", *The Accounting Review*, Vol. 79, No. 2, pp. 453-472.
12. Hodder, L., Hopkins, P., Wahlen, J. (2006), "The Risk-Relevance of Fair-Value Income Measures for Commercial Banks", *The Accounting Review*, Vol. 81, No. 2, pp. 337-375.
13. IASB (2006), "Fair Value Measurements. Part 2: SFAS 157 Fair Value Measurements", Discussion Paper, November 2016, available at: www.efrag.org (Accessed on: November 13, 2018)
14. Kapić, R., Bajraktarević, E. (2015), "Teorijski i praktični problemi primjene modela revalorizacije dugoročne materijalne imovine", in *Proceedings of 18th Medunarodnog simpozija u organizaciji Udruženja računovođa, revizora i finansijskih djelatnika FB&H*, Neum, pp. 329-347.
15. Knežević, G. (2009), "Fer vrednost kao koncept vrednovanja finansijskih instrumenata", in *Proceedings of Prvi naučni skup sa međunarodnim učešćem, Bijeljina*, pp. 37-42.
16. Kovacs, D. (2013). *The role and application of fair value accounting in the Hungarian regulatory framework*. Doctoral dissertation. Budapest: Corvinus University of Budapest.
17. Laux, C., Leuz, C. (2009), "The crisis of fair value accounting: Making sense of the recent debate", *Accounting, Organizations and Society*, Vol. 34, No. 6-7, pp. 826-834.
18. Maines, A., Wahlen, J. (2006), "The Nature of Accounting Information Reliability: Inferences from Archival and Experimental Research", *Accounting Horizons*, Vol. 20, No. 4, pp. 399-425.

19. Negovanović, M. (2007), "Procjena osnovnih sredstava po fer vrijednosti – da ili ne?", *Privredni savetnik*, No. 22/23, pp. 183-190.
20. Novalija Islambegović, S. (2015). *Specijalna računovodstva I*. Tuzla: OFF-SET.
21. Rezaee, Z. (2003), "Improving corporate governance: the role of audit committee disclosures", *Managerial Auditing Journal*, Vol. 18, No. 6/7, pp. 530-537.
22. Rupiće, B., Bonić, Lj. (2015), "Specifičnosti koncepta fer vrednovanja u finansijskom izvještavanju i reviziji", *Ekonomске teme*, Vol. 53, No. 1, pp. 119-141.
23. Savić, B. (2014), "Računovodstveni konzervativizam prepreka ili podsticaj visokokvalitetnom finansijskom izvještavanju", in *Proceedings of the 45th Simpozijuma Računovodstva i menadžmenta privatnog i javnog sektora*, Zlatibor, Savez računovođa i revizora Srbije, Belgrade, pp. 33-54.
24. Stipiće, V. (2015), "MSFI 13- mjerjenje fer vrijednosti", *Praktični menadžment*, Vol. 6, No. 1, pp. 122-129.
25. Šodan, S. (2014). *Modeliranje utjecaja računovodstva fer vrijednosti na kvalitetu objavljenih finansijskih performansi*. Doctoral dissertation. Split: Faculty of Economics.
26. Tan, P. (2015), "Fair Value Hierarchy Measures: Post-Implementation Evidence on IFRS 7", *Journal of Business Review*, Vol. 4, No. 1, pp. 105-113.
27. Zajmi, S. (2011), "Harmonizacija finansijskog izvještavanja kao jedan od preduslova internacionalizacije poslovanja", *Pravno-Ekonomski Pogledi*, Vol. 2, No. 1, pp. 33-51.
28. Wallace, R. S. O., Naser, K. (1995), "Firm-Specific Determinants of the Comprehensiveness of Mandatory Disclosure in Corporate Annual Reports of Companies Listed on the Stock Exchange of Hong Kong", *Journal of Accounting and Public Policy*, Vol. 14, No. 4, pp. 311-368.

ENDNOTES

- 1 Ngueyen, N. (2014), "Perception towards the prospect of implementing fair value according to IASB and Vietnamese accounting system: A quantitative study of accounting professionals in Vietnam", available at: <https://www.theseus.fi> (Accessed on: November 11, 2018)
- 2 Registar poslovnih subjekata u Bosni i Hercegovini, available at: <https://bizreg.pravosudje.ba/pls/apex/f?p=183:20:2029767690184299> (Accessed on: November 09, 2018)

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PREDICTING STUDENTS' UNETHICAL BEHAVIOUR: DO ATTITUDES LEAD TOWARDS INTENTIONS?

ABSTRACT

In the last several years, the amount of research on the lack of academic integrity and unethical behaviour of students has increased. On the one hand, technological development has spurred unethical behaviour, while on the other hand it has enabled better control of the same behaviour. This raises the question if the students behave unethically and why, and which factors influence their unethical behaviour. The research was conducted on a sample of 622 university students. The aim of the study was to determine if students' personal attitudes on unethical behaviour influence their intentions to engage in unethical behaviour, i.e. the aim is to determine the connection between the attitudes and the intended behaviour. The results of the regression analysis show a statistically significant positive correlation between the students' general personal attitudes toward unethical behaviour and their future intentions toward unethical behaviour. This leads to the necessity for control and supervision regarding unethical behaviour and a stricter approach to such behaviour, which would ultimately result in the reduction of intentions toward further unethical behaviour among students.

Keywords: Attitudes, intentions, unethical behaviour, marketing, theory of planned behaviour

1. Introduction

Today, the emphasis on sustainable development is increasing across all areas of activity, along with socially responsible business activities, and the ethical behaviour of individuals is increasingly considered. Higher education, as a sector where individuals receive education and where they focus on a specific area of interest, also has an effect on the ethical behaviour of students. A question that is emerging with increasing frequency, the one

also receiving an increased amount of media attention, is the (un)ethical behaviour of employers, employees, and government officials. We ask ourselves where it all starts, at what stage of their lives do people start considering unethical behaviour, what are the reasons for it, and what is its goal. The Croatian market is not alone in dealing with these issues; they are also present in foreign markets, where company managers have caused dramatic drops in the value of their companies' stocks

through their unethical behaviour in the organisation (Wang, Kleiner, 2005). Also, some studies (Ballantine et al., 2014; McCall, 1988; Sims, Sims, 1991; Nonis, Swift, 2001; Stone et al., 2009) indicate that persons who behave unethically in school also display unethical behaviour in the workplace. Furthermore, research has shown that students, who are the future of the labour market, show a decreasing amount of awareness regarding the importance of academic integrity, which ultimately affects all the stakeholders in the market. Another research study that supports this is authored by Rosman et al. (2008), which says that students' awareness of cheating is present from the childhood stage, considering that they believe cheating is acceptable because everyone cheats.

Ethics begins with each specific individual, with personal emotions, intuition, and attitudes, which are later translated into ethical behaviour. Individuals learn how to adapt ethical principles through their own socialisation process, their life experience, and critical thinking, along with the explicit cultural standard (Shaw, 2008). Ethical values have been widely recognised as a key element in educational institutions, where each educational institution wants to develop a culture of honesty among their students, as well as the awareness about the importance of academic integrity and about a quick response to academic dishonesty. The advanced technology that surrounds us presents a problem as it provides the possibility for more intensive unethical behaviour. On the other hand, the same technology enables us to monitor that kind of behaviour.

The aim of the study is to analyse the previous research related to the ethical behaviour of students, as the main stakeholders of higher education, and determine the intentions toward ethical behaviour of students in higher education, based on our own conclusions resulting from the primary research. Furthermore, the aim is to analyse the personal attitudes of students regarding unethical behaviour and predict their future intentions toward unethical behaviour on that basis. Subjective norms (Štimac et al., 2017) and perceived behavioural control (Štimac, 2018) were observed and determined, so in this article the focus will be only on attitudes, as one of the predictors of the Theory of Planned Behaviour.

2. Review of previous research on ethical behaviour in higher education

Ethical dilemmas appear when there is no clear answer regarding the "right" or "wrong" course of

action in a certain situation. Complex dilemmas appear when the values of the institution collide with society or with the personal or professional values of the individual. Even though the dilemmas are observed as a problem in an individual's life or in the business activities of an institution, they are still a useful tool for helping individuals/institutions when considering their own approach to ethical questions. They can also play an important role in ethical training and in encouraging individuals to discuss problems and resolve unfavourable circumstances that appear in the course of their work¹.

Symaco and Marcelo (2003) defined academic dishonesty as the violation of rules and regulations within the institutions of higher education. They believe that academic dishonesty is a serious "disorder" which is difficult to remove from higher education. The violations of rules and regulations include cheating on exams, plagiarism, using materials that are not allowed, copying exam questions from fellow students, writing exams/preliminary exams/student papers on behalf of other colleagues, stealing exams, and similar actions (Roberts, 2002; Petress, 2003; Finn, Frone, 2004). Roberts (2002) and McCabe et al. (2006) stated that the most common reasons for unethical behaviour among students are time pressure, laziness, fear of failure, peer influence/pressure and peer competition, advanced technology that facilitates unethical behaviour, the influence of scholarships, greed (Piff et al., 2012) and other circumstances. Piff et al. (2012) in their results show that more individuals from upper-class backgrounds behaved more unethically in naturalistic and laboratory settings, in comparison to lower-class individuals. The reasons for that are upper-class individuals' relative independence, availability of resources to deal with the costs and consequences of unethical behaviour, reduced concern for others and increased goal-focus.

Apart from the research on samples, some authors (Engle, Smith, 1990) conducted research on the ethical behaviour of faculty employees, and their position on ethical behaviour. The results have shown that most of them plagiarised their research, forged the results of the research, and their decisions on the grades they gave to students were influenced by the students' gender and the way they interacted with them. Furthermore, most of the study participants used outdated class notes and were prone to decide on the final grades based on the criteria that

are not objective, along with other similar practices. The results of a similar research by Lewellyn (1996) showed that employees attended professional conferences without significant participation, used faculty owned equipment for personal benefit, sold additional copies of books, and used certain computer programs without a licence.

All of this indicates the need for implementing a code of ethical behaviour, equally for students and for faculty employees. The code of ethical behaviour in higher education is used for promoting ethical actions in teaching. Institutions of higher education should implement a university code of ethical behaviour that emphasises core ethical principles, instead of only advocating adherence to laws and regulations. It is extremely important that certain institutions of higher education seriously reconsider their statements, as well as their actions. According to Astin (1989), some of the most serious ethical issues in higher education are the result of inconsistencies between explicit and implicit moral values of the institution. Explicit moral values include the formal rules of the institution, while implicit values drive the institutional practice related to issues like resource allocation, personal decisions, decisions related to teaching courses, and the like. All institutions of higher education are of course complex and autonomous organisations, and they should create their codes of ethical behaviour in accordance with their own policies and culture. The conclusion arising from this is that all institutions of higher education should engage in ethical issues, and the primary reason for it is that management should have a consistent approach, it should support the mission and the values of the organisation, provide guidelines for the employees and for students, deal with the issue of reputation and risk, adhere to the legislation, employ the best talent and attract students, as well as encourage sponsorships and additional financing². Apart from the codes of ethical behaviour, it is necessary to systematically implement monitoring and correction of those codes in case certain irregularities are noticed. Simkin and McLeod (2010) suggest reinforcement of an intolerant collegiate culture about cheating and changing the attitude toward cheating - public exposure of cheating individuals who then suffer negative consequences might be useful.

On the other hand, some authors (Ruedy et al., 2013) show that unethical behaviour can trigger positive

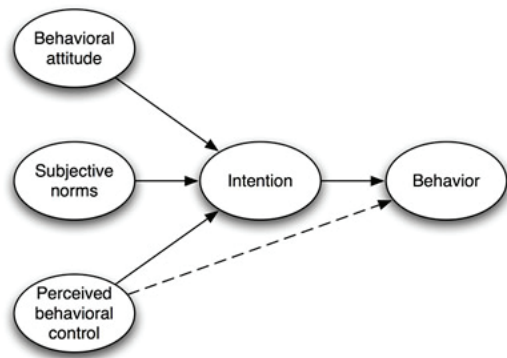
affect, not only negative. Authors find that the participants who cheated experienced more positive affect than those who did not cheat, because they show a high degree of excitement and they do not look at their behaviour as cheating.

3. Attitudes toward unethical behaviour in higher education

One of the most applied theories in the area of research regarding human behaviour is the Theory of Planned Behaviour. In the last two decades, it has seen increased application and expansion to research related to personal behaviour, especially in predicting the intentions of individuals in their behaviour and their actual behaviour (Lin, Chen, 2010: 66). The Theory of Planned Behaviour is basically an expansion of the Theory of Reasoned Action which includes measurements of the belief control and the perceived behavioural control (Armitage, Conner, 2001: 471), and it states that people believe that the intentions toward certain behaviour come before the action. However, there are questions related to its generalisation and the operation of certain predictors in the equation. Also, the model does not explain that the best predictor of future behaviour is past behaviour (Aiken, 2002). The new model makes up for the deficiencies of the Theory of Reasoned Action, which its authors (Ajzen, Fishbein, 2004) noticed during their research into the impossibility of the Theory of Reasoned Action to include behaviours during which individuals are not fully in control (Marangunić, Granić, 2012: 208). Furthermore, the model does not include the predictor of perceived behavioural control, which definitely leads to the expanded model, the Theory of Planned Behaviour. Perceived behavioural control has been added to the Theory of Planned Behaviour in order to improve predictions in situations where behaviour can be limited or where it does not follow the rules, like the policy of academic integrity.

Ajzen (1988) and Beck and Ajzen (1991) expanded the Theory of Planned Behaviour in order to enable the prediction of individuals' behaviour. Today, the Theory of Planned Behaviour is used in various areas of research to show the influence of attitudes, subjective norms, and perceived behavioural control on the individuals' intentions toward certain behaviour which result in certain behaviour. The mentioned information can be seen in Figure 1.

Figure 1 Theory of Planned Behaviour Model



Source: Ajzen, I. (1991), "Theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp. 179-211.

Theory of Reasoned Action and PLS (partial least squares) methodology is used by Simkin and McLeod (2010) to show cheating behaviour of students. According to their results, 60% of business students admitted to having cheated at least once while attending college. The most important reason for cheating was a "desire to get ahead", whereas the presence of a moral anchor in a faculty member whose opinion mattered was one of the reasons why students refrained from unethical behaviour. The Theory of Planned Behaviour is used in numerous social and scientific disciplines. Lin and Chen (2010) applied the Theory of Planned Behaviour in their research into the intentions toward unethical behaviour at the workplace, Beck and Ajzen (1991) applied it for various types of dishonesty, like the actions of cheating, stealing, and lying. Apart from that, it is applied for research into healthy living, into behaviours related to AIDS risk, voluntary blood donations, using coupons, alcoholism, consumption of fast food, quitting smoking, violence control, using technology (Ajzen, Fishbein, 2004), ethical behaviour of accountants (Buchan, 2005), as well as purchasing organic food (Jeger et al., 2013).

Considering the observed issues and the aims of this study, further in the text we will only explain attitudes toward behaviour, as one of the predictors of the Theory of Planned Behaviour. Attitude toward behaviour is the level to which the execution (performance) of behaviour is judged as positive or negative by the individual. Ajzen (1991) defined attitude as a certain mood which responds positively or negatively to an object, person, institution, or event. Miller (2005) defined the attitudes of individuals as a group of beliefs about specific behaviour influenced

by the evaluation of those beliefs. An attitude is the individual's estimate regarding their level of approval or disapproval of specific behaviour.

Beck and Ajzen (1991) explained that attitudes of individuals identify to what level students approve or condemn academic dishonesty. Park and Blenkinsopp (2009) suggested that a person develops attitudes on the basis of beliefs they hold regarding certain behaviours and connecting them to certain consequences. Research conducted in Singapore on 518 students showed that students believe that cheating on exams is a serious problem, while plagiarism is a less serious problem. The results of the research by Hardigan (2004) show that mostly female students (56%), older students (58%), and students with a higher grade point average (51%) have negative attitudes toward cheating. Stone et al. (2007) and Harding et al. (2007) have concluded in the results of their research that attitudes are a strong predictor of cheating. The results of the research by Stone et al. (2009) have shown that the attitudes of students are statistically significantly related to the intentions toward behaviour ($\beta=0.23$, $p < 0.01$).

Attitudes toward unethical behaviour of individuals in this study are related to the attitudes of students toward their specific behaviour, which are formed from expressed beliefs about such behaviour. As a result of everything mentioned previously, the following hypothesis is set in the study:

H1: Positively directed attitudes about unethical behaviour have a positive influence on the intentions to perform unethical behaviour by students in higher education.

Positively directed attitudes mean that the student believes that any form of cheating is acceptable (exams, seminar papers...), and that they would not report a fellow student if they believe that cheating is "normal" behaviour. In that case, the intentions toward the performance of the same unethical behaviour in higher education are increased for that student as well, just because such options are becoming available to them (if others are doing it, why shouldn't I do it). The aim of the study is to confirm the set hypothesis on the basis of primary research.

4. Research methodology

The aim of the research was to identify and evaluate the attitudes of students regarding unethical behaviour in higher education and if personal attitudes of students have an influence on their intentions to engage in unethical behaviour in higher education.

The emphasis in the study has been placed on personal attitudes of students and their influence on the students' intentions toward unethical behaviour, and for that reason, only the mentioned predictor will be observed. The research was conducted on a sample of 622 university students (attending undergraduate and graduate study programmes). The

research covered all the years of study, as well as all the majors at the observed faculty. The sample of 622 students is a representative sample, and it represents 29% of the total number of currently active students at the observed faculty. The description of the sample regarding the observed socio-demographic data is provided in Table 1.

Table 1 Description of the sample

		N	%
Gender	Male	225	36.2
	Female	389	62.5
Year of study	First year	123	19.8
	Second year	92	14.8
	Third year	161	25.9
	Fourth year	118	19.0
	Fifth year	127	20.4
Place of residence	Village	195	31.4
	Suburbs	64	10.3
	City	357	57.4
Student status	Full-time	516	83.00
	Part-time	100	16.1
Major	Financial Management	143	23.0
	Marketing	102	16.4
	Management	104	16.7
	Entrepreneurial Management and Entrepreneurship	84	13.5
	Business Informatics	64	10.3
Class attendance	0%	1	0.2
	0-25%	11	1.8
	26-50%	36	5.8
	51-75%	151	24.3
	76-100%	419	67.4
Performance (grade point average)	2.0 – 3.0	123	19.8
	3.1 – 4.0	323	51.9
	Higher than 4.1	132	21.2

Source: Authors' research

The data was gathered using a study questionnaire, in which the study participants were informed about the topic and the aim of the research. In the process of measuring the predictors, the authors accepted and adapted the scale for measuring personal positions related to cheating by Stone et al. (2009), while the measurement scale related to intentions toward unethical behaviour was adapted according to Stone et al. (2009) and Harding et al. (2007). The questionnaire consisted of three sec-

tions. In the first section, the attitudes and the intention toward unethical behaviour in higher education were tested; in the second part of the research, we wanted to find out to what extent, when, and why the study participants (students) cheat; and the last part of the questionnaire was related to the socio-demographic characteristics of the study participants. Every scale used in the questionnaire was created according to the five-point Likert measurement scale, where the study participants

had the option to express their level of agreement or disagreement with specific statements from the questionnaire.

The research results were obtained using the SPSS 18.0 statistical software package. Descriptive analysis, multivariate analysis (correspondence analysis, correlation analysis, linear regression), factor analysis, and analysis of variance (ANOVA) were used in the research.

4.1 Research results

When we looked at the problem of unethical behaviour of study participants (students in higher education) regarding our research, we reached the following results:

- 62.4% of the study participants were cheating in secondary school as well;
- 23.5% of the study participants are cheating on their exams/preliminary exams (the most common reason is helping a friend or getting a better grade);

- 25.7% of the study participants had someone else write their seminar paper for them at least once and 3.4% had their final paper written by someone else. The most common reasons are the lack of time to write the seminar/final papers or their lack of interest for the topic (for seminar papers);
- 17% of the study participants wrote a seminar paper for someone else at least once and 3.9% wrote final papers for someone else. The most common reason is the desire to help a friend.

Considering that there is a relatively large number of variables, it is necessary to contract them to a smaller number of common factors using exploratory factor analysis (Table 2). The variation method used was the varimax factor rotation with Kaiser normalisation. The factor analysis and the consistency analysis was performed on the 8 variables of the predictor Attitudes. The sample included 610, or 98%, of the study participants and the rest have been excluded from the factor analysis. The sample should be five times larger than the number of variables included in the analysis, so that condition was met.

Table 2 Results of the factor analysis

Variable of the predictor Attitudes	Factor 1	Factor 2	h ²
Reported a student they know for cheating on an exam/preliminary exam	.906		.823
Reported a student they do not know for cheating on an exam/preliminary exam	.938		.884
It is important to report students who cheat on exams/preliminary exams because it is the right thing to do and it is fair toward the other students.	.541		.378
It is always wrong to cheat on an exam/preliminary exam.		.439	.261
It is acceptable for students to cheat on an exam/preliminary exam as long as they are not caught.		.639	.418
It is acceptable to allow another student to copy from me during an exam/preliminary exam.		.540	.358
It is acceptable to cheat when writing seminar papers (e.g. plagiarism, paying someone to write a seminar paper...)		.780	.609
It is acceptable to cheat when writing final and diploma papers (e.g. plagiarism, paying someone to write final and diploma papers...)		.724	.524
Eigenvalue	3.39	4.61	
Variance percentage	42.4	57.6	
Number of variables in the factor	3	5	

Source: Authors' research

The Cronbach's alpha coefficient is 0.781³, the Kaiser-Meyer-Olkin measure is 0.721, and the Bartlett test is $\chi^2=2061.212$, $df=28$, $Sig.=.000$. The Principal Axis Factoring method was applied. Two factors were identified through exploratory factor analysis. The eigenvalue, which shows the amount of information contained in each factor, is larger than one for each identified factor, which means that the criteria for determining the number of identified factors have been met. The variance percentage is 100%, which shows an excellent percentage of information of all the original variables of the identified factors. Therefore, two factors have been

identified through factor analysis, and they were given the following titles:

Factor 1: Attitudes of students toward cheating by other students

Factor 2: The general attitude of students toward cheating

Based on everything mentioned above, the reliability analysis was performed for individual factors and for intentions toward unethical behaviour. Table 3 shows that both factors, as well as intentions toward unethical behaviour, have the appropriate level of internal consistency, measured using the Cronbach's alpha coefficient and average intercorrelation.

Table 3 Reliability analysis for individual factors

Measuring scale	Number of statements	Mean	Variance	Standard deviation	Cronbach's alpha	Average intercorrelation
Intentions	11	19.78	49.126	7.009	0.873	0.401
Factor 1	3	12.52	6.643	2.577	0.806	0.626
Factor 2	5	11.96	19.36	4.40	0.769	0.4

Source: Authors' research

Before developing a linear regression model, it is necessary to see if there is a statistically significant correlation between the two factors of the students' attitudes and the students' intentions toward un-

ethical behaviour. Table 4 shows the results of the Pearson correlation. Both factors are in positive statistical correlation with the intentions toward unethical behaviour.

Table 4 Correlation analysis (n = 622)

Predictor variables	Intentions toward unethical behaviour	
	Pearson correlation	Statistical significance
Factor 1	.105*	.016
Factor 2	.492**	.000

** Correlation is significant at the level of 0.01

* Correlation is significant at the level of 0.05

Source: Authors' research

The linear regression model is shown in Table 5. Regression analysis is used in order to determine the correlation between the observed variables, i.e. the effect of the dependent variables on the independent variable. The results of the regression analysis show a statistically significant positive correlation between general personal attitudes of stu-

dents toward unethical behaviour and their future intentions toward unethical behaviour. The model explains the total of 24% of the variance in the intentions toward unethical behaviour. We will not comment on the other correlation, which shows the negative sign in front of the standardised regression coefficient, because it is not statistically significant.

Table 5 Linear regression model

Predictor variables	beta (β)	t-value	Significance (p)	Model summary
Factor 1	-.053	-1.318	.188	R = 0.494 R2 = 0.244 F = 83.996
Factor 2	.508	12.663	.000	

Note: Dependant variable: intentions toward unethical behaviour

Source: Authors' research

5. Conclusions, limitations and implications for future research

The research was conducted in order to explore intentions toward unethical behaviour by students, considering their personal attitudes toward unethical behaviour. The aim of the research was to determine the attitudes of students related to unethical behaviour in higher education and whether the students' personal attitudes influence their intentions toward unethical behaviour in higher education.

The results of the research have shown that both identified factors (the factor related to the attitude on cheating by other students and the factor related to the general attitude toward cheating) are in correlation with the intentions toward unethical behaviour by students in higher education. Furthermore, the results of the regression analysis have shown a statistically positive influence of students' general personal attitudes toward unethical behaviour on their future intentions toward unethical behaviour. Accordingly, the hypothesis that positively directed attitudes about unethical behaviour have a positive influence on the intention toward unethical behaviour of students in higher education has been confirmed.

It can be concluded that at the beginning of their studies, the study participants (students) believe that it is acceptable to cheat, and more than half of them (62.4%) cheated before, during the earlier stages of their education. There is also the problem

of implementing control and supervision over unethical behaviour, considering that all unethical behaviour is "swept under the carpet", i.e. it does not receive any large or significant amount of attention. Students usually receive a warning and that does not exclude their further unethical behaviour. This brings up an issue of whether changing the system of higher education would change the students' attitudes toward unethical behaviour and raises the question of their behaviour after they enter the labour market.

However, there are several limitations regarding this research. First, it is difficult to interpret the results on cheating among students unless we consider a comparable educational institution. It is questionable whether these results would be interpreted in the same manner in comparison to another educational institution. Second, in this study we observed only the personal attitudes of students in higher education, so the inclusion of other predictors of the Theory of Planned Behaviour would complete the image of the intentions toward unethical behaviour among students. Further studies will deal with the other predictors of the Theory of Planned Behaviour. Third, considering the low variance explained by the model in the linear regression analysis, there is the question of the predictive strength of the model and the level of prediction. Taking into account all this, it is necessary to conduct further research in order to resolve the limitations of this research and fill in the blanks left by this research.

REFERENCES

1. Aiken, L. (2002). *Attitude and Related Psychosocial Constructs*. Thousand Oaks: Sage.
2. Ajzen, I. (1988). *Attitudes, Personality, and Behavior*. Chicago: Dorsey Press.
3. Ajzen, I. (1991), "Theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp. 179-211.
4. Ajzen, I., Fishbein, M. (2004), "Questions raised by a reasoned action approach: comment on Ogden", *Health Psychology*, Vol. 23, No. 4, pp. 431-434.
5. Armitage, C. J., Conner, M. (2001), "Efficacy of the Theory of Planned Behaviour: A meta-analytic review", *British Journal of Social Psychology*, Vol. 40, No. 4, pp. 471-499.
6. Astin, A. W. (1989), "Moral messages of the university", *Educational Record*, Vol. 70, No. 1, pp. 22-25.
7. Ballantine, J. A., Larres, P. M., Mulgrew, M. (2014), "Determinants of academic cheating behavior: The future for accountancy in Ireland", *Accounting forum*, Vol. 38, No. 1, pp. 55-66.
8. Beck, L., Ajzen, I. (1991), "Predicting dishonesty actions using the theory of planned behavior", *Journal of Research in Personality*, Vol. 25, No. 3, pp. 285-301.
9. Buchan, H. F. (2005), "Ethical decision making in the public accounting profession: An extension of Ajzen's Theory of Planned Behavior", *Journal of Business Ethics*, Vol. 61, No. 2, pp. 165-181.
10. Engle, T., Smith, J. (1990), "The Ethical Standards of Accounting Academics", *Issues in Accounting Education*, Vol. 5, No. 1, pp. 7-28.
11. Finn, K. V., Frone, M. R. (2004), "Academic performance and cheating: Moderating role of school identification and self-efficacy", *The Journal of Educational Research*, Vol. 97, No. 3, pp. 115-122.
12. George, D., Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. 4th edition. Boston: Allyn & Bacon.
13. Hardigan, P. C. (2004), "First- and Third-Year Pharmacy Students' Attitudes Toward Cheating Behaviors", *American Journal of Pharmaceutical Education*, Vol. 68, No. 5, Article 110.
14. Harding, T. S., Mayhew, M. J., Finnerly, C. J., Carpenter, D. D. (2007), "The Theory of Planned Behaviour as a Model of Academic Dishonesty in Engineering and Humanities Undergraduates", *Ethics & Behaviour*, Vol. 17, No. 3, pp. 255-279.
15. Jeger, M., Ham, M., Leko, V. (2014), "Stavovi studenata prema kupnji ekoloških prehrambenih proizvoda: spoznaje iz istočne Hrvatske", in Mašek Tonković, A. (Ed.), *Proceedings of 3rd International scientific symposium Economy of Eastern Croatia – vision and growth*, Josip Juraj Strossmayer University of Osijek, Faculty of Economics, Osijek, pp. 354-363.
16. Llewellyn, P. A. G. (1996), "Academic Perceptions: Ethics in the Information Discipline", *Journal of Business Ethics*, Vol. 15, No. 5, pp. 559-569.
17. Lin, C-H. S., Chen, C-F. (2010), "Application of Theory of Planned Behavior on the Study of Workplace Dishonesty", *2010 International Conference on Economics, Business and Management, IPEER Vol. 2*, Manila, pp. 66-69.
18. Marangunić, N., Granić, A. (2012), "TAM – četvrt stoljeća istraživanja", *Suvremena psihologija*, Vol. 15, No. 2, pp. 205-224.
19. McCabe, D. I., Butterfield, K. D., Trevino, L. K. (2006), "Academic Dishonesty in Graduate Business Programs: Prevalence, Causes and Proposed Action", *Academy of Management Learning and Education*, Vol. 5, No. 3, pp. 294-305.
20. McCall, M. W. (1988), "Developing executives through work experience", *Human Resource Planning*, Vol. 11, No. 1, pp. 1-12.
21. Miller, K. (2005). *Communications Theories: Perspectives, Processes and Contexts*. New York: McGraw-Hill.

22. Nonis, S., Swift, C. O. (2001), "An examination of the relationship between academic dishonesty and workplace dishonesty: A multi-campus investigation", *Journal of Education for Business*, Vol. 77, No. 2, pp. 69-77.
23. Park, H., Blenkinsopp, J. (2009), "Whistleblowing as Planned Behavior – A survey of South Korean Police Officers", *Journal of Business Ethics*, Vol. 85, No. 4, pp. 545-556.
24. Petress, K. C. (2003), "Academic Dishonesty: A plague on our profession", *Education*, Vol. 123, No. 3, pp. 624-627.
25. Piff, P. K., Stancato, D. M., Côté, S., Mendoza-Denton, R., Keltner, D. (2012), "Higher social class predicts increased unethical behavior", *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 109, No. 11, 4086-4091.
26. Roberts, E. (2002), "Strategies for promoting academic integrity in CS courses", in *Proceedings of 32nd Annual Frontiers in Education*, Vol. 2, Boston, MA, November 6-9, 2002, IEEE, pp. F3G-14 – F3G-19.
27. Rosman, A. S., Hassan, A. M., Suratman, A. S., Ripin, M. N., Marni, N. (2008), "Persepsi Pelajar Universiti Teknologi Malaysia (UTM) terhadap Plagiarisme", *Jurnal Teknologi*, Vol. 48, pp. 1-14.
28. Ruedy, N. E., Moore, C., Gino, F., Schweitzer, M. E. (2013), "The cheater's high: The unexpected affective benefits of unethical behavior", *Journal of Personality and Social Psychology*, Vol. 105, No. 4, pp. 531-548.
29. Shaw, W. H. (2008). *Business Ethics*. 6th edition. Belmont: Thomson/Wadsworth.
30. Simkin, M. G., McLeod, A. (2010), "Why do college students cheat?", *Journal of Business Ethics*, Vol. 94, No. 3, pp. 441-453.
31. Sims, R. R., Sims, S. J. (1991), "Increasing applied business ethics courses in business school curricula", *Journal of Business Ethics*, Vol. 10, No. 3, pp. 211-219.
32. Stone, T. H., Kisamore, J. L., Jawahar, I. M. (2007), "Predicting Academic Dishonesty: Theory of Planned Behavior and Personality", *ASAC*, Vol. 28, No. 10, pp. 41-57.
33. Stone, T. H., Jawahar, I. M., Kisamore, J. L. (2009), "Using the theory of planned behavior and cheating justifications to predict academic misconduct", *Career Development International*, Vol. 14, No. 3, pp. 221-241.
34. Symaco, P., Marcelo, E. (2003), "Faculty perception on student academic honesty", *College Student Journal*, Vol. 37, No. 3, pp. 327-333.
35. Štimac, H. (2018), "The impact of perceived behavioural control on the students' behaviour and their intention to engage in unethical behaviour in higher education", in *Proceedings of 28th International Scientific Conference on Economic and Social Development*, Paris, pp. 56-66.
36. Štimac, H., Pap, A., Milković, A. (2017), "The influence of subjective norms on students' intentions for engaging in unethical behaviour", in Mašek Tonković, A. (Ed.), *Proceedings of 6th International scientific symposium Economy of Eastern Croatia – vision and growth*, Josip Juraj Strossmayer University of Osijek, Faculty of Economics, Osijek, pp. 433-441.
37. Wang, Y., Kleiner, B. H. (2005), "Defining Employee Dishonesty", *Management Research News*, Vol. 28, No. 2/3, pp. 11-22.

ENDNOTES

- 1 IBE, CIHE (2005:13), "Ethics Matters: Managing Ethical Issues in Higher Education", CIHE and Brunel University, London.
- 2 IBE, CIHE (2005:10), "Ethics Matters: Managing Ethical Issues in Higher Education", CIHE and Brunel University, London.
- 3 George and Mallery (2003:231) stated the following rules related to the Cronbach's alpha indicator in their study: $\alpha > .9$ – Excellent, $\alpha > .8$ – Good, $\alpha > .7$ – Acceptable, $\alpha > .6$ – Questionable, $\alpha > .5$ – Weak, and $\alpha < .5$ – Unacceptable.

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UTJECAJ OSOBNIH STAVOVA STUDENATA NA NAMJERE NEETIČNOG PONAŠANJA U VISOKOM OBRAZOVANJU

SAŽETAK

Zadnjih nekoliko godina porastao je broj istraživanja o akademskom nepoštenju i neetičnom ponašanju studenata. Razvoj tehnologije je s jedne strane negativno utjecao na razvoj neetičnog ponašanja, dok je s druge strane omogućio i bolju kontrolu istog. Postavlja se pitanje ponašaju li se studenti neetično i zašto, te koji čimbenici utječu na njihovo neetično ponašanje. Istraživanje je provedeno na uzorku od 622 sveučilišna studenta. Cilj rada je determinirati utječu li osobni stavovi studenata o neetičnom ponašanju na njihove namjere neetičnog ponašanja primjenom Teorije planiranog ponašanja. Rezultati regresijske analize pokazuju statistički značajan pozitivan odnos između generalnih osobnih stavova studenata prema neetičnom ponašanju i njihove buduće namjere prema neetičnom ponašanju. Nameće se nužnost provođenja kontrole i nadzora nad neetičnim ponašanjem te stroži pristup istom, što bi u konačnici rezultiralo smanjenjem namjera njihovog daljnjeg neetičnog ponašanja.

Ključne riječi: stavovi, namjere, neetično ponašanje, marketing, teorija planiranog ponašanja

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MULTI-OBJECTIVE OPTIMIZATION FOR THE INTEGRATED SUPPLY AND PRODUCTION PLANNING IN OLIVE OIL INDUSTRY

ABSTRACT

Sustainable agriculture, among other things, implies encouraging a diverse and decentralized system of family farms rather than corporate concentration. The challenge is to find a way to organize coalitions improving the food system. The case study that inspired this work originates from Istria, a Croatian region with 25 olive oil producers and about 5,000 mostly small farmers growing and harvesting olives. To account for all the objectives of the agri-food supply chain participants, this work aims to set up a model for its integrated optimization, give its mathematical formulation and suggest a method for solving the problem.

Keywords: Perishable goods, agri-food industry, olive oil, production planning, multi-objective optimization

1. Introduction

As in many other countries, the structure of the Croatian agri-food market is currently undergoing major changes, largely due to globalization. In the past, the main participants in the country's olive oil industry were small family-owned firms, which made the market fragmented and locally oriented. However, today, the supply chains in the industry need to be better coordinated and more efficient in order to stay competitive and able to respond to the demands of the global market. Also, consumers are more aware of the importance of healthy nutrition and they are sensitive about food quality and safety, which affects demand and price variability. To incorporate increased traceability and generally higher expectations about production standards for

perishable food, producers need to review their use of inventory and move towards more integrated approaches, as suggested also by Amorim et al. (2013).

Supply chain models used in the management of fresh farming products tend to be more complicated than the models used in the supply chain of non-perishable products. This is because the amount of harvestable fresh products depends on the growing process of the related plants, and also because fresh products start deteriorating immediately after harvesting (Widodo et al., 2006). Deterioration has a significant influence on all the elements of a production process which is characterized by uncertain demand, complex technical matters, variabilities or disruptions of production (Pahl et al., 2007).

This paper seeks to analyze the supply chain in olive oil industry which includes the farmers as suppliers on the one side, and the olive oil producers on the other. The case study that inspired this work originates in Istria, a Croatian region with 25 olive oil producers and about 5,000 mostly small farmers growing and harvesting olives. Presently, the suppliers decide on the harvesting time and quantities mostly by themselves, without consulting the producers who want to process olives as fast as possible upon delivery. Such a situation is far from optimal, so the goal of this research is to examine the possibilities of improving the processes in the studied supply chain by creating a model and a method for optimization of integrated supply and production planning for the olive oil industry.

The model and the method we propose have to take into account the perishability issues since the production of olive oil includes handling raw material (olives) which is perishable due to physical deterioration after the harvest. Olive perishability may result in decreasing customer value and a significant fall in the value of the final product (olive oil). Namely, the quality of olive oil is often measured by the percentage of free fatty acids, which depends on two factors: fruit maturity and storage (Koprivnjak, 2006). This means that the harvesting date should be carefully chosen, and then olives either have to be processed shortly after the harvest, or they should be stored in a controlled environment (cold storage). Hence, the raw material and the final product both undergo physical deterioration and a reduction in customer value when deviating from the appropriate time interval of the harvest.

Since the supply chain includes the farmers as suppliers on the one side, and the olive oil producers on the other, to account for all of the objectives of both sides, we set up a multi-objective model and a method for multi-objective optimization. Thus, the research questions are whether it is possible to construct a model and offer a method for integrated planning of olive harvesting, supply and oil production and to improve the processes in the studied supply chain.

The paper is organized as follows. Section 2 reviews the literature related to the issues of interest. After formally defining the considered problem of the olive oil industry, a mathematical model is proposed and commented on in Section 3. Section 4 provides a description of the method implemented for solving the problem, i.e. the Non-Dominated Sorting

Genetic Algorithm II (NSGA-II). Section 5 provides the computational results. The conclusion and suggestions for future work are given in Section 6.

2. Related work

As seen from the literature review presented by Arshinder et al. (2011), it seems that the problem of agri-food supply chain coordination has not received serious attention, or these efforts have not been widely reported in the literature. Several recent examples of an integrated approach show that the scientific community has started putting more effort into resolving such problems (Baldo et al., 2014; Deng et al., 2014). Factors such as food quality and safety, weather related variability, limited shelf life of agri-food products, their demand and price variability make the agri-food supply chains more complex and harder to manage than other supply chains (Ahumada, Villalobos, 2009). In their review of the related work Ahumada and Villalobos (2009) also notice that there is a limited number of models addressing operational planning needs, especially in integrated models that aim to plan more than one aspect of the agri-food supply chain. The reviewed models are mostly created for only one group of target users, usually suppliers or producers, and they usually perform single objective optimization.

Some of the applications in the agri-food industry described in literature are a mixed-integer programming planning model for fruit industry (Masini et al., 2011), a linear programming model for planning the production of flowers (Caixeta-Filho et al., 2002), and a linear programming model that determines how to harvest oranges in order to maximize the revenue (Caixeta-Filho, 2006). Ruiz-Torres et al. (2012) propose planning models for floriculture operations and present a heuristic strategy that gives a solution close to the optimal. A paper that considers a problem similar to ours presents a practical tool for optimally scheduling wine grape harvesting operations taking into account both the operational costs and grape quality (Ferrer et al., 2008). Grape quality is measured by a quality loss function, which is a way of measuring potential reduction in the quality of wine due to the use of grapes which were not harvested on the optimal maturity date. Bohle et al. (2010) suggest how to deal with different types of uncertainties in scheduling the wine grape harvesting using a robust

optimization approach. Vlah Jerić and Šorić (2011) modeled the problem of scheduling olive harvesting, delivery, storage and olive oil production as a single objective mixed integer programming problem and they presented some preliminary results for the two proposed heuristics for solving it. Rong et al. (2011) integrated food quality in decision making involved in production and distribution in a food supply chain. They proposed a single objective mixed integer programming model with around 1,500 integer variables and applied CPLEX 10.2. Also, Ahumada and Villalobos (2011) presented an operational model designed for providing decisions for harvesting, packing and distribution of crops with the objective of maximizing the revenue of the farmer. Cai et al. (2008) developed both a model and an algorithm for the production of sea food products. Due to a deadline constraint and the raw material perishability, the manufacturer determines the product types to be made, the machine time to be allocated for each product type, and the sequence to process the products selected.

The literature considering the agri-food supply chain or its parts as a multi-objective optimization problem is scarce despite numerous conflicting objectives typically related to the issue. Multi-criteria decision making methods are mostly used to measure the performance of the agri-food supply chain, but they do not use the techniques of multi-objective programming for optimizing the supply chain processes. These techniques are sometimes used for solving problems in farming, but not in fruit processing¹. For example, Sarker and Ray (2009) formulated a crop-planning problem as a multi-objective optimization model, and they proposed a multi-objective constrained algorithm for solving the problem and compared its performance with ϵ -constrained method and a variant of NSGA-II. A hybrid genetic algorithm based on NSGA-II was developed by Amorim et al. (2011) to solve the problem of multi-objective lot-sizing and scheduling dealing with perishability issues in relation to a dairy company producing yogurt. Amorim et al. (2012) considered the problem of production and distribution planning with the objective of minimizing the total cost and maximizing the mean remaining shelf-life of products at distribution centers over a planning horizon. They compared the results for two scenarios, i.e. the integrated model and decoupled production and distribution model, both for the fixed shelf-life and loose shelf-

life cases. Also, some authors have already given suggestions about the importance of using a multi-objective framework to investigate the perishability problems (e.g. Arbib et al., 1999; Lütke Entrup, 2005). Nevertheless, to the best of our knowledge, our work is the first to address the integrated supply and production planning for perishable goods in a multi-objective framework. Thus, the scientific contribution of this research is development of a new multi-objective mixed-integer programming problem model that encompasses the objectives of both the suppliers and the producers in terms of economic gains and product quality. Moreover, another scientific contribution is the design of a method that approximates the Pareto frontier of the multi-objective optimization problem, thus offering an insight into the trade-offs between the conflicting objectives. More specifically, we propose a specific design of the crossover operator, as a component for the NSGA-II algorithm.

3. Problem formulation

3.1 Problem description

In Croatia, olive suppliers are usually small farmers who often grow olives as a part-time job. Farmers harvest and then deliver olives as raw products to producers, so they have to decide about the time and quantities of harvesting and delivery. Some suppliers sell olives to producers only to make a profit on the sale of the raw material, and others use the service of processing olives into olive oil and then take the oil for their own consumption or for selling it under their name.

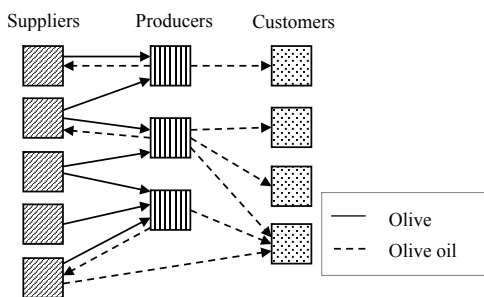
When using olive processing services, some suppliers mix their olives with those provided by other suppliers, and some insist on obtaining oil exclusively from their own raw material. Namely, oil producers sometimes offer to mix olives because the production run time is constant and it does not depend on the quantity of the raw material. Since the raw material is perishable, it has to be delivered shortly after the harvest. Moreover, the highest-quality olive oil will be obtained if olives are harvested within a given time window. Therefore, suppliers (farmers) have adopted a system of successive harvesting and delivering of olives, so small amounts of olives are delivered for processing day after day. Delivery costs do not depend significantly on the quantity, so the focus is on minimizing the costs of organizing olive harvest and delivery, as

well as on reducing the number of working days to a minimum. Also, it is important to note that the region observed in our case study is very small, so we disregard the distances when calculating the olive delivery costs. For example, the suppliers and the producers in the data used in the experiments lie in the radius of about 20 km.

On the other hand, producers have to decide whether to process the delivered fresh products immediately, to store them in cold storage or to leave them for a few days. Maintaining cold storage is typically too costly for producers, so in the region under our consideration only the biggest producer owns such a facility. Due to the high costs of cold storage and the fact that, if improperly stored, olives lose their desirable features very fast, producers need to carefully time the collection of olives from suppliers and their processing. After the processing, a certain amount of olive oil is given to suppliers, and the remaining part is sold on the market under the producer's name.

A graphical representation of the problem is given in Figure 1. We model the decisions concerning the flows between the suppliers and the producers, while the flows toward the customers are not considered. Namely, the production is concentrated in a few consecutive months during the harvest season, and the distribution of the finished olive oil can be planned separately.

Figure 1 The concept of a supply chain in the olive oil industry



Source: Authors

To construct a multi-objective mixed-integer programming problem, we define sets of suppliers, olive oil types and olives needed for oil production. For input parameters we take the time horizon, machine number, upper and lower bound on the supply, cold storage and machine capacities, unit

production revenue for a final product type, delivery cost, unit storage and production cost, and unit cost associated to deviation with respect to the preferred supply periods. The latter is the quality factor i.e. the cost defined through the reduction in olive oil quality due to the use of olives which were not harvested and supplied on the optimal date.

In order to understand the loss of quality, it is necessary to note that olive oil is categorized into several quality groups: extra virgin olive oil as the premium category, virgin olive oil as the medium-quality category, and olive oil lampante as a category considered suitable for human nutrition only after refining and adding a small amount of edible virgin olive oil. The categories are differentiated according to the percentage of free fatty acids and the sensory properties, which are the measures of olive oil quality that highly depend on olive maturity as well as on olive storage conditions and duration. The sequential degradation process of the olives results in a loss of revenue for the business, since the profit on extra virgin olive oil is much higher than in the case of other olive oil categories. Thus, harvesting on the optimal date has no quality penalty; harvesting before or after the optimal date generates a cost associated with the potential deterioration of olives, which affects oil quality. In this way we incorporate the notion of quality in the model by using a quality loss function, which is a concept originally developed by Taguchi and Clausing (1990). The optimal date of harvesting and supply is defined by olive oil suppliers based on the known effects of farming and storage factors on olive oil quality (from e.g. Koprivnjak, 2006) and their experience.

3.2 Multi-objective mixed-integer programming problem

In order to present the multi-objective mixed-integer programming problem, it is necessary to list the sets and indices needed to introduce the parameters and the variables for the studied problem.

Sets and indices:

- T – number of working days ($t = 1, \dots, T$);
- M – number of machines ($m = 1, \dots, M$).
- P – number of combinations of suppliers and olive types they supply ($j = 1, \dots, P$);
- U – number of olive oil types ($u = 1, \dots, U$);

- V_u – set of olives that the olive oil of type u is made of, i.e., supplier/olive type combinations that are used to produce the olive oil of type u ($V_u \subseteq \{1, \dots, P\}$); the sets are mutually exclusive;

Parameters:

- A_j – total supply of olives from supplier j ;
- D_{jt} – upper bound on the supply of olives from supplier j on day t ;
- G_{jt} – lower bound on the supply of olives from supplier j on day t ;
- N_t – working hours in day t ;
- C_m – capacity of machine m ;
- H – capacity of cold storage;
- p_u – unit revenue obtained from olive oil of type u ;
- e_{mt} – cost of processing a full or a partial batch on day t on machine m ;
- f_t – unit storage cost on day t (the same for all olive types);
- w_{jt} – unit cost of supplying in non-preferred period (quality cost of olives j on day t);
- b_{jt} – delivery cost of supplying olives j in period t .

Variables:

- I_{ut} – storage quantity of olives that the olive oil of type u is made of at the end of day t , with $I_{u0} = 0$, for all u ;
- Q_{umt} – quantity of olives processed for olive oil of type u on machine m in day t ;
- S_{jt} – quantity of olives j supplied at the beginning of day t ;
- $Y_{umt} \in \mathbb{N}$ – number of working hours in day t in which olive oil of type u is processed on machine m (the number of batches);

- $X_{jt} = \begin{cases} 1, & \text{if the olives } j \text{ are supplied at the beginning of day } t \\ 0, & \text{otherwise;} \end{cases}$
- R_{jt} – oversupply of olives j in day t i.e. the quantity of olives that are supplied in a period that is not preferred (unlike other variables in this model that are the decision variables, this is an auxiliary variable which calculates the surplus of the quantity of the supplied olives and the demand).

As has been said, suppliers want to minimize both the cost of supply in non-preferred periods (quality cost i.e. oversupply cost) and the delivery cost, while producers attempt to maximize the profit depending on revenue, production cost and storage cost. Hence, the *producers' objective* can be formulated as follows:

$$\max z_1 = \left(\sum_{u=1}^U p_u \sum_{m=1}^M \sum_{t=1}^T Q_{umt} - \sum_{m=1}^M \sum_{t=1}^T e_{mt} \sum_{u=1}^U Y_{umt} - \sum_{u=1}^U \sum_{t=1}^T f_t I_{ut} \right),$$

while the *suppliers' objective* is:

$$\min z_2 = \left(\sum_{j=1}^P \sum_{t=1}^T w_{jt} R_{jt} + \sum_{j=1}^P \sum_{t=1}^T b_{jt} X_{jt} \right).$$

There are three types of *constraints* in this problem: the constraints related to the raw materials in cold storage (constraints (1)-(2)); those related to machine processing (constraints (3)-(4)); and finally, the constraints concerning the supply of olives (constraints (5)-(8)). The constraints (9) define the variables domain.

$$I_{ut} = I_{u(t-1)} + \sum_{j \in V_u} S_{jt} - \sum_{m=1}^M Q_{umt}, \quad u = 1, \dots, U, t = 1, \dots, T \quad (1)$$

$$\sum_{u=1}^U I_{ut} \leq H, \quad t = 1, \dots, T \quad (2)$$

$$Q_{umt} \leq C_m Y_{umt}, \quad u = 1, \dots, U, m = 1, \dots, M, t = 1, \dots, T \quad (3)$$

$$\sum_{u=1}^U Y_{umt} \leq N_t, \quad m = 1, \dots, M, t = 1, \dots, T \quad (4)$$

$$\sum_{t=1}^T S_{jt} \leq A_j, \quad j = 1, \dots, P \quad (5)$$

$$S_{jt} \leq A_j X_{jt}, \quad j = 1, \dots, P, t = 1, \dots, T \quad (6)$$

$$S_{jt} \leq D_{jt} + R_{jt}, \quad j = 1, \dots, P, \quad t = 1, \dots, T \quad (7)$$

$$S_{jt} \geq G_{jt} X_{jt}, \quad j = 1, \dots, P, \quad t = 1, \dots, T \quad (8)$$

$$I_{ut} \geq 0, Q_{umt} \geq 0, S_{jt} \geq 0, R_{jt} \geq 0, X_{jt} \in \{0, 1\}, Y_{umt} \in \mathbb{N} \quad (9)$$

Constraints (1) represent the cold storage balancing constraints for each item, i.e., olives from each supplier used to produce the olive oil of type u , in each period. Constraints (2) refer to the cold storage capacity. The variables Y are defined by the set of constraints (3), which also guarantees that the total quantity of olives used to produce olive oil of type u on machine m in period t is lower than the machine capacity. Constraints (4) ensure that the upper bounds on the daily number of batches are respected. The set of constraints (5) guarantees that the total supply of olives does not exceed the given upper bounds, while the set of constraints (6) defines the binary variables X (supply set up variables). The oversupply variables R are defined by constraints (7). Also, the same set of constraints imposes that the daily supply of olives is lower than the given upper bound in the case of no oversupply. Finally, constraints (8) ensure that the lower bounds on the daily supply of olives j are respected (minimum volume that is profitable to handle, below this number it makes no sense to harvest).

3.3 Optimization method

Although the hours of optimization would still be acceptable for finding a problem solution in some situations, this would be impractical for industrial applications, especially for repetitive optimization which is needed when a change in circumstances occurs. Moreover, solution times and even the number of non-dominated solutions for this kind of problem are hard to predict. It is important to mention that we tried to solve the scalarized problem of the presented supply chain in the olive oil industry (with a weighted sum of both objectives as a single objective) using only CPLEX 12.1, but this did not reach an optimal solution in 30 minutes. Thus, we did not even try to obtain the exact Pareto frontier which could require finding many optimal solutions using CPLEX. Instead, we decided to apply approximate approaches in order to deal with the difficulties arising from the high dimensionality of the problem and from having more than one objective.

The method we propose is based on the usual scheme of Non-Dominated-Sorting-Genetic algorithm NSGA-II (Deb et al., 2002). The main idea of NSGA-II is to update the population by sorting the solutions according to the level of non-domination and their crowding distance.

The initial phase is used to initialize the solutions of the population. However, since the size of the population in the genetic algorithm is fixed, even the dominated solutions are accepted to form the population for the NSGA-II method. The Crowded Tournament Selection Operator (Deb, 2001) is used to form a mating pool. The crossover operator used for generating a new population of the offspring fixes the variables whose values agree in both feasible solutions that are subjected to the operator, while the values for the other variables are determined by optimizing the remaining problem using CPLEX within a given time. Thereby, CPLEX is here also used for solution improvement. The solutions are evaluated using the weighted-sum of the normalized objective values, where the weights are set randomly. The best feasible solution found is checked for efficiency and included in the source set if efficient. Also, if some previously efficient solutions became dominated, they are expelled from the source set. In performing the mutation, the variables which will be fixed are randomly chosen with a probability of 0.01, while the values for the other variables are determined by solving the remaining problem using CPLEX 12.1. The solutions are here again evaluated using the weighted-sum of the normalized objective values, where the weights are set randomly.

4. Computational results

The purpose of the computational experiments is to evaluate and compare the proposed NSGA-II method, illustrate the obtained results and obtain managerial insights. The data sets for the experiments are created following the structure of the real data. The information on the parameters for the creation of the problem instances was obtained in communication with the Croatian olive oil experts who also provided valuable guidance for the construction of the proposed model (Koprivnjak, 2006; Koprivnjak, Cervar, 2010).

The producers can have more than one machine for processing olives and their plant capacities vary from 50 kg/h to 3,500 kg/h. Also, since the harvest period lasts from the beginning of September to the

end of November, there are 91 time periods (days). For the purpose of the experiments, we used the following:

- 1,000 suppliers,
- 500 olive oil types,
- 5 producers,
- 10 machines with capacities of 300, 600 and 1,000 kg/h and
- 30 days of the planning horizon.

Consequently, the number of the binary variables was 30,000, while the number of the integer variables was 150,000.

The data that varied in simulations were the quantities, the preferred periods of harvesting, olive mixtures and the combinations of machine capacities:

- The quantities of olives that the supplier wishes to offer on a given day ranged from 5 to 14 hundred kilograms, which was set randomly.
- The maximum length for the harvesting periods was set to six.
- The actual days of the preferred harvesting periods were not uniformly distributed. Instead, as it generally happens in reality, there were periods with a lot of suppliers offering olives as the raw material, and periods when the raw material was offered by only a few suppliers.
- The olive type mixtures were created in the way that all the oil types except one consisted of a maximum of five types/suppliers of olives. Thus, only one olive oil type was made by processing oil from many different olive suppliers. This corresponds to the oil that would be sold on the market on a large scale usually as a brand provided by a single olive oil producer.

After trying to optimize only the scalarized problem by commercial software (CPLEX), we concluded that the exact Pareto frontier could not be obtained within a reasonable time. The time limit for the NSGA-II constructing the approximate Pareto frontier was set to 30. The source set and the population size were both set to 20. This number was determined by initial experiments where we looked for a trade-off between the computation

time and solution quality. The developed method was programmed in C# using Concert Technology as interface to CPLEX 12.1. The programs ran on Intel Core Duo CPU 2Ghz 1GB RAM. This way we succeeded in obtaining multiple compromise solutions (Pareto frontier) of the problem, while using CPLEX we were not able to obtain even a single feasible solution.

In order to investigate the possible benefits of the proposed coordinated production planning approach, we compare this method to the currently practiced way of planning, i.e. the sequential planning of supply and production. Namely, supply is now determined without consulting the producers, followed by the planning of the production of olive oil, i.e. olive processing.

When comparing the solution taken from the Pareto frontier with the same weight for both the suppliers' and the producers' objective functions to the solution obtained by the sequential planning of supply and production over the ten cases, we noticed that, on average, there was a decrease in the suppliers' costs of 37.76% (st. dev. 13.57). Furthermore, an average increase of 12.44% in the producers' profits was also obtained at the same time (st. dev. 7.85). The obtained cost reductions and increase in profits show us that it is justified to consider the integration of supply and production planning as we did in this work.

We believe that the most significant aspect of our work comes from the observations of the trade-offs between the objectives of olive suppliers on the one side and olive oil producers on the other. This way, the results obtained in the form of the Pareto frontier approximations can be used for studying the supply chain dynamics.

5. Conclusions and future work

We have considered a problem of agri-food supply chain management in the olive oil industry inspired by a case study from Croatia. Since Croatia cannot compete on the global market with large quantities of olive oil, its potential lies in high quality. Using the proposed procedure for integrated planning of supply and production helps reduce the quantities of olive oil whose lower quality is due to the supply decisions made without consulting the producers. Such optimization would be impossible without using operational research approaches and information technology. The model we propose also incor-

porates quality costs associated with the potential deterioration of olives which affects the quality of the oil. A Croatian agency based in the region considered in this paper (Istria) is trying to create an olive brand of high quality, so the results of this research could help in such attempts.

In addition to the optimization of the studied supply chain through the coordinated supply and production planning approach, the presented integrated model also allows for the evaluation of the performance trade-offs between the suppliers and the producers. To handle the complexity of considering the whole supply chain and the performance trade-offs, we have proposed a genetic algorithm based method.

The main contributions of this research are the novel mixed integer programming model in which we also modeled the decision on mixing the raw material, and the method that captures the dynamics of the supply chain in an industry of increasing

importance. Namely, the supply chain models in the literature have emphasized single-performance measures, i.e. single objective optimization. We have developed a procedure that can provide insights into the relation between different performance measures of the supply chain. This allows the decision makers to be more flexible and have more freedom.

The method created in this work is of a general nature, so it can also be applied to other agri-food supply chains dealing with similar problems, for example, in harvesting the industrial hemp for hemp seed production or oranges for the production of orange juice. In the future we shall try to exploit some problem specifics to alter the components of the proposed method and improve its performance. Research limitations lie in the fact that the proposed model and algorithm are designed for smaller countries like Croatia where olive suppliers are usually small farmers, but not also for big olive producing countries like Spain or Greece.

REFERENCES

1. Ahumada, O., Villalobos, J. R. (2011), "Operational model for planning the harvest and distribution of perishable agricultural products", *International Journal of Production Economics*, Vol. 133, No. 2, pp. 677-687.
2. Ahumada, O., Villalobos, J. R. (2009), "Application of planning models in the agri-food supply chain: A review", *European Journal of Operational Research*, Vol. 196, No.1, pp. 1-20.
3. Amorim, P., Antunes, C. H., Almada-Lobo, B. (2011), "Multi-Objective Lot-Sizing and Scheduling Dealing with Perishability Issues", *Industrial & Engineering Chemistry Research*, Vol. 50, No. 6, pp. 3371-3381.
4. Amorim, P., Gunther, H.-O., Almada-Lobo, B. (2012), "Multi-objective integrated production and distribution planning of perishable products", *International Journal of Production Economics*, Vol. 138, No. 1, pp. 89-101.
5. Amorim, P., Meyr, H., Almeder, C., Almada-Lobo, B. (2013), "Managing perishability in production-distribution planning: a discussion and review", *Flexible Service and Manufacturing Journal*, Vol. 25, No. 3, pp. 389-413.
6. Arbib, C., Pacciarelli, D., Smriglio, S. (1999), "A three-dimensional matching model for perishable production scheduling", *Discrete Applied Mathematics*, Vol. 92, No. 1, pp. 1-15.
7. Arshinder, K., Kanda, A., Deshmukh, S. G. (2011), "A Review on Supply Chain Coordination: Coordination Mechanisms, Managing Uncertainty and Research Directions", in Choi, T.-M., Cheng, T. C. E., (Eds.), *Supply Chain Coordination under Uncertainty*, Springer-Verlag, Berlin Heidelberg, pp. 39-82.
8. Baldo, T. A., Santos, M. O., Almada-Lobo, B., Morabito, R. (2014), "An optimization approach for the lot sizing and scheduling problem in the brewery industry", *Computers & Industrial Engineering*, Vol. 72, pp. 58-71.

9. Bohle, C., Maturana, S., Vera, G. (2010), "A robust optimization approach to wine grape harvesting scheduling", *European Journal of Operational Research*, Vol. 200, No. 1, pp. 245-252.
10. Cai, X., Chen, J., Xiao, Y., Xu, X. (2008), "Product selection, machine time allocation, and scheduling decisions for manufacturing perishable products subject to a deadline", *Computers & Operations Research*, Vol. 35, No. 5, pp. 1671-1683.
11. Caixeta-Filho, J. (2006), "Orange harvesting scheduling management: A case study", *The Journal of the Operational Research Society*, Vol. 57, No. 6, pp. 637-642.
12. Caixeta-Filho, J., van Swaay-Neto, J., Wagemaker, A. (2002), "Optimization of the production planning and trade of lily flowers at Jan de Wit Company", *Interfaces*, Vol. 13, No. 1, pp. 13-46.
13. Deb, K. (2001). *Multi-Objective Optimization using Evolutionary Algorithms*. Chichester: John Wiley & Sons.
14. Deb, K., Pratap, A., Agarwal, S., Meyarivan, T. (2002), "A fast and elitist multiobjective genetic algorithm: NSGA-II", *IEEE Transactions on Evolutionary Computation*, Vol. 6, No. 2, pp. 182-197.
15. Deng, S., Aydin, R., Kwong, C. K., Huang, Y. (2014), "Integrated product line design and supplier selection: A multi-objective optimization paradigm", *Computers & Industrial Engineering*, Vol. 70, pp. 150-158.
16. Efron B., Tibshirani, R. (1993). *An Introduction to the Bootstrap*. London: Chapman and Hall.
17. Ferrer, J.- C., Mac Cawley, A., Maturana, S., Toloza, S., Vera, J. (2008), "An optimization approach for scheduling wine grape harvest operations", *International Journal of Production Economics*, Vol. 112, No. 2, pp. 985-999.
18. Koprivnjak, O. (2006). *Djevičansko maslinovo ulje – od masline do stola*. Poreč: MIH.
19. Koprivnjak, O., Červar, A. (2010), "Proizvodne karakteristike maslinarsko-uljarske djelatnosti u Istarskoj županiji", *Agronomski glasnik*, Vol. 72, No. 2-3, pp. 125-142.
20. Lütke Entrup, M. (2005). *Advanced Planning in Fresh Food Industries*. Heidelberg: Physica.
21. Masini, G. L., Blanco, A., Petracci, N., Bandoni, J. A. (2011), "Supply Chain Tactical Optimization in the Fruit Industry", in Papageorgiou, L., Georgiadis, M. C., (Eds.), *Supply-Chain Optimization, Part II, Volume 4*, WILEY-VCH Verlag, Weinheim, pp. 121-172.
22. Pahl, J., Voß, S. (2014), "Integrating deterioration and lifetime constraints in production and supply chain planning: A survey", *European Journal of Operational Research*, Vol. 283, No. 3, pp. 654-674.
23. Pahl, J., Voß, S., Woodruff, D. L. (2007), "Production planning with deterioration constraints: A survey", in Ceroni, J. (Ed.), *The development of collaborative production and service systems in emergent economies, proceedings of the 19th International Conference on Production Research*, Valparaiso, pp. 1-6.
24. Rong, A., Akkerman, R., Grunow, M. (2011), "An optimization approach for managing fresh food quality throughout the supply chain", *International Journal of Production Economics*, Vol. 131, No. 1, pp. 421-429.
25. Rothberg, E. (2007), "An Evolutionary Algorithm for Polishing Mixed Integer Programming Solutions", *INFORMS Journal on Computing*, Vol. 19, No. 4, pp. 534-541.
26. Ruiz-Torres, A. J., Villalobos, R., Salvador, M., Alomoto, N. (2012), "Planning models for floriculture operations", *International Journal of Applied Management Science*, Vol. 4, No. 2, pp. 148-163.
27. Sarker, R., Ray, T. (2009), "An improved evolutionary algorithm for solving multi-objective crop planning models", *Computers and Electronics in Agriculture*, Vol. 68, No. 2, pp. 191-199.
28. Taguchi, G., Clausing, D. (1990), Robust quality "Harvard Business Review", Vol. 68, No. 1, pp. 65-75.
29. Vlah Jerić, S., Šorić, K. (2011), "Single Criterion Supply Chain Management in Olive Oil Industry", *Croatian Operational Research Review*, Vol. 1, No. 1, pp. 138-147.
30. Yu, M., Nagurney, A. (2013), "Competitive food supply chain networks with application to fresh produce", *European Journal of Operational Research*, Vol. 224, No. 2, pp. 273-282.
31. Widodo, K. H., Nagasawa, H., Morizawa, K., Ota, M. (2006), "A periodical flowering-harvesting model for delivering agricultural fresh products", *European Journal of Operational Research*, Vol. 170, No. 1, pp. 24-43.

ENDNOTES

- 1 Christensen, T., Olsen, S. B., Dubgaard, A., Kærgård, N. (2012), "Organic farming and multi-criteria decisions: An economic survey", available at: http://ifsa.boku.ac.at/cms/fileadmin/Proceeding2012/IFSA2012_WS6.1_Christensen.pdf (Accessed on: October 25, 2018)

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VIŠEKRITERIJSKA OPTIMIZACIJA ZA INTEGRIRANO PLANIRANJE NABAVE I PROIZVODNJE U MASLINARSKO-ULJARSKOJ INDUSTRIJI

SAŽETAK

Održiva poljoprivreda podrazumijeva, između ostalog, poticanje razgranatog i decentraliziranog sustava obiteljskih poljoprivrednih gospodarstava umjesto velike korporacije. Izazov je pronaći način organiziranja koalicija koje poboljšavaju sustav proizvodnje hrane. Studija slučaja koja je inspirirala ovaj rad potječe iz Istre, hrvatske regije s 25 proizvođača maslinova ulja i oko 5.000 uglavnom malih poljoprivrednika koji se bave uzgojem i berbom maslina. Kako bi se uzelo u obzir sve ciljeve sudionika tog lanca dobave poljoprivredno-prehrambenih proizvoda, ovaj rad ima za cilj postaviti model za njegovu integriranu optimizaciju, dati matematičku formulaciju i predložiti metodu za rješavanje problema.

Gljučne riječi: kvarljiva roba, poljoprivredno-prehrambena industrija, maslinovo ulje, planiranje proizvodnje, višekriterijska optimizacija

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DEBTORS' ASSET SIZE AND PRACTITIONERS' APPOINTMENTS WITHIN INSOLVENCY PROCEDURES IN CROATIA

ABSTRACT

This paper aims to answer the following research question: what is the common debtors' assets size within the insolvency proceedings in Croatia, and what is the relation of the size of the assets to the appointment system? The goals and purpose are to deliver a dynamic, analytical overview of the of appointment system of insolvency practitioners in the Republic of Croatia, and to study them in relation to the debtors' asset size. The database of appointments, originally published by the Croatian Ministry of Justice, is here coupled with the annual financial reports data, which created an initial matrix of 32,840 appointments among cases with a total nominal value of 70.07 billion HRK (9.34 billion €). The results show that the Croatian insolvency system annually, on average, processes cases with a total value of approximately 10 billion HRK (1.33 billion €), which indicates the importance of this system for the economy in general, but also for the legal system which regulates it. Furthermore, for the first time in Croatia, the results provide public insight into quantitative indicators on a national level, which opens a new area for broader examination.

Keywords: Bankruptcy, insolvency proceedings, insolvency practitioners, appointment, assets

1. Introduction

The insolvency system is one of the striking examples of how legal systems and regulations powerfully affect the formation of the economic environment and entrepreneurial culture. The quality of the insolvency system directly affects how well the entire economy functions as a whole. A culture in which delayed and non-payment are tolerated, where it seems "normal" not to pay creditors, where insolvency creditors reimburse only a minor part of the claims, and where the efficient compensation of the insolvency practitioner is the most important practical economic effect of

the bankruptcy – contributes to the demotivation of entrepreneurs and induces economic passivity, while further encouraging innovative performers to emigrate to better arranged systems.

Respectable insolvency regimes provide a well-ordered process in which scarce resources are redistributed efficiently and fairly, and in which all economic participants – creditors and debtors, managers and workers, society and tax collectors, among others – have an economic interest in the orderly procedure (Halliday, Carruthers, 2007: 1137). The European Union also recognizes the im-

portance of preserving economic value within the proceedings and promotes the rescue of economically viable but distressed businesses, by seeking to give them a second chance, while also promoting a restructuring of a debtor (from the preamble of the Regulation 2015/848 on insolvency proceedings, European Parliament and the Council, 2015).

However, within the context of decision making regarding the rescue of strategic, nationally important companies¹, the general public in Croatia (including economic and legal experts) implicitly established a hypothesis that the Croatian insolvency system has virtually no capacity to produce economically efficient outcomes of an insolvency procedure. This hypothesis is manifested in the practice of finding any possible way to avoid insolvency proceedings for strategic companies, even though the procedure (nominally) contains the possibility of restructuring, and survival of the debtor. In such a context, every attempt to make the proceedings more transparent and subject them to standard economic analysis should be welcomed, and an elementary starting point would be an examination of the debtors' assets size.

As Baird suggests (1987: 176), a small number of citizens in a market economy would have their basic existential needs fulfilled if loans as a funding model did not exist. A debt contract (credit agreement) is one of the most useful contracts for the economy in general, because it allows businesses to finance their investments, and the citizens their consumption (Djankov et al., 2008: 1106). Growth opportunities and the development of entrepreneurship depend on the quality of debt collection systems, and bankruptcy is the last stronghold of the system in the chain of collection. When an entrepreneur as a creditor can reimburse more within insolvency proceedings, he will be more inclined to invest, to create new partnerships, and to expand the business. On the macro-economic level this positively affects the growth of GDP and employment, increasing international competitiveness, lowering interest rates, increasing credit ratings, etc. While studying 88 jurisdictions worldwide Djankov et al. (2008) have observed that the procedures of debt collection of insolvency (and similar) procedures are very protracted, costly, and inefficient. However, they also showed that more developed countries (measured by per capita income) are also significantly more efficient. Armour and Cumming (2008) view insolvency laws as an im-

portant aspect of the legal environment that affects entrepreneurship. All of this indicates that an effective insolvency system is one of the determinants of economic prosperity.

Professional engagement of insolvency judges and insolvency practitioners is an occupation in the public interest; their work should therefore be subject to public scrutiny. The fundamental assumption of this paper is that the transparency of each element² of an economic system has a positive effect on the economy's efficiency and its development. Managers of insolvency proceedings, as well as the judges who appoint them, hold a sort of a public office. They are appointed by the "State" (in the broad sense of the word) as the last refuge for creditors, and conditionally could be regarded as "stewards" *sui generis* in the economic system. Hence, they do not have the right to anonymity, while stakeholders do have the right to a transparent insight into their work. For that reason, all of the data used in preparation of this research, as well as the results (in an interactive form) are deposited in "Open Science Foundation"³ – an open and public system of access to scientific research, for the purpose of providing reproducibility and results' verification⁴. The results have also been deposited in the "cloud" storage data system, where anyone can download them without registration, for free⁵.

When observing the Croatian insolvency system it is well known that the insolvency practitioner is practically and operationally the most important person. The higher his expenses, the less there is left for workers and other creditors. His competence can greatly affect the debtor's possibility for survival. Transparency in the appointment of the procedure manager and in the system of assigning cases has a positive impact on the business environment and implicitly provides entrepreneurs with a signal that the pay-out of the managers' remuneration is not the only practical objective of the procedure. In this context, the objectives and purpose of this study are to provide a dynamic-analytic overview of the system of appointing managers to insolvency proceedings in the Republic of Croatia, and to analyse the appointments in relation to the amount of assets of the debtor. In this sense, this paper is based on the previous research by Sajter (2017), while its novelty lies in the systematic collection and synthesis of publicly available data regarding appointments during 2018, and in linking the appointment data with the assets amounts of the debtor. For the

first time in Croatia, the results of this research offer the possibility for a public inquiry into the asset size of debtors within proceedings, and they open a new area for future, more extensive analyses of appointments in relation to the debtor's assets size.

Given that this paper does not analyse the appointments of insolvency practitioners only, but also the assigning managers on other types of insolvency proceedings based on The Insolvency Act (Official Gazette No. 71/15, 104/17; hereinafter IA), the frame of examination has been extended. As there is more than one type of insolvency proceedings in Croatia, each of these procedures has their own manager, with their own distinctive title and (somewhat) different responsibilities, roles, and duties. The roles of the procedure managers whose appointments we reflect on in this paper are:

- a) *trustee*, a manager of the pre-insolvency settlement procedure,
- b) *insolvency trustee*, the manager of the insolvency proceedings in which "the personal administration" is carried out (a type of proceedings in which the debtor independently manages and disposes the insolvency estate under the supervision of the insolvency practitioner - Chapter VIII. of the IA),
- c) *temporary insolvency practitioner*, a manager of the preliminary proceedings who establishes if there are legal reasons for the commencement of the procedure, after which the full procedure could but does not necessarily need to be opened,
- d) *insolvency practitioner in a shortened procedure*, a manager of the "process" in which a procedure is simultaneously opened and closed due to the non-existence of debtors' assets that would cover the costs of the normal procedure,
- e) *insolvency practitioner*, a manager of the insolvency procedure in the "classic" sense of the word.

Since, throughout this paper, the phrase "appointment of a practitioner" could be confused with the appointment of a trustee or a temporary practitioner, we use the term "manager of the insolvency proceedings," which includes various procedures within the IA, as well as the different roles within them.

The structure of this paper is the following. This (introductory) part elaborates on the importance, goal, purpose, and hypothesis of this research. It also presents a review of a selection of significant previous papers that contextualize the importance of bankruptcy in the economic system. In the second part the data sources and methodology are described. The third section provides an overview of the results and a discussion of the most important findings. Finally, the conclusion conveys final thoughts, the most important insights, and guidelines for possible future research.

2. Methodology and data

On its official Internet site⁶, The Croatian Ministry of Justice regularly publishes and updates the database of current appointments of insolvency proceedings' managers. Anyone can access this data free of charge, without registration. It contains the full names of the judges, managers of the proceedings, and the debtors, as well as other accompanying data – all openly available. This database was downloaded twelve times during the year 2018, at the end of each month, and was compiled and merged into a single source, which was then consolidated and filtered (some items were entered more than once, and numerous appointments were also displayed multiple times)⁷.

The central contribution of this paper consists in obtaining the amounts of the debtors' total assets, and in linking these amounts with information on appointments of procedure managers. Data on debtors' assets were obtained through the Poslovna.hr online information system⁸ which is maintained by the company Bisnode Ltd., which in turn gets the original data from the Financial Agency (Fina). Therefore, Bisnode Ltd. is not the primary, but a secondary data source, which is important because many debtors are irresponsible (and/or are intentionally concealing their poor financial position from the public), and do not submit their financial reports to Fina. Fina can take certain disciplinary action only after a borrower fails to deliver their financial data for three years in a row. Therefore, companies that are in financial difficulties do not submit their financial reports, expecting bankruptcy. Bisnode Ltd. receives, via Fina, 110 to 120 thousand financial reports per year. Given that the sector classification of institutional units within the Croatian Bureau of Statistics⁹ contains around 144,000 limited liability companies and some 1,200

joint stock companies, this means that yearly around 30,000 companies do not submit their annual financial statements to Fina. It is likely that the companies that are in financial difficulties are those that do not provide their statements – the same companies that are candidates for some of the proceedings described by the IA. For these reasons, we could not find data about the total assets for many debtors.

The balance sheets are dated 31 December, and the data regarding the total debtors' assets from the previous annual financial statement was searched for every manager's appointment. Since many companies submit their statements with delay, and given that many companies in difficulties do not submit anything, if information (on the total assets) was not found from the year preceding the commencement of the proceedings, then alternatively we went back one more year¹⁰. All the previous data were considered irrelevant. In this manner we attempted to gather maximum information content without compromising the analysis, acknowledging that the amount of assets declared by the debtors is often unrealistically high. In addition, the data that companies submit to Fina do not have to be accurate, nor does Fina check their accuracy (for example, sometimes the totals in the balance sheet are incorrect). Unfortunately, financial reports are sometimes completely useless.

It is important to stress the following: there are frequent cases in which the declaratory (accounting) positions regarding debtors' assets are higher than the real conditions found on the spot, and therefore

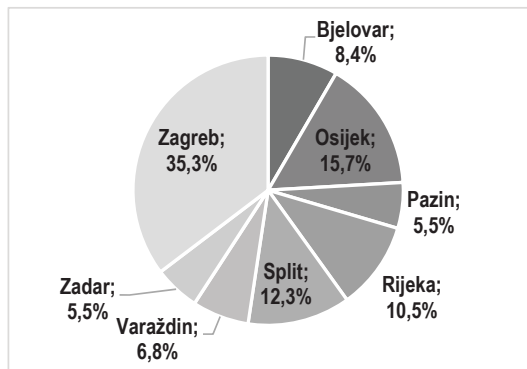
all the data on debtor's assets in this paper should be taken with a measure of caution – more as nominal amounts than as precise, exact indicators. When designing the methodology we discussed the idea of discounting, where the amount of the assets was to be reduced by 25% (if it is from the first year before the commencement of the proceedings), or by 33% (going back one more year before the opening of the proceedings), but that would be an unsystematic, linear, and arbitrary downgrade of all the assets of all the debtors. Hence, we left the original data, and we repeat that depreciation is required for all the amounts. However, the aim of this research is not to gain a strictly precise co-analysis of the debtors' assets in relation to the managers' appointments, but rather to get a general picture of the insolvency system as a whole.

After compiling, linking, and filtering the data, the statistical processing was performed. The integral database created for this paper contains 159 judges, 342 managers of insolvency proceedings, 29,280 debtors (the insolvency estates found after the closing proceedings are also counted among the debtors), and 32,840 appointments at all of the eight Croatian commercial courts (Table 1), in the period from September 1998 to the end of November 2018. There are more appointments than debtors because for many debtors there were multiple appointments; e.g. first a temporary insolvency practitioner is appointed to a debtor, then he gets a "full" practitioner, then a practitioner gets substituted, etc.

Table 1 Statistical indicators of the integral database on appointments

Commercial court headquarters	Total appointments	Share in total
Bjelovar	2,754	8.4%
Osijek	5,153	15.7%
Pazin	1,798	5.5%
Rijeka	3,456	10.5%
Split	4,041	12.3%
Varaždin	2,232	6.8%
Zadar	1,804	5.5%
Zagreb	11,602	35.3%
Total	32,840	100.0%

Source: Author's calculation



In 13,918 cases, out of 32,840 appointments, a record was found on the amount of the debtors' total assets, and the overall sum of assets totals 70.07 billion HRK (€9.34 billion¹¹), without the Agrokor Group.

One statistical exception (outlier) was excluded from the research – the Agrokor Group – which would, due to its size, significantly affect all the statistical parameters and would have deformed all the results. Since the restructuring of Agrokor was performed outside the standard insolvency system, and because specific legislation was enacted on account of this company, it ought to be omitted from the analysis of the standard insolvency system.

The research area was further delimited in the following steps. The earliest appointment in the integral database is dated 18 September 1998. However, for the purpose of comparability and compatibility of data, all the appointments made before 1 September 2015 have been excluded. The reason for

this is the entry into force of the recast IA (Official Gazette No. 71/15), which significantly altered the manager appointment system and introduced random appointing of practitioners, but which gave discretionary power to the judge to circumvent the random assignment process.

Afterwards we excluded the appointments from list B because appointments of the insolvency practitioner can be performed only from list A (Article 84/1 of the IA).

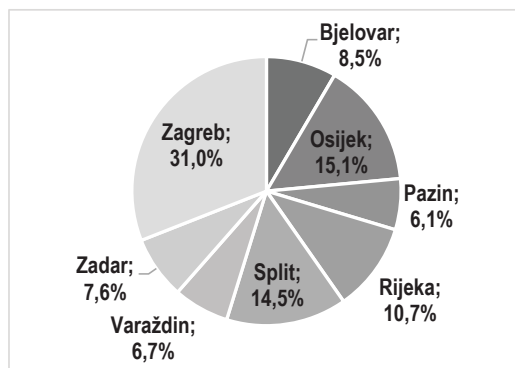
Finally, we excluded all the cases in which the appointed managers were relieved of duty after 14 days or less, for the reason that such a temporary appointment was evidently made by error (or the appointed manager requested a dismissal for private reasons).

After making the stated reductions, the reduced database contained 146 judges, 298 managers, 18,999 debtors and 21,526 appointments¹² (Table 2).

Table 2 Statistical indicators of the reduced database on appointments

Commercial court headquarters	Total appointments	Share in total
Bjelovar	1,819	8.5%
Osijek	3,240	15.1%
Pazin	1,320	6.1%
Rijeka	2,293	10.7%
Split	3,120	14.5%
Varaždin	1,442	6.7%
Zadar	1,628	7.6%
Zagreb	6,664	31.0%
Total	21,526	100.0%

Source: Author's calculation



Of the above 21,526 appointments, for 8,826 of them we managed to obtain data on the debtors' assets from the last annual report before the commencement of the procedure, or from the year prior to that. It should be noted that in the observed period (1 September 2015 – end of 2018) for some debtors there were multiple proceedings (interim/full, opened/closed/reopened etc.), and this is the reason why some debtors have multiple entries in the database. Hence, a catalogue with appointments and total assets created for the purpose of this research contains a total of 8,826 appointments and 8,697 debtors.

The sample of appointments therefore contains 41.0% of the entire population (8,826 / 21,526), or 45.8% at the level of the number of debtors (8,697 / 18,999), and as such constitutes an appropriate set for scientific research. In addition, it is likely that the assets are relatively small for those companies that have not submitted their statements to Fina (and, therefore, for them it was not possible to link the data on appointments with the data on assets), which to a certain extent reinforces and improves the results of the analysis.

3. Results and Discussion

When considering all the Croatian commercial courts, the largest percentage of appointments refers to placement in shortened insolvency proceedings cases (46%), then the appointment of insolvency practitioners (36%), and lastly temporary insolvency practitioners (Table 3). Even the first indicator points to the fact that in almost half of the proceedings the insolvency judge and the practitioner do not have a substantial operative engagement; in other words, a standard template for opening and closing the procedure is used, while there is no discussion of preserving economic resources, restructuring, or property sale.

Table 3 Analysis of the reduced database on appointments, by roles

Role of the manager	Total appointments	Share in total
Trustee	258	1.2%
Temporary insolvency practitioner	3,658	17.0%
Insolvency trustee	16	0.1%
Insolvency practitioner	7,666	35.6%
Insolvency practitioner (shortened procedure)	9,928	46.1%
Total	21,526	100.0%

Source: Author's calculation

Analysing the frequency of appointments of managers of insolvency proceedings is however not sufficient to acquire a broader overview of the insolvency system, because it has little meaning if one person is appointed for hundreds of cases if all these cases refer to debtors who have, for instance, an average of €1,000 worth of assets. On the other hand, a practitioner that only has ten cases, but in each of them

more than a million euro of assets within the estate, can be considered more burdened (but also more privileged in terms of expected remuneration) than the one who has hundreds of "small" cases. That is why this paper broadens the analysis for the first time by using data on debtors' assets.

The total assets in the reduced database which contains information on 8,697 debtors have a nominal value of 39.29 billion HRK (€5.24 billion)¹³. Taking into consideration that the sample is made up of less than half of the population, the significance of the insolvency system for preserving economic values on a macroeconomic level is already made clear.

For the purpose of a better overview, the debtors are then sorted on the basis of their asset size into one of the following categories (a logarithmic scale was used):

- less than 1,000 HRK (<133 €),
- 1,000 – 9,999 HRK (130 – 1,332 €),
- 10,000 – 99,999 HRK (1,333 – 13,332 €),
- 100,000 - 1 million HRK (13,333 – 133,332 €),
- 1 million – 9.99 million HRK (133,333 – 1.33 million €),
- 10 million – 99.9 million HRK (1.33 million – 13.33 million €), and
- 100 million - 1 billion HRK (13.33 million – 133.3 million €).

When considering the distribution of the number of debtors in correlation with the distribution of the assets of debtors (Table 4), a strong disproportion can be seen: 1% of debtors (89 of them) own 52% of all the assets of all insolvency debtors combined. Also, only 5% of debtors (442) account for 78.4% of all the assets in the (observed) system. In other words, only about a hundred cases make up more than a half of the insolvency assets in Croatia.

Table 4 Distribution of debtors by asset size

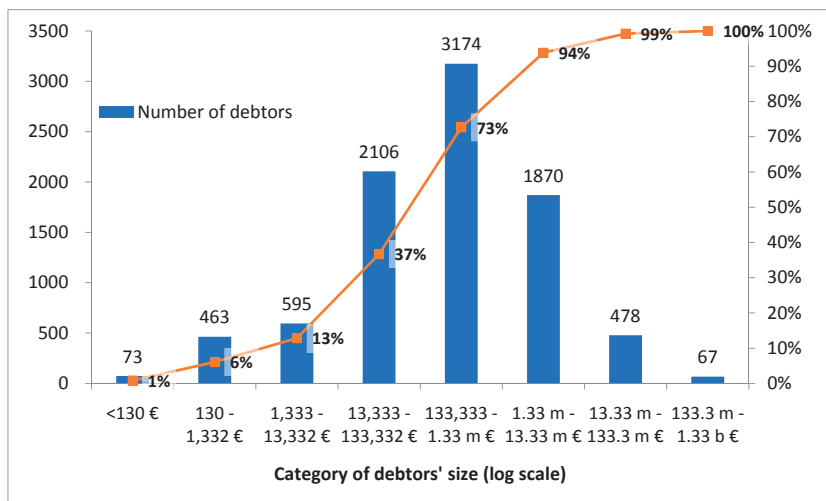
Category of debtors' asset size	Total number of debtors	Share in total	Total assets of debtors	Share in total
a) <130 €	531	6.1%	11,433 €	0.0%
b) 130 – 1,332 €	594	6.8%	384,226 €	0.0%
c) 1,333 – 13,332 €	2,097	24.1%	12,922,359 €	0.2%
d) 13,333 – 133,332 €	3,139	36.1%	162,045,433 €	3.1%
e) 133,333 – 1.33m €	1,817	20.9%	797,744,977 €	15.2%
f) 1.33m – 13.33m €	456	5.2%	1,803,521,305 €	34.4%
g) 13.33m – 133.3 m €	63	0.7%	2,461,743,325 €	47.0%
Total	8,697	100.0%	5,238,373,058 €	100.0%

Source: Author's calculation

Graph 1 shows the stated categorization, and although at first glance it could seem that the distri-

bution is uniform, it should be repeated that the horizontal scale is not linear but logarithmic.

Graph 1 Histogram of debtors' asset size in relation to the number of debtors



Source: Author's calculation

Since the Croatian economy is centralized, and the headquarters of the largest Croatian companies are located in the capital, it is not surprising that the biggest debtors were processed in Zagreb, at its Commercial Court, where the largest volume of the cases' assets can be found (Table 5). Regardless of

that, it is interesting that the Commercial Court in Zagreb processes insolvency cases that in total have as much as eight times larger assets than in Bjelovar, whereas on average (measured by the arithmetic mean) the size of the debtors is about three times larger than in Rijeka.

Table 5 Statistical indicators of debtors' assets, by courts

Commercial court headquarters	Number of cases	Mean (mil. €)	Median (thousands of €)	Total (mil. €)	Minimum	Maximum (mil. €)	Standard deviation (mil. €)	Coeff. of variation
Bjelovar	753	0.336	24.69	252,52	0.00	50.08	2.17	645.9
Osijek	1,381	0.443	21.49	610,83	0.00	53.48	2.66	601.4
Pazin	763	0.391	36.48	298,02	0.00	50.05	2.78	711.8
Rijeka	982	0.291	27.28	285,70	0.00	15.57	1.14	390.9
Split	1,288	0.587	22.09	755,19	0.00	115.38	4.32	736.9
Varaždin	646	0.491	32.13	317,14	0.00	39.01	2.26	460.3
Zadar	737	0.711	42.04	523,37	0.00	92.31	4.57	644.2
Zagreb	2,276	0.965	39.72	2,195,61	0.00	117.50	6.09	631
Total	8,826	0.593	29.95	5,238,37	0.00	117.50	4.09	690

Note: only appointments from List A are observed, after 1 Sept. 2015, with durations longer than 14 days.

Source: Author's calculation

The disproportionate distribution of the size of debtors' assets can be observed in the difference between the arithmetic mean in proportion to the median of the assets by the case. Since the arithmetic means is considerably more susceptible to the influence of extremes, the median is considerably lower at all administrative roles in the Croatian in-

solveny system (Table 6). It is to be expected that the average debtors' assets in shortened proceedings is considerably lower than in all other types of proceedings, and considering the small number of cases and a high average, it is clear that personal administration is carried out rarely, but is more common with somewhat larger debtors.

Table 6 Statistical indicators of debtors' assets, by managers' roles

Role of the manager	Number of cases	Mean (mil. €)	Median (thousands of €)	Total (mil. €)	Minimum	Maximum (mil. €)	Standard deviation (mil. €)	Coeff. of variation
Trustee	199	5.47	757.74	1,088.45	0.00	117.50	15.80	288.9
Insolvency trustee	13	4.52	1,031.29	58.76	0.04	16.23	5.97	132.0
Insolvency practitioner	2,630	0.81	55.49	2,122.45	0.00	116.88	4.59	569.1
Temporary insolvency practitioner	2,040	0.74	51.79	1,516.77	0.00	115.38	4.19	563.3
Insolvency practitioner (shortened procedure)	3,944	0.11	15.50	451.94	0.00	12.89	0.48	419.8
Total	8,826	0.59	29.95	5,238.37	0.00	117.50	4.09	690.0

Note: only appointments from List A are observed, after 1 Sept. 2015, with durations longer than 14 days.

Source: Author's calculation

Key results for the basic focus of this paper are presented in Table 7. It is clear that in those cases where debtors have larger assets, practitioners are chosen by a discretionary decision of the court (not via an automatic system of allocation, but manually). The indicators of the central tendency of debtors' assets are approximately five times larger with a manual (non-random) appointment than with other methods of administrator selection. When observing the relationship of appointments to debtors' assets, this explicitly proves empirical findings that in the Croatian insolvency system the appointments to

debtors with larger estate are done by bypassing the standard rule of the automatic (random) assignment. When considering the following conditions: (1) about a hundred cases account for more than half of all insolvency assets in Croatia, (2) the exception in the way of appointment is used as a rule when a debtor has above-average assets, and (3) in most cases insolvencies have economically inefficient outcomes (liquidation, and not restructuring), it is apparent that the system of appointments requires a comprehensive re-evaluation in correlation with the economic goals of insolvency.

Table 7 Statistical indicators of debtors' assets, by managers' appointment method

Managers' appointment method	Number of cases	Mean (mil. €)	Median (thousands of €)	Total (mil. €)	Minimum	Maximum (mil. €)	Standard deviation (mil. €)	Coeff. of variation
Manually (non-random)	433	3.15	321.02	1,365.94	0.00	116.88	10.01	317.3
"Random with exceptions"	1,316	1.00	58.66	1,319.99	0.00	98.63	5.21	519.9
By switching roles	62	0.62	117.50	38.71	0.00	12.96	1.77	283.1
Random	7,015	0.36	23.94	2,513.73	0.00	117.50	3.05	851.6
Total	8,826	0.59	29.95	5,238.37	0.00	117.50	4.09	690.0

Note: only appointments from List A are observed, after 1 Sept. 2015, with durations longer than 14 days.

Source: Author's calculation

Finally, taking into consideration the following elements:

1. the duration of the observed time was a bit longer than three years (1 September 2015 – end of 2018);
2. for almost half of the cases the data about the size of the assets was successfully found;
3. for those debtors whose asset size data could not be found, the assumption is that their assets were relatively small or non-existent;
4. the total sum of assets of all debtors is 39.29 billion HRK;
5. the number of assets are nominal, and in reality usually lower,

it can be estimated that the insolvency system of the Republic of Croatia annually processes insolvencies that have an approximate value of ten billion HRK (€ 1.33 billion). With the empirical fact that most cases end in liquidation, property sale and job terminations, it can be also assumed that most of this economic value is irretrievably lost.

4. Conclusion

This paper aims to contribute to a coherent discussion regarding the appointment methods of insolvency proceedings' managers in the Republic of Croatia by supplying quantitative indicators that are very scarce in the domestic environment. For the first time the assets of the debtor are associated with the appointments of the proceedings' managers, and statistics at the national level are revealed.

Based on the research here presented, it can be cautiously estimated that the insolvency system of the Republic of Croatia annually processes cases with a total value of approximately 10 billion HRK (€ 1.33 billion). This reflects the importance of the insolvency system for the economy in general and the need for stricter control and greater transparency. For cases with larger asset values, courts tend to bypass the random selection method of practitioners: the debtors' assets are on average about five times higher in the non-random appointment than in the random selection process. In practice, this means that the random selection method of an insolvency manager (which should be the rule, with some exceptions) is a formal regulation that is being bypassed whenever the assets of a debtor are larger than average.

Most of the debtor's assets are found in a small number of cases: 47% of all assets are located in 0.7% of cases: these are the debtors who have more than one hundred million HRK (€ 13.33 million) worth of total assets. On the other hand, the largest number of cases (73%) is made up of debtors who have assets of less than one million HRK (€ 133,330), but all together they make up less than 4% of all of the assets in the insolvency system. In total, about a hundred cases constitute more than half of all the insolvency estate in Croatia.

Remarking the previously observed unequal workload of managers, we also found that the leading ten practitioners were appointed in parallel to more than 20 cases each (and several to over 30), in which the average assets of a case were greater than 10 million HRK / € 1.33 million (the first five with cases averaging over 20 million HRK / € 2.67 million each). Ten of them are in charge of more than 240 cases whose total nominal assets amount to nearly 6 billion HRK (€800 million). In other words, debtors entrusted to these ten practitioners in 243 cases have assets whose worth is equal to all the debtors combined at 166 practitioners in 2,978 cases from the bottom of the asset scale. For a person that leads in parallel over 20 companies, each of which has (on average) over ten million HRK worth of assets (€1.33 million), we can pragmatically assume the following: either (a) he has extraordinary managerial competencies; or (b) he cannot possibly manage all these positions effectively, and the debtors' workplaces and assets will disappear in insolvency proceedings; or (c) he only nominally conducts the procedure while in fact there is some other operating arrangement at hand. Either way, this system is not established to optimise the survival of the debtor and to preserve the economic value of the debtor's assets and jobs.

One shortcoming of analyses of this type is the fact that assets are only nominal, while real assets found when opening a procedure are most often lower. It is also possible that a debtor declares multimillion assets in the year prior to opening the procedure, only to find at the commencement of the proceedings that there is nothing left. Due to the lack of systematically collected quantitative data, it is at the moment impossible to accurately, or even roughly, estimate what rate of asset depreciation would be appropriate to apply, and therefore all amounts in this paper should be taken with caution.

In future research it would be useful to extend the time horizon of the analysis and to observe comparative situation in relation to jurisdictions of similar economic and legal-cultural traditions. Also, it would be valuable to systematically collect

data on the gap between the declared and the actual amounts of debtor's assets for the purpose of better estimation of the economic aspects of the insolvency system.

LITERATURE

1. Armour, J., Cumming, D. (2008), "Bankruptcy Law and Entrepreneurship", *American Law and Economics Review*, Vol. 10, No. 2, pp. 303–350.
2. Baird, D. (1987), "A World Without Bankruptcy", *Law and Contemporary Problems*, Vol. 50, No. 2, pp. 173–193.
3. Djankov, S., Hart, O., McLiesh, C., Shleifer, A. (2008), "Debt Enforcement around the World", *Journal of Political Economy*, Vol. 116, No. 6, pp. 1105–1149.
4. European Parliament and the Council, Regulation (EU) 2015/848 on insolvency proceedings (recast), 20 May 2015.
5. Insolvency Act, Official Gazette No. 71/15, 104/17.
6. Halliday, T. C., Carruthers, B. G. (2007), "The Recursivity of Law: Global Norm Making and National Lawmaking in the Globalization of Corporate Insolvency Regimes", *American Journal of Sociology*, Vol. 112, No. 4, pp. 1135–1202.
7. LoPucki, L. M., Doherty, J. W. (2014), "Bankruptcy Survival", *UCLA Law Review*, Forthcoming; Law-Econ Research Paper No. 14-11, available at: <https://papers.ssrn.com/abstract=2492209> (Accessed on: April 27, 2019)
8. Sajter, D. (2017), "Imenovanja stečajnih upravitelja u Hrvatskoj", *Ekonomski pregled*, Vol. 68, No. 2, pp. 161–190.

ENDNOTES

- 1 The Agrokor Group and shipyards.
- 2 With the exception of security (sub)systems.
- 3 <https://osf.io/esx6j/>, (accessed on April 25th 2019)
- 4 Based on the public database and research on US bankruptcies, provided by Professor LoPucki from the UCLA School of Law and published on their official university pages; <http://lopucki.law.ucla.edu>, (accessed on 25 April 2019)
- 5 Microsoft OneDrive; the link is <http://tiny.cc/imenovanja2019>, (accessed on 25 April 2019). Published documents allow interactive browsing in regard to the individual criteria of the viewer.
- 6 <https://e-oglasna.pravosudje.hr/?q=popisi-obraci/8998>, (accessed on 25 April 2019)
- 7 The author has taken the data in good faith, assuming that they are accurate and correctly entered. The source of all data, except for those about the amounts of the assets of the debtor, is the Ministry of Justice of the Republic of Croatia, and for the potential corrections of the data one needs to address the Ministry. Even though a few weeks were spent for initial viewing and filtration of data, it was impossible to check all of the >800.000 cells within the spreadsheet, i.e. over 40,000 entries, so it is possible that some inconsistencies and/or inaccuracies remained. However, they are minor and they can be ignored within a statistical analysis of the whole system.

As an example of the noticed and corrected error: it was announced on 1 March 2018 that judge Hrvoje Luksic, at the Commercial Court in Zagreb, appointed Ante Ramljak as a special trustee at the debtor "Wrestling Club in Novi Zagreb" (VAT No.: 46193988864). After the error was perceived he was relieved of this duty and seven days later, on 8 March, manager Valentino Koscak (from the B list of practitioners) was appointed in a shortened procedure to the same case. It is normal that mistakes occur and that is why we need to distance ourselves from them, but we can assume (and hope) that they do not occur very often.

- 8 Bisnode operates in 19 markets and is one of the leading providers of business data in Europe. The institution of the author has a subscription to the information system Poslovna.hr.
- 9 <https://www.dzs.hr/app/sektorizacija/>, (accessed on 27 January 2019)
- 10 For example, if the appointment was on 11 May 2018 we searched for the debtors' assets as of 31 Decembert 2017. If that data did not exist we searched for the assets dated 31 December 2016. Even though there were situations when it was not possible to find the assets of the debtor on either of these dates, but it was possible to find the data from previous years (e.g. for 31 December 2015), the older data was not taken into account because it would have most likely become irrelevant at the time of the appointment of the insolvency practitioner.
- 11 Throughout this paper the exchange rate of 1 € = 7.5 HRK was used.
- 12 At many of the debtors there was more than one appointment.
- 13 If Agrokor was included it would be approximately 54 billion HRK (€7.2 billion).

Domagoj Sajter

IMOVINA DUŽNIKA I IMENOVANJA UPRAVITELJA U STEČAJNIM POSTUPCIMA U REPUBLICI HRVATSKOJ

Sažetak

Ovaj rad nastoji ispitati koliko iznose imovine dužnika u stečajnim postupcima u Republici Hrvatskoj u suodnosu s imenovanjima voditelja istih postupaka. Ciljevi i svrha su pružiti dinamičko-analitički prikaz sustava imenovanja voditelja stečajnih postupaka u Republici Hrvatskoj, te ih analizirati u relaciji s nominalnim iznosima imovine dužnika. Baza podataka o imenovanjima koju objavljuje Ministarstvo pravosuđa povezana je s godišnjim financijskim izvješćima dužnika te je formirana inicijalna matrica s 32.840 imenovanja u kojoj dužnici imaju ukupnu nominalnu aktivu od 70,07 milijardi kuna. Kao takav rad se temelji na kreaciji nove baze podataka koja povezuje imenovanja voditelja postupaka s iznosima imovine dužnika u tim postupcima. Rezultati pokazuju da stečajni sustav Republike Hrvatske godišnje prosječno obrađuje predmete u vrijednosti od oko 10 milijardi kuna što izvrsno opisuje njegovu važnost za ekonomiju u cjelini, ali i za pravni sustav koji ju regulira. Također, rezultati prvi puta u Republici Hrvatskoj omogućuju javni uvid u kvantitativne indikatore u stečajnim postupcima na nacionalnoj razini što otvara prostor ekstenzivnijim istraživanjima.

Ključne riječi: stečaj, stečajni postupak, upravitelj, imenovanje, ukupna aktiva

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1. Uvod

Stečajni je sustav jedan od zornih primjera koliko pravni sustav i regulativa snažno utječu na oblikovanje ekonomskog ambijenta i poduzetničke kulture. Kvaliteta stečajnog sustava izravno utječe na kvalitetu funkcioniranja ekonomije kao cjeline. Kultura neplaćanja u kojoj se čini „normalnim“ neplaćanje vjerovnicima, u kojemu vjerovnici u stečaju naplate čine zanemariv dio potraživanja, te u kojoj je učinkovita naplata troškova upravitelja najvažniji praktični ekonomski učinak stečaja – doprinosi demotivaciji poduzetnika i induciranju ekonomske

pasivnosti, a inovativne sudionike dodatno potiče na emigraciju u uređenje sustave.

Kvalitetni stečajni režimi osiguravaju uredan proces u kojemu se oskudni resursi učinkovito i pravedno redistribuiraju, a pri tome svi ekonomski sudionici – vjerovnici i dužnici, menadžeri i radnici, društva i poreznici, među ostalima – imaju ekonomski interes za urednim postupkom (Halliday i Carruthers, 2007: 1137). Europska unija prepoznala je važnost očuvanja ekonomskih vrijednosti u stečajnim postupcima te stoga promiče spašavanje ekonomski održivih poduzeća koja se nalaze u poteškoćama i kojima se pru-

ža druga prilika te također promiče restrukturiranje dužnika (iz toč. 10 preambule Uredbe Europskog parlamenta i Vijeća o postupku u slučaju nesolventnosti (Europski parlament i Vijeće, 2015). Međutim, u kontekstu odlučivanja o spašavanju strateških, nacionalno važnih kompanija¹ hrvatska je javnost (uključujući ekonomske i pravne eksperte) implicitno postavila hipotezu koja glasi da hrvatski stečajni sustav nema praktično nikakav kapacitet producirati ekonomski učinkovite ishode stečaja. Ova se hipoteza manifestira se u fokusiranju iznalaženja svih mogućih načina izbjegavanja stečaja, premda stečajni postupak u sebi sadrži i mogućnost restrukturiranja i opstanka dužnika. U takvom kontekstu valjalo bi pozdraviti svaki pokušaj da se stečajni postupci učine transparentnijima i podložnima standardnoj ekonomskoj analizi, a pritom je analiza opsega imovine dužnika elementarno polazište.

Kako Baird ističe (1987: 176), malen bi broj građana u tržišnoj ekonomiji imalo zadovoljene temeljne egzistencijalne potrebe kad kao model financiranja ne bi postojali krediti. Ugovor o dugu (kreditu) jedan je od najkorisnijih ugovora u ekonomiji generalno, jer tvrtkama omogućuje financiranje investicija, a građanima potrošnju (Djankov i dr., 2008: 1106). Mogućnosti rasta i razvoja poduzetništva ovise o kvaliteti sustava naplate dugova, a stečajni je sustav posljednje uporište u lancu naplate. Što se poduzetnik više može naplatiti u stečaju, to će biti skloniji investiranju, stvaranju novih poslovno-partnerskih odnosa, širenju posla. To na makroekonomskoj razini utječe na rast BDP-a i zaposlenosti, povećanje međunarodne konkurentnosti, sniženje kamatnih stopa, povećanje kreditnog rejtinga, itd. Promatrajući 88 jurisdikcija diljem svijeta Djankov i dr. (2008) uočili su da su procedure naplate dugova u stečajnim (i sličnim) postupcima vrlo dugotrajne, skupe i neučinkovite, no isto tako pokazali su da su ekonomski razvijenije zemlje (mjereno *per capita* dohotkom) značajno učinkovitije. Armour i Cumming (2008) ističu stečajni zakon kao važno motrište pravnog okruženja koji utječe na poduzetništvo. Navedeno ukazuje da je učinkovit stečajni sustav jedna od determinanti razine ekonomskog prosperiteta.

Profesionalni angažman stečajnog suca i upravitelja javni je posao, u javnom interesu, te bi stoga i njihov rad morao biti podložan javnoj analizi. Temeljna je pretpostavka ovoga rada da razvidnost (transparentnost) svakog² elementa ekonomskog sustava pozitivno utječe na učinkovitost ekonomije kao cjeline i njezin razvoj. Voditelji stečajnih postupaka, kao

i suci koji ih imenuju, imaju svojevrsnu javnu službu. Njih imenuje „država“ (u širem smislu riječi) kao posljednje utočište vjerovnika, te ih se uvjetno može promatrati kao „redare“ *sui generis* u ekonomskom sastavu. Zbog svega navedenog nemaju pravo na anonimnost, a dionici imaju pravo uvida u njihov rad. Stoga su svi podaci koji su korišteni pri izradi ovoga rada, kao i rezultati (u interaktivnoj formi) pohranjeni u sustavu otvorenog i javnog pristupa znanstvenim istraživanjima „Open Science Foundation“³, u svrhu omogućavanja reprodukcije i verifikacije rezultata⁴. Rezultati su alternativno pohranjeni i u sustavu pohrane podataka „u oblaku“ odakle se mogu također preuzeti bez registracije i bez naknade⁵.

Promatrajući hrvatski stečajni sustav znano je da je stečajni upravitelj operativno najvažniji subjekt, a što su veći njegovi troškovi, manje preostaje za radnike i druge vjerovnike. Njegova kompetentnost uvelike može utjecati na mogućnost opstanka dužnika. Razvidnost u načinu imenovanja voditelja postupka i sustavu dodjele predmeta pozitivno utječe na ekonomski ambijent te poduzetnicima implicitno daje do znanja da isplata novčane nagrade upravitelju nije praktično jedini cilj postupka. U ovom kontekstu ciljevi i svrha ovoga rada su pružiti dinamičko-analički prikaz sustava imenovanja voditelja stečajnih postupaka u Republici Hrvatskoj te ih analizirati u suodnosu s iznosima imovine dužnika. U tom smislu ovaj se rad temelji na prethodnom istraživanju Sajtera (2017), a iskorak i novina sastoje se u sustavnom prikupljanju i sintezi javnih podataka o imenovanjima tijekom 2018. godine, te u povezivanju imenovanja s iznosima imovine dužnika. Rezultati ovoga istraživanja prvi puta u Republici Hrvatskoj pružaju mogućnost javnog uvida u obujme imovine dužnika u stečajnim postupcima te otvaraju prostor ekstenzivnijim analizama imenovanja voditelja postupaka u odnosu na veličine imovine dužnika.

S obzirom da se u ovom radu ne analiziraju samo imenovanja stečajnih upravitelja već i postavljanja voditelja drugih vrsta stečajnih postupaka temeljem Stečajnog zakona (Narodne novine br. 71/15, 104/17 – nadalje: SZ), i okvir promatranja je proširen. Naime, kako postoji više vrsta stečajnih postupaka, tako i svaki od ovih postupaka ima svoga voditelja koji ima drugačiji naslov i (donekle) drugačije odgovornosti, uloge i dužnosti. Voditelji postupaka čija se imenovanja u ovom radu razlažu su:

- a) *povjerenik* kao voditelj postupka predstečajne nagodbe,

- b) *stečajni povjerenik* kao voditelj stečajnog postupka u kojemu se provodi osobna uprava (vrsta postupka u kojemu dužnik samostalno upravlja i raspolaže stečajnom masom pod nadzorom stečajnoga povjerenika - Glava VIII. SZ),
- c) *privremeni stečajni upravitelj* kao voditelj prethodnog postupka u kojemu se utvrđuje postoje li razlozi za otvaranje stečaja, i nakon kojega se može ali i ne mora otvoriti stečaj,
- d) *stečajni upravitelj u skraćenom postupku* kao voditelj „postupka“ koji se istodobno otvara i zaključuje prije svega stoga što dužnik nema dovoljno imovine za pokriće troškova postupka, i
- e) *stečajni upravitelj* kao voditelj stečajnog postupka u klasičnom smislu riječi.

Budući da bi moglo doći do konfuzije ako bi se kroz ovaj rad koristila sintagma „imenovanje upravitelja“, a da se pritom razmatra imenovanje povjerenika ili privremenog upravitelja kojemu se služba ne nadovezuje na položaj stečajnog upravitelja, koristi se termin „voditelj stečajnog postupka“ koji obuhvaća i različite postupke unutar SZ-a, kao i različite službe unutar njih.

Struktura ovog rada je sljedeća. U prvom – uvodnom – dijelu elaboriraju se značaj, cilj, svrha i hipoteze rada. Također se iznosi pregled značajnih radova koji kontekstualiziraju značaj stečaja u ekonomskom sustavu. U drugom dijelu opisuju se izvori podataka i metodologija rada. Treći dio donosi pregled rezultata i diskusiju najvažnijih saznanja. Konačno, zaključak donosi završne misli, najznačajnije uvide i smjernice za moguća buduća istraživanja.

2. Metodologija i podatci

Ministarstvo pravosuđa redovito na svojim službenim internetskim stranicama⁶ javno objavljuje bazu podataka o aktualnim, trenutnim imenovanjima voditelja stečajnih postupaka; ovim podatcima svatko može pristupiti bez naknade ili lozinke, te su ondje otvoreno objavljena imena i sudaca, i dužnika, i voditelja postupaka. Navedena je baza preuzimana dvanaest puta tijekom 2018. godine, krajem svakoga mjeseca, te je kompilirana i objedinjena u jedan izvor koji je potom pročišćen za višestruke unose (neki predmeti uneseni su više puta, a također su i brojna imenovanja iskazana više puta tijekom godine)⁷.

Doprinos ovoga rada sastoji se ipak prije svega u pribavljanju iznosa ukupne aktive dužnika i povezivanju ovih iznosa s podatcima o imenovanjima voditelja postupaka. Podatci o visini imovine dužnika pribavljeni su kroz informacijski sustav Poslovna.hr kojega poslužuje tvrtka Bisnode d.o.o.⁸, a koja podatke pribavlja od Financijske agencije (Fina). Bisnode tako nije primarni već sekundarni izvor podataka što valja imati na umu jer su mnogi dužnici neodgovorni (i/ili namjerno skrivaju svoj loš financijski položaj od javnosti) te Fina ne dostavljaju svoja financijska izvješća. Fina može poduzeti određene disciplinske mjere tek kad dužnik ne dostavi svoje financijske podatke tri godine zaredom. Stoga društva koja zađu u financijske poteškoće često ne predaju izvješća očekujući stečaj. Bisnode d.o.o. putem Fine zaprimi 110 do 120 tisuća financijskih izvještaja godišnje, a s obzirom da u sektorskoj klasifikaciji institucionalnih jedinica Državnog zavoda za statistiku⁹ postoji oko 144.000 društava s ograničenom odgovornošću i 1.200 dioničkih društava, to znači da oko 30.000 trgovačkih društava Fina ne podnosi godišnja financijska izvješća. K tome, vjerojatnije je da izvješća ne podnose društva koja su u financijskim problemima i koja su kandidati za koji od postupaka reguliranih SZ-om. Iz navedenih razloga za mnoge dužnike nije bilo moguće pronaći podatak o njihovoj ukupnoj imovini.

Bilance se iskazuju na datum 31. 12. te se uz svako imenovanje tražio podatak o stanju imovine iz posljednjeg godišnjeg financijskog izvješća. Budući da mnoga društva kasno tijekom godine predaju izvješća za prethodnu godinu, te s obzirom da mnoga društva u poteškoćama ni ne predaju izvješća, ako nije pronađen podatak iz posljednje godine prije pokretanja postupka alternativno se tražila visina imovine iz neposredno prethodne godine.¹⁰ Svi stariji podatci smatrani su irelevantnima. Na navedeni način nastojao se steći maksimum informacijskog sadržaja, a ne kompromitirati analizu naglašavajući da je deklaratorni iznos imovine koju dužnik sam za sebe iskazuje često nerealno visok. Uz to, podatci koje društva dostavljaju u Finu ne moraju biti korektni niti Fina provjerava njihovu točnost (npr. zbrojevi u bilanci su neispravni), te se događa da su financijska izvješća katkad beskorisna.

Važno je naglasiti sljedeće: česti su slučajevi u kojima je deklaratorno (knjigovodstveno) stanje imovine veće od stvarnog zatečenog stanja, te stoga sve informacije o imovinama dužnika u ovom radu treba uzimati s mjerom opreza i kritičnosti – više kao nominalne iznose nego kao precizne, egzaktne pokazatelje. Pri koncipiranju metodologije razmatrana je ideja diskontiranja vrijednosti imovine u

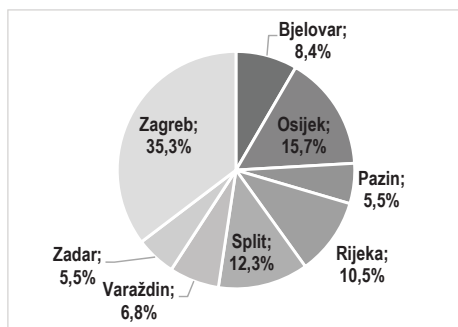
kojoj bi se iznos imovine umanjio za 25% (ako je to podatak iz prve godine prije otvaranja postupka), ili za 33% (ako je to podatak iz druge godine prije otvaranja postupka), no time bi se nesustavno, linearno i arbitrarno umanjila imovina svih dužnika. Stoga su ostavljeni originalni podatci, a ponavlja se napomena kako je potrebna deprecijacija svih ukupnih iznosa. No cilj ovoga rada i nije dobiti isključivo preciznu suanalizu iznosa imovine u odnosu na imenovanja, nego tek okvirnu sliku sustava u cjelini.

Nakon kompiliranja, povezivanja i filtriranja podataka pristupljeno je statističkoj obradi. U integral-

noj bazi podataka kreiranoj za ovaj rad nalazi se 159 sudaca, 342 upravitelja, 29.280 dužnika (ovdje se u dužnike ubrajaju i stečajne mase iza zaključenih stečajeva), i 32.840 imenovanja na svih osam hrvatskih trgovačkih sudova (Tablica 1.), u razdoblju koje seže od rujna 1998. do kraja studenog 2018. Više je imenovanja nego dužnika zato što kod brojnih dužnika postoji više imenovanja: npr. jednom dužniku se imenuje prethodni stečajni upravitelj, pa mu se postavlja stečajni upravitelj, potom se prvi razriješi pa se imenuje drugi stečajni upravitelj, itd.

Tablica 1. Statistički pokazatelji sveukupne baze podataka o imenovanjima

Trgovački sud	Ukupno imenovanja	Udio u cjelini
Bjelovar	2.754	8,4%
Osijek	5.153	15,7%
Pazin	1.798	5,5%
Rijeka	3.456	10,5%
Split	4.041	12,3%
Varaždin	2.232	6,8%
Zadar	1.804	5,5%
Zagreb	11.602	35,3%
Ukupno	32.840	100,0%



Izvor: izračun autora

Od sveukupno 32.840 imenovanja u 13.918 slučajeva pronađen je podatak o visini ukupne aktive dužnika, te sveukupna suma imovine čini 70,07 milijardi kuna (bez Agrokora).

Iz istraživanja je isključena jedna statistička iznimka („outlier“) – Agrokor d.d. – koji bi zbog veličine svoje imovine značajno izmijenio sve statističke parametre i deformirao sve rezultate. Budući da je restrukturiranje Agrokora izvedeno izvan standardnog stečajnog sustava, te je samo zbog ovoga društva donesen novi, specifični zakon, valjalo ga je isključiti pri ovoj analizi standardnog stečajnog sustava.

U sljedećim je koracima područje istraživanja dodatno suženo. Budući da imenovanje s najstarijim datumom u integralnoj bazi podataka slovi na 18. rujna 1998. godine, u svrhu usporedivosti i kompatibilnosti podataka isključena su sva imenovanja prije 1. rujna 2015., odnosno prije stupanja na

snagu verzije Stečajnog zakona (Narodne novine br. 71/15) kojom je značajno izmijenjen sustav imenovanja upravitelja, kad je uvedena nasumična dodjela predmeta (uz diskrecijsko pravo zaobilaženja nasumične dodjele).

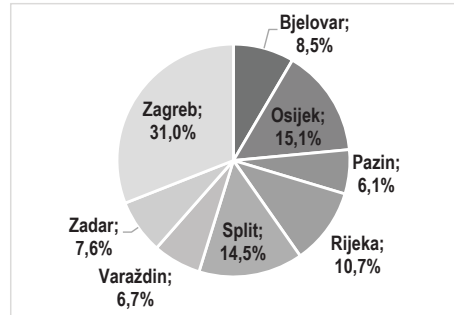
Potom, analizirana su samo imenovanja s liste A stečajnih upravitelja jer se izbor stečajnoga upravitelja u stečajnom postupku obavlja samo s liste A (čl. 84. st. 1. SZ).

Konačno, isključeni su svi slučajevi kod kojih su imenovani voditelji razriješeni nakon manje od 14 dana iz razloga što su takva imenovanja evidentno privremenog karaktera (najčešće je imenovani zatražio razrješenje iz određenog razloga), ili su učinjena pogreškom.

Nakon prethodno navedenih ograničenja reducirana baza sadrži 146 sudaca, 298 upravitelja, 18.999 dužnika i 21.526 imenovanja¹¹ (Tablica 2.).

Tablica 2. Statistički pokazatelji reducirane baze podataka o imenovanjima

Trgovački sud	Ukupno imenovanja	Udio u cjelini
Bjelovar	1.819	8,5%
Osijek	3.240	15,1%
Pazin	1.320	6,1%
Rijeka	2.293	10,7%
Split	3.120	14,5%
Varaždin	1.442	6,7%
Zadar	1.628	7,6%
Zagreb	6.664	31,0%
Ukupno	21.526	100,0%



Izvor: izračun autora

Od navedenih 21.526 imenovanja za njih ukupno 8.826 uspio se pribaviti podatak o visini imovine dužnika iz posljednjeg godišnjeg izvješća prije otvaranja postupka, ili iz godine prije te. Pritom valja naglasiti da se u promatranom razdoblju (1. rujna 2015. – kraj 2018. god.) nad pojedinim trgovačkim društvima i više puta otvarao i zatvarao predstečajni ili stečajni postupak te se u bazi podataka zato pojedina društva nalaze više puta. Dakle, baza podataka s imenovanjima i imovinama kreirana u svrhu ovoga rada sadrži ukupno 8.826 imenovanja, odnosno 8.697 dužnika.

Uzorak imenovanja za koje su prikupljeni podatci o nominalnoj visini imovine dužnika stoga iznosi 41,0% cijele populacije (8.826 / 21.526), odnosno 45,8% na razini broja dužnika (8.697/18.999), te je sasvim primjeren za znanstveno oblikovano istraživanje¹². Uz to, vjerojatno je da je imovina relativno mala kod onih tvrtki koje uopće nisu dostavile

podatke u Finu (te stoga kod njih nije bilo moguće povezati podatke o imenovanjima s podacima o imovini), što u određenoj mjeri učvršćuje i pospješuje rezultate analize.

3. Rezultati i diskusija

Promatrajući sve trgovačke sudove, najveći dio imenovanja odnosi se na postavljanja u skraćenim stečajnim postupcima (46%), potom na imenovanja stečajnih upravitelja (36%), i konačno na privremene upravitelje (Tablica 3.). Već prvi pokazatelj ukazuje na činjenicu da u polovici svih predmeta stečajni sudac i upravitelj nemaju konkretnijega operativnog angažmana, odnosno koristi se standardni obrazac rješenja o otvaranju i istodobnom zaključenju postupka, dok o očuvanju ekonomskih resursa, restrukturiranju ili prodaji imovine nema govora.

Tablica 3. Razrada reducirane baze podataka o imenovanjima, po ulogama

Uloga	Ukupno imenovanja	Udio u cjelini
Povjerenik	258	1,2%
Privremeni stečajni upravitelj	3.658	17,0%
Stečajni povjerenik	16	0,1%
Stečajni upravitelj	7.666	35,6%
Stečajni upravitelj (skraćeni st. postupak)	9.928	46,1%
Ukupno	21.526	100,0%

Izvor: izračun autora

Sama analiza učestalosti imenovanja voditelja stečajnih postupaka ipak je nedostatna za postizanje šireg pregleda stečajnog sustava jer ne znači mnogo ako je jedna osoba imenovana upraviteljem na stotinu predmeta ako se svi predmeti odnose na dužnike koji imaju u prosjeku npr. tisuću kuna imovine. S druge strane, upravitelj koji ima samo deset predmeta, ali u svakome od njih ima preko stotinu milijuna kuna imovine može se smatrati daleko opterećenijim (ali i privilegiranim u smislu očekivane nagrade za rad) od onoga tko ima stotine „malih“ slučajeva. Stoga ovaj rad proširuje analizu po prvi put koristeći podatke o imovinama dužnika.

Ukupna imovina u reduciranoj bazi podataka koja sadrži 8.697 dužnika iznosi nominalno 39,29 milijardi kuna¹³. Imajući na umu da uzorak čini nešto manje od pola ukupne populacije već je ovdje jasno koliki je značaj stečajnog sustava za očuvanje ekonomskih vrijednosti na makroekonomskoj razini.

U svrhu preglednosti dužnici su potom sortirani s obzirom na veličinu imovine u jednu od sljedećih kategorija (korištena je logaritamska skala):

- a) manji od 1000 kuna,
- b) 1.000 - 9.999 kuna,
- c) 10.000 - 99.999 kuna,
- d) 100.000 - 1 milijun kuna,
- e) 1 milijun - 9,99 milijun kuna,
- f) 10 milijuna - 99,9 milijuna kuna, i
- g) 100 milijuna - 1 milijarda kuna.

Promatra li se međuodnos distribucije broja dužnika u odnosu na distribuciju imovine kod tih dužnika (Tablica 4.), može se uočiti snažna disproporcija: kod svega 1% dužnika (njih 89) nalazi čak 52% sve imovine svih stečajnih dužnika. Ujedno, svega 5% dužnika (442) čini 78,4% sve imovine u (promatranom) sustavu. Drugim riječima, svega stotinjak slučajeva čini više od pola sve stečajne mase u Republici Hrvatskoj.

Tablica 4. Distribucija dužnika po veličini imovine

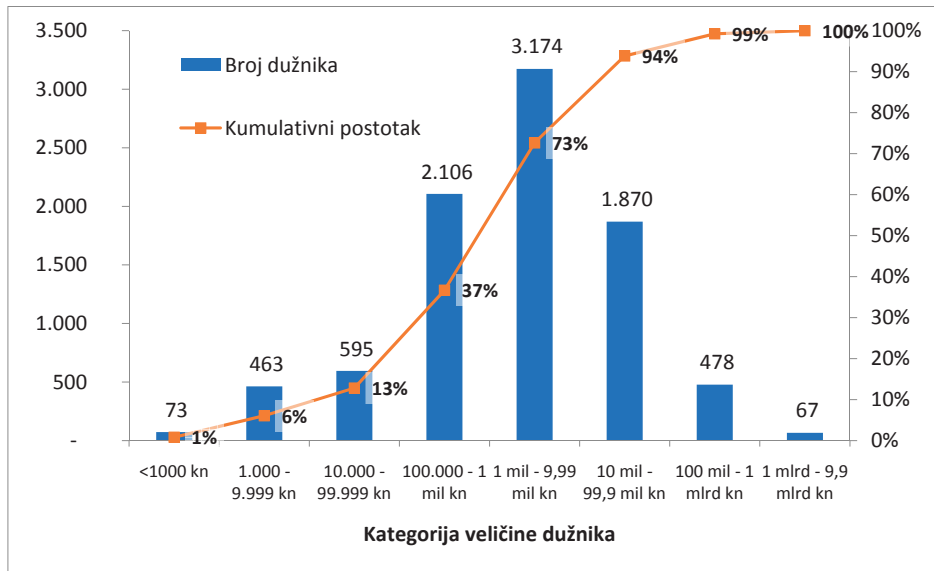
Kategorija veličine imovine dužnika	Ukupno dužnika	Udio u cjelini	Ukupna imovina dužnika	Udio u cjelini
a) <1000 kn	531	6,1%	85.748 kn	0,0%
b) 1.000 - 9.999 kn	594	6,8%	2.881.696 kn	0,0%
c) 10.000 - 99.999 kn	2.097	24,1%	96.917.691 kn	0,2%
d) 100.000 - 1 mil. kn	3.139	36,1%	1.215.340.750 kn	3,1%
e) 1 mil. - 9,99 mil. kn	1.817	20,9%	5.983.087.324 kn	15,2%
f) 10 mil. - 99,9 mil. kn	456	5,2%	13.526.409.785 kn	34,4%
g) 100 mil. - 1 mlrd. kn	63	0,7%	18.463.074.941 kn	47,0%
Ukupno	8.697	100,0%	39.287.797.935 kn	100,0%

Izvor: izračun autora

Grafikon 1. prikazuje navedenu raspodjelu, a iako se na prvi pogled može učiniti da je distribucija

ujednačena valja ponoviti da skala apscise nije linearna već logaritamska.

Grafikon 1. Histogram imovine dužnika u odnosu na broj dužnika



Izvor: izračun autora

Budući da je hrvatska ekonomija centralizirana te su u glavnom gradu sjedišta najvećih hrvatskih poduzeća, ne iznenađuje da su najveći dužnici procesuirani u Zagrebu i da se na tamošnjem Trgovačkom sudu nalazi najveći obujam imovine predmeta (Tablica 5.). Unatoč tome zanimljivo je da Trgovač-

ki sud u Zagrebu obrađuje stečajne predmete koji ukupno imaju čak oko osam puta veću imovinu nego li u Bjelovaru, a u prosjeku (mjereno aritmetičkom sredinom) je veličina dužnika oko tri puta veća nego u Rijeci.

Tablica 5. Statistički pokazatelji imovine dužnika, po sudovima

Trgovački sud	Broj predmeta	Aritm. sredina (u mil. kn)	Medijan (u tis. kn)	Ukupno (u mil. kn)	Minimum	Maksimum (u mil. kn)	Standardna devijacija (u mil. kn)	Koef. varijacije
Bjelovar	753	2,52	185,19	1.893,91	0,00	375,60	16,25	645,9
Osijek	1.381	3,32	161,16	4.581,20	0,00	401,11	19,95	601,4
Pazin	763	2,93	273,59	2.235,13	0,00	375,40	20,85	711,8
Rijeka	982	2,18	204,62	2.142,76	0,00	116,76	8,53	390,9
Split	1.288	4,40	165,71	5.663,89	0,00	865,32	32,40	736,9
Varaždin	646	3,68	241,01	2.378,56	0,00	292,58	16,95	460,3
Zadar	737	5,33	315,32	3.925,28	0,00	692,33	34,31	644,2
Zagreb	2.276	7,24	297,93	16.467,08	0,00	881,23	45,65	631,0
Ukupno	8.826	4,45	224,65	39.287,80	0,00	881,23	30,71	690,0

Napomena: promatrana su samo imenovanja s liste A nakon 1. 9. 2015., s trajanjem dužim od 14 dana.

Izvor: izračun autora

Nerazmjerna distribucija veličine imovine dužnika može se promatrati i u razlici aritmetičke sredine u odnosu na medijan imovine po predmetu. Budući da je aritmetička sredina znatno podložnija utjecaju krajnjih vrijednosti, medijan je bitno niži kod svih uloga voditelja u hrvatskom stečajnom sustavu

(Tablica 6.). Očekivano, prosječna imovina dužnika u skraćenim postupcima bitno je manja nego li u ostalim postupcima, a s obzirom na malen broj predmeta i visok prosjek jasno je i da se osobna uprava provodi rijetko, i to češće kod većih dužnika.

Tablica 6. Statistički pokazatelji imovine dužnika, po ulogama voditelja postupka

Uloga	Broj predmeta	Aritm. sredina (u mil. kn)	Medijan (u tis. kn)	Ukupno (u mil. kn)	Min.	Maks. (u mil. kn)	Stand. devijacija (u mil. kn)	Koef. varijacije
Povjerenik	199	41,02	5.683,02	8.163,40	0,00	881,23	118,50	288,9
Stečajni povjerenik	13	33,90	7.734,64	440,72	0,30	121,70	44,75	132,0
Stečajni upravitelj	2.630	6,05	416,18	15.918,39	0,00	876,61	34,45	569,1
Privremeni st. upravitelj	2.040	5,58	388,39	11.375,74	0,00	865,32	31,41	563,3
Stečajni upravitelj (skraćeni postupak)	3.944	0,86	116,22	3.389,54	0,00	96,66	3,61	419,8
Ukupno	8.826	4,45	224,65	39.287,80	0,00	881,23	30,71	690,0

Napomena: promatrana su samo imenovanja s liste A nakon 1. 9. 2015., s trajanjem dužim od 14 dana.

Izvor: izračun autora

U odnosu na temeljni fokus ovoga rada, ključne rezultate prezentira Tablica 7. Evidentno je da se na predmete kod kojih dužnici imaju veću imovinu upravitelji najčešće biraju po diskrecijskoj odluci suda (ne automatskim sustavom dodjele, već ručno). Pokazatelji centralne tendencije imovine dužnika su oko pet puta veći kod ručnog načina postavljanja, nego li kod ostalih metoda odabira voditelja postupka. Promatrajući suodnos imenovanja u odnosu na imovinu dužnika ovo eksplicitno dokazuje empirijska saznanja o tome da se u hrvatskom stečajnom

sustavu imenovanja na dužnike s velikom imovinom provode mimo standardnog pravila automatske dodjele predmeta. Uzevši u obzir prethodno utvrđeni pokazatelj da stotinjak slučajeva čini više od pola sve stečajne mase u Republici Hrvatskoj, te da se iznimka u načinu imenovanja koristi kao pravilo kad dužnik ima nadprosječno veliku imovinu, te da u većini slučajeva stečajevi imaju ekonomski neučinkovite ishode (likvidaciju a ne restrukturiranje), očigledna je nužnost sveobuhvatne reevaluacije sustava imenovanja s obzirom na ekonomske ciljeve stečajeva.

Tablica 7. Statistički pokazatelji imovine dužnika prema načinu postavljanja voditelja

Način postavljanja voditelja postupka	Broj predmeta	Aritm. sredina (u mil. kn)	Medijan (u tis. kn)	Ukupno (u mil. kn)	Min.	Maks. (u mil. kn)	Stand. devijacija (u mil. kn)	Koef. varijacije
Ručno	433	23,66	2.407,68	10.244,56	0,00	876,61	75,07	317,3
„Automatski s iznimkom“	1.316	7,52	439,98	9.899,92	0,00	739,73	39,11	519,9
Promjenom uloge	62	4,68	881,26	290,36	0,00	97,20	13,26	283,1
Automatski	7.015	2,69	179,57	18.852,95	0,00	881,23	22,89	851,6
Ukupno	8.826	4,45	224,65	39.287,80	0,00	881,23	30,71	690,0

Napomena: promatrana su samo imenovanja s liste A nakon 1. 9. 2015., s trajanjem dužim od 14 dana.

Izvor: izračun autora

Konačno, uzevši u obzir sljedeće elemente:

1. razdoblje promatranja je nešto dulje od tri godine (1. rujna 2015. – kraj 2018.),
2. za nešto manje od pola svih predmeta uspješno je pronađen podatak o visini ukupne aktive dužnika,
3. za dužnike kod kojih ne postoji podatak o visini imovine može se pretpostaviti da imaju relativno malenu (ili čak nepostojeću) imovinu,
4. suma aktive svih dužnika iznosi 39,29 milijardi kuna,
5. iznosi aktive su nominalni, a u praksi su često niži,

može se iznijeti procjena da stečajni sustav Republike Hrvatske godišnje obrađuje stečajne koji imaju vrijednosti od približno deset milijardi kuna. Uz empirijsku činjenicu da većina stečajeva završi likvidacijom, rasprodajom imovine i otkazima, može se također pretpostaviti da većina ove ekonomske vrijednosti biva nepovratno izgubljena.

4. Zaključak

Ovaj rad nastoji doprinijeti argumentiranoj diskusiji o načinu imenovanja voditelja stečajnih postupaka u Republici Hrvatskoj iznošenjem kvantitativnih pokazatelja koji su u domaćem okruženju oskudni, te su ovdje po prvi put povezani iznosi imovine dužnika s imenovanjima voditelja postupaka, kao i kvantitativni pokazatelji na nacionalnoj razini.

Temeljem istraživanja može se okvirno procijeniti da stečajni sustav Republike Hrvatske godišnje obrađuje predmete u vrijednosti od oko deset milijardi kuna. Ovo izvršno oslikava značaj stečajnog sustava za ekonomiju u cjelini te ukazuje na potrebu pomnijeg nadzora i veće razvidnosti svih elemenata toga sustava. Kod predmeta s velikom imovinom dužnika zaobilazi se nasumični način odabira upravitelja, te je imovina dužnika u prosjeku oko pet puta veća kod ručnog načina postavljanja nego li kod ostalih metoda odabira voditelja postupka. Praktično to znači da je nasumični način odabira upravitelja (koji bi trebao biti pravilo, uz poneke iznimke) formalni propis koji se zaobilazi kad god je imovina dužnika veća od prosjeka.

Većina imovine svih dužnika nalazi u malenom broju predmeta: 47% sve imovine nalazi se u 0,7%

predmeta, a njih čine dužnici koji imaju više od sto milijuna kuna imovine. S druge strane, najveći broj slučajeva (njih 73%) čine dužnici koji imaju manje od milijun kuna imovine, no oni zajedno čine manje od 4% sve imovine u stečajnom sustavu. Oko sto slučajeva čini više od pola sve stečajne mase u Republici Hrvatskoj.

Promatrajući prethodno utvrđenu nejednaku opterećenost upravitelja može se također uvidjeti da je vodećih deset upravitelja paralelno imenovano na više od 20 predmeta (svaki, a pojedini i na preko 30) kod kojih je je prosječna imovina veća od deset milijuna kuna (kod prvih pet i preko 20 mil. kn). Dakle, njih deset vodi ukupno više od 240 predmeta čija ukupna nominalna imovina iznosi skoro 6 milijardi kuna. Drugim riječima, dužnici kod ovih deset upravitelja u 243 predmeta imaju podjednaku sumu imovine koliku imaju i svi dužnici kod 166 upravitelja u 2.978 predmeta s dna ljestvice. Za osobu koja paralelno vodi preko 20 tvrtki, a da pritom svaka od njih ima (u prosjeku) preko deset milijuna kuna imovine, može se pragmatično pretpostaviti jedno od sljedećeg: ili (a) ima izvanredne menadžerske kompetencije; ili (b) ne uspijeva kvalitetno voditi sve te poslove pa će radna mjesta i većina vrijednosti imovine nestati u stečaju; ili (c) ona samo nominalno vodi postupak, a zapravo je posrijedi kakav drugi operativni aranžman. Bilo kako bilo, ovakav sustav nije uspostavljen tako da optimizira opstanak dužnika i očuvanje ekonomskih vrijednosti: imovine dužnika i radnih mjesta.

Nedostatak svih analiza ove vrste očituje se u tome što su iznosi imovine (ukupne aktive) nominalni, dok su realni – stvarno zatečeni – pri otvaranju postupka najčešće niži. Moguće je i da dužnik iskazuje višemilijunsku imovinu u godini prije pokretanja postupka, a da kod samog pokretanja više nema ništa. Zbog nepostojanja sustavno prikupljenih kvantitativnih podataka zasad je nemoguće precizno ili barem okvirno procijeniti koliki postotak bi bilo korektno primijeniti za umanjenje vrijednosti imovine, te stoga i sve iznose u ovom radu valja promatrati okvirno.

U budućim istraživanjima bilo bi korisno proširiti vremenski horizont analize te promatrati komparativnu situaciju u odnosu na jurisdikcije sličnih ekonomskih i pravno-kulturnih tradicija. Također, bilo bi korisno sustavno prikupiti podatke o jazu između deklariranih i realnih iznosa imovine dužnika u svrhu bolje procjene ekonomskih gledišta stečajnog sustava.

LITERATURA

1. Armour, J., Cumming, D. (2008), "Bankruptcy Law and Entrepreneurship", *American Law and Economics Review*, Vol. 10, No. 2, pp. 303–350.
2. Baird, D. (1987), "A World Without Bankruptcy", *Law and Contemporary Problems*, Vol. 50, No. 2, pp. 173–193.
3. Djankov, S., Hart, O., McLiesh, C., Shleifer, A. (2008), "Debt Enforcement around the World", *Journal of Political Economy*, Vol. 116, No. 6, pp. 1105–1149.
4. Europski parlament i Vijeće (2015), "Uredba (EU) 2015/848 Europskog parlamenta i Vijeća od 20. svibnja 2015. o postupku u slučaju nesolventnosti"
5. Halliday, T. C., Carruthers, B. G. (2007), "The Recursivity of Law: Global Norm Making and National Lawmaking in the Globalization of Corporate Insolvency Regimes", *American Journal of Sociology*, Vol. 112, No. 4, pp. 1135–1202.
6. LoPucki, L. M., Doherty, J. W. (2014), "Bankruptcy Survival", *UCLA Law Review*, Forthcoming; *Law-Econ Research Paper No. 14-11*, dostupno na: <https://papers.ssrn.com/abstract=2492209> (pristupljeno: 27. 4. 2019)
7. Sajter, D. (2017), "Imenovanja stečajnih upravitelja u Hrvatskoj", *Ekonomski pregled*, Vol. 68, No. 2, pp. 161–190.
8. Stečajni zakon, *Narodne novine* br. 71/15, 104/17.

ENDNOTES

1. Konkretno Agrokor i brodogradilišta.
2. Uz iznimku sigurnosnih (pod)sustava.
3. <https://osf.io/esx6j/>, (pristupljeno 25.4.2019.)
4. Po uzoru na javnu bazu podataka i istraživanja o američkim stečajevima koju prof. LoPucki s UCLA School of Law (SAD) javno objavljuje na službenim sveučilišnim stranicama; <http://lopucki.law.ucla.edu>, (pristupljeno 25. 4. 2019.)
5. Microsoft OneDrive; poveznica je <http://tiny.cc/imenovanja2019>, (pristupljeno 25.4.2019.). Objavljene datoteke omogućuju i interaktivno pregledavanje s obzirom na individualne kriterije promatrača.
6. <https://e-oglasna.pravosudje.hr/?q=popisi-obrasci/8998>, (pristupljeno 25. 4. 2019.)
7. Autor je podatke preuzeo u dobroj vjeri, pretpostavljajući da su točni i korektno uneseni. Izvor svih podataka, osim onih o iznosima imovine dužnika, je Ministarstvo pravosuđa Republike Hrvatske, te se za eventualni ispravak istih potrebno obratiti navedenom Ministarstvu. Iako je samo za inicijalno pregledavanje i filtraciju podataka bilo potrebno nekoliko tjedana, bilo je nemoguće provjeriti svih preko 800.000 čelija, odnosno preko 40.000 unosa, tako da je moguće da su preostale neke nelogičnosti i/ili nepreciznosti, ali njih je u svakom slučaju vrlo malo i mogu se zanemariti u statističkoj analizi cjeline sustava.
Za primjer uočene i ispravljene pogreške: objavljeno je da je 1. ožujka 2018. sudac Hrvoje Lukšić s Trgovačkog suda u Zagrebu imenovao Antu Ramljaka za izvanrednog povjerenika (!) kod dužnika "Hrvački klub Novi Zagreb" (OIB: 46193988864). Nakon uviđaja omaške razriješen je sedam dana kasnije te je 8. ožujka u istom predmetu s liste B imenovan Valentino Koščak za upravitelja u skraćenom postupku. Normalno je da se pogreške događaju te se upravo zbog toga potrebno ograditi od netočnosti kojih sasvim sigurno ima, ali je za pretpostaviti (i nadati se) da se ne događaju često.
8. Bisnode posluje na 19 tržišta i jedan je od vodećih pružatelja poslovnih podataka u Europi, a fakultet autora preplaćen je na korištenje informacijskog sustava Poslovna.hr.
9. <https://www.dzs.hr/app/sektorizacija/>, (pristupljeno 27. 1. 2019.)
10. Primjerice, ako je imenovanje bilo na datum 11.5.2018. tražila se visina aktive na dan 31.12.2017., a ako taj podatak ne postoji tražila se imovina na dan 31.12.2016. Premda je u situacijama kad ni na jedan od ova dva datuma nije bilo moguće pronaći imovinu dužnika, ali je bilo moguće iz ranijih godina (npr. za 31.12.2015.), ovi stariji podaci nisu se analizirali jer su najvjerojatnije s protekom vremena postali irelevantni u trenutku imenovanja voditelja postupka.
11. Kod brojnih dužnika ima više od jednog imenovanja.
12. U društvenim znanostima vrlo je rijetko moguće istraživati cijelu populaciju već samo uzorak temeljem kojega se donose prosudbe o cjelini kao takvoj, a uzorak koji čini gotovo polovinu cijele populacije i više je nego respektabilan.
13. Da je Agrokor bio uključen iznosila bi oko 54 milijardi.

DEBTORS' ASSET SIZE AND PRACTITIONERS' APPOINTMENTS WITHIN INSOLVENCY PROCEDURES IN CROATIA

ABSTRACT

This paper aims to answer the following research question: what is the common debtors' assets size within the insolvency proceedings in Croatia, and what is the relation of the size of the assets to the appointment system? The goals and purpose are to deliver a dynamic, analytical overview of the of appointment system of insolvency practitioners in the Republic of Croatia, and to study them in relation to the debtors' asset size. The database of appointments, originally published by the Croatian Ministry of Justice, is here coupled with the annual financial reports data, which created an initial matrix of 32,840 appointments among cases with a total nominal value of 70.07 billion HRK (9.34 billion €). The results show that the Croatian insolvency system annually, on average, processes cases with a total value of approximately 10 billion HRK (1.33 billion €), which indicates the importance of this system for the economy in general, but also for the legal system which regulates it. Furthermore, for the first time in Croatia, the results provide public insight into quantitative indicators on a national level, which opens a new area for broader examination.

Keywords: Bankruptcy, insolvency procedure, insolvency office holder, appointment, total assets

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JOB SATISFACTION OF ACCOUNTANTS AND THEIR PROFESSIONAL ETHICS

ABSTRACT

Corporate accountants might be faced with many ethical dilemmas and pressures, some of which are complex and difficult to resolve. The purpose of this paper is to provide an overview of the job satisfaction of accountants in the context of their professional ethics. Empirical research is based on a questionnaire addressed to corporate accountants in Croatia. The collected data were statistically tested using SPSS. The results indicated that there was a significant difference in the job satisfaction of accountants in relation to the situations when they have to compromise their own principles to fit the expectations of the organization. According to the findings, ethical issues make a difference in accountants' job satisfaction. This finding indicates that companies should consider the IFAC Code of Ethics for Professional Accountants when introducing business ethics into their organizations. Since the IFAC Code represents a well-established framework for ethical behaviour of accountants, it could be used in the initial phase of institutionalization of ethical standards at the company level and then adapted according to the organizational culture of each company. Although this study has limitations regarding the scope of empirical investigation, it represents an initial effort in the research of corporate accountants' professional ethics. So, this paper makes a contribution to rather scarce literature on the relationship between job satisfaction and business ethics.

Keywords: Job satisfaction, corporate accountants, accounting ethics, Code of Ethics, HRM, accounting

1 Introduction

Generally, ethics refers to the basic concepts and fundamental principles of decent human conduct. Ethics essentially comprises the study of universal values as it is a branch of philosophy. Business ethics is often defined as a segment of applied ethics oriented on moral problems and ethical principles in the business environment. Corporate (busi-

ness) ethics applies various philosophical methods to identify the morally correct course of action in different fields like accounting, finance and marketing. Sparks & Pan (2010: 405) notice that decades of business ethics research have been focused on ethical judgments, resulting in extensive theoretical and empirical literature, which attests to the importance of ethical judgments in explaining ethical and un-

ethical behaviour. Andersen et al. (2015: 525) claim that moral judgment is more the result of intuition rather than reasoning and state that moral intuition is immediate and effortless, while reasoning is more of an afterthought.

In recent years, and in close connection with a number of well-known financial malpractice cases, public debate on business ethics has intensified worldwide, and particularly in ethics-unfriendly environments with many recent fraud and corruption scandals (Tormo-Carbó et al., 2016: 161). These events shed light on the importance of business (and particularly on accounting) ethics.

Accounting is a profession where ethical issues are significant. Accountants provide an important service to society whether they work for accounting firms or in other organizations. Actually, they are responsible for information that can facilitate better decision making in an organization and verify information reported by organizations, thus affecting investors' confidence in them (Lan et al., 2013). Williams (2002) points out that the accounting profession is a part of the moral order. Therefore, corporate accountants must respect moral norms.

The accounting profession involves various tasks, such as recording of all business events that are financial in character, including their classification and aggregation as well as their presentation in the form of income statement, balance sheet or cash flow statement. The manner in which these activities are performed is very important and that has a lot to do with ethics. In performing their duties, accountants should remain objective and loyal to the organization they work in. Thus, accounting ethics should be applied to every activity in the accounting process, so that complete, accurate and reliable information should be provided to the users of financial statements. Additionally, the information supplied by accountants is extremely important to the general public and their moral obligation is transparent reporting. The main objective of the accountants' profession is not personal gain, but service to and protection of the public (Corey, Payne, 2012). In this context, their professional ethics becomes a significantly important issue in their everyday working activities.

Because of this, business ethics has become an interesting topic for scientists, researchers and practitioners (Koh, Bo, 2001; Vitell, Singhapakdi, 2008; Elci, Alpkan, 2009; Yang, 2014; Tu et al., 2016). Their efforts are focused on organizational as well as on individual outcomes of business ethics. On an individual level, consequences such as job satisfaction, stress, motivation, commitment or job performance can have a significant impact on organizations. Although this area of business ethics research is potentially useful, little has been done to date (Koh, Boo, 2001). So, this paper tries to give its own contribution in this direction. The focus of this paper is on the job satisfaction of corporate accountants in the context of their professional ethics.

The rest of the paper is structured as follows: the second section reviews the survey of literature with respect to both the theoretical and empirical background on the professional accountants' ethics (with the emphasis on the normative framework), as well as job satisfaction and its relationship with business ethics. The hypothesis is defined in the third section followed by a description of the methodology of the empirical research. The fourth section contains the discussion on research findings while the last section concludes the paper.

2. Literature review

2.1 A normative framework for the ethical behaviour of professional accountants

The latest studies stress the importance of ethical behaviour of professional accountants in new business circumstances (Andersen et al., 2015; Domino et al., 2015; Sparks, Pan 2010; Tormo-Carbó et al., 2016). Domino et al. (2015: 453) state that there is an increasing amount of high-profile accounting frauds involving internal corporate accountants. This questions the individual accountant's perceptions of the ethical climate within their organization. Also, it raises the question about the "limits to which these professionals will tolerate unethical behaviour and/or accept it as the norm" (Domino et al., 2015: 453).

Due to the growing interest in the society about ethical issues, some authors have noticed that many companies try to institutionalize ethical standards

(Murphy, 1989; Stevens, 1994; Vitell, Singhapakdi, 2008). The institutionalization of ethical standards could be achieved by structural and procedural changes. These changes could include designing new jobs or departments with the main focus on ethical issues or to formalize the ethical issues in the form of a code of ethics (Murphy, 1989; Stevens 1994; Weiss, 1994).

Koh & Boo (2001) summarized the previous research on this topic and point out that a code of ethics is the most effective measure for encouraging ethical behaviour. Besides providing guidelines for appropriate employee behaviour and establishing a better corporate culture, a code of ethics can also improve management, help organizations to comply with government guidelines, and produce more socially responsible organizations. Additionally, a code of ethics should be reinforced by other factors. The support of top management is crucial to ethical behaviour. Codes of ethics represent a good starting point, but they must reflect ideals in which employees believe, and they must become part of the organizational culture.

Codes of ethics are usually established by professional organizations to promote public confidence in the quality of the services rendered by members of the profession, regardless of the individual performing the service (Jakubowski et al., 2002: 112). The Code of Ethics for Professional Accountants published by the International Ethics Standard Board for Accountants (IESBA) is an excellent framework for ethical conduct which is globally accepted. The IESBA is an independent standard-setting body founded by the International Accounting Standards Board (IFAC) that develops and issues (in the public interest and under its own authority) ethics standards for professional accountants that are in use around the globe. According to the information disclosed on their official website, IFAC is currently comprised of over 175 members and associates in more than 130 countries and jurisdictions, "representing almost 3 million accountants in public practice, education, government service, industry, and commerce". Members of IFAC are national accounting organizations rather than individual professional accountants or accounting firms. A comprehensive cross-country research (Clements et al., 2009: 182) reveals that IFAC has been moder-

ately successful in their attempt to harmonize ethical standards for professional accountants across the world.

Adoption and implementation of the international code of ethics is a subarea of the globalization of the accounting profession (Branson et al., 2015: 2). According to the IESBA Annual Report (2015),¹ the Code is currently adopted or used as a basis for national ethical codes in over 100 jurisdictions around the world. The intent of the IESBA is to harmonize ethical standards worldwide so in the long-term their objective is convergence "of the Code's ethical standards for professional accountants, including auditor independence standards, with those issued by regulators and national standard setters" (IESBA, 2015). It is assumed that convergence to a single set of standards would lead to higher quality and consistency of services provided by professional accountants with the positive effect on the improvement of the efficiency of global capital markets. Ethical conduct by accountants in public practice and in business, including in government, can exert considerable influence on the level of ethical awareness and orientation of ethical compasses within the broader community.

The IFAC Code² establishes the fundamental principles of professional accounting ethics. It provides a conceptual framework for the firms and professional accountants. Accountants should consult the Code when they face ethical issues because it provides guidance regarding the approach to ethical conflict resolution. The fundamental ethical principles for professional accountants promoted by this Code are integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

According to Splanding & Oddo (2011: 53), IFAC offers no pretence about the fact that accountants are then faced by a myriad of real or potential conflicts of interest in many circumstances. The IFAC Code does not prohibit the existence of conflict of interest or undue influence. Instead, it requires that accountants not allow conflicts of interest, undue influence of others, or even their own personal bias to override professional or business judgement. When arguing about this Code, Splanding & Oddo (2011: 53) stated that it is a more realistic standard that addresses the professional accountant as a per-

son and challenges the accountant to rise above the realities of such conflicts.

The importance of ethical reporting of decisions that serve the best interests of external stakeholders may also be emphasized through internal training programs for professional accountants. Consequently, the quality of professional accountants' ethical decisions may be improved by efforts to align the values and ethical standards of the organization more closely with the espoused values of the accounting profession (Shafer, 2015: 44).

Ethical beliefs are highly diverse and often deeply held, especially when intertwined with local cultural or religious practices (Tweedie et al., 2013). Many scientists explored the cultural differences and attitudes in accounting ethics (Smith, Hume, 2005; Arnold et al., 2007; Bailey, Spicer, 2007; Emerson et al., 2007; Wong-On-Wing, Lui, 2013; Branson et al., 2015) but the literature lacks empirical studies on job satisfaction and the ethical behaviour of professional accountants.

2.2 Job satisfaction and business ethics

Compliance with ethical standards is essential in any business environment and prerequisites for survival in the market. Fulfilment of ethical standards is necessary for organizational efficiency as well as for its improvement and development. In this context, employees should be trained and led in a way that develops their competences with a particular focus on maintaining ethical standards. The ethical issues become extremely complex regarding societal expectations, fair competition, legal protection and rights, and social responsibilities. Additionally, ethical issues have potential influences and consequences on more and more parties, including customers, employees, competitors and society (Vitell, Davis, 1990).

Job satisfaction is a work attitude that represents the collection of feelings and beliefs that workers have in relation to the work they do (Jones et al., 2000: 399). It is an attitude that workers have when they match their needs and interests, when the working conditions and rewards are satisfactory, and when they like to work with their colleagues (Daft, Marcic, 2001). Job satisfaction shows how much people love their jobs (Spector, 1997). It also could be defined as a collection of positive or negative feelings

that employees have for their work environment (Davis, Newstrom, 1989). Shi et al. (2015) define job satisfaction as an individual's overall evaluation of the work.

From these definitions, it is evident that some define job satisfaction as a general feeling and do not attribute it to the individual components, while others base it on the individual factors that could influence overall job satisfaction. These factors usually are as follows: the nature of work, top management, co-workers, supervision, promotion, pay, status, working conditions, training and development, job security, and working hours.

Job satisfaction is often investigated (Brown, Peterson, 1993; Wright, Cropanzano, 2000; Santhaparaj, Alam, 2005; Bendre, Heywood, 2006; Mohr, Puck, 2007) because it has the potential to affect a wide range of behaviours in organizations (George, Jones, 2008), but very rarely in the context of business ethics (Elci, Alpkın, 2009).

The link between organizational ethics and job satisfaction could be explained by two theories: the organizational justice theory and cognitive dissonance theory. The concept of organizational justice has its roots in equity theory (Adams, 1963, 1965), which assumes that the experience of equality or inequality stems from a comparison of what an individual invests in the organization - input (knowledge, work ability, experience, creativity, interest, energy) and what s/he gets from the organization - output (wages, benefits, recognition, prestige, promotion and development, status, good social relationship). Furthermore, the existence of equality or inequality can also be perceived by comparing what an individual gets from the organization and gives, in relation to others in the workplace. Further to this, the organizational justice theory (Greenberg, 1987) focuses on perceptions of fairness in organizations, by categorizing employees' views and feelings about their treatment and the treatment of others within an organization (Saunders, Thornhill, 2003). Basically, this theory assumes that the justice perceptions of employees affect their job attitudes. It means that employees who perceive their organizations to be ethical are also likely to perceive their organizations as being fair to them. This, in turn, is likely to enhance employee job satisfaction. If employees perceive strong top management support for ethical behaviour, a favourable ethical climate, and a strong association between ethical behaviour and career success in the organization, then they are

also likely to have a higher level of job satisfaction (Koh, Boo, 2001). Latham & Pinder (2005) found out that those perceptions of justice influence many key organizational outcomes such as motivation. In his research, Al-Zu'bi (2010) examined the impact of perceptions of justice on job satisfaction. Namely, job satisfaction was found to be positively associated with overall perceptions of organizational justice to the extent that greater perceived injustice results in lower levels of job satisfaction and greater perceptions of justice result in higher levels of job satisfaction (Al-Zu'bi, 2010).

Another theory that describes the relationship between organizational ethics and job satisfaction is cognitive dissonance theory. This theory is built upon the notion that individuals strive toward consistency. If there are inconsistencies, they try to rationalize them to reduce psychological discomfort (Festinger, 1957). Festinger (1957) proposed that dissonance might arise from logical inconsistencies, cultural background, and inconsistency between cognition or because of past experiences. In the existence of dissonance, individuals are motivated to reduce the dissonance and avoid situations that increase it (Metin et al., 2011). To summarize, this theory is based on the following assumptions: people are sensitive to inconsistencies between actions and beliefs; recognition of this inconsistency will cause dissonance; and will motivate an individual to resolve the dissonance. The dissonance could be resolved in one of three basic ways: to change beliefs, to change actions, or to change perception of action. So, cognitive dissonance theory supposes that individuals strive to minimize dissonance in their environment. Basically, employees desire consistency between their ethical values and the ethical climate of their organization (Schwepker, 1999). Any inconsistency between employees' ethical values and their perceptions of top management's ethical values will result in moral conflict and cognitive dissonance and will reduce job satisfaction (Dozier, Miceli, 1985; Sims, Kroeck, 1994; Viswesvaran et al., 1996; Schwepker 1999; Koh, Boo, 2001).

These theories, as well as the lack of research about job satisfaction and ethics, were the inspiration for the research of this paper. So, the aim of this paper is to find out whether ethical issues make a difference in accountants' job satisfaction. More precisely, does the situation when s/he has to compromise his own ethical principles to fit the expectations of the organization reduce her/his job satisfaction?

3. Research hypothesis and methodology

Based on the literature review elaborated in the previous section, the research hypothesis was developed. The assumption is that: *There are differences in the job satisfaction of accountants in relation to the situations when s/he has to compromise her/his own principles to fit the expectations of the organization.*

The empirical research was conducted in June 2016 via a specially designed questionnaire distributed online using Google Docs. The questionnaire was sent to 196 professional accountants in Croatia. It was filled out by 55 accountants. So, the response rate was 28%.

The questionnaire consisted of three groups of questions. The first group was about general demographic characteristics of accountants. The second group of questions was about the overall job satisfaction and about the satisfaction with different job satisfaction factors. These factors were the nature of work, top management, co-workers, supervision, promotion, pay, status, working conditions, training and development, job security, and working hours. The third group of questions was about ethics. For the questions about overall job satisfaction and job satisfaction factors, a Likert 5-item scale was used where answer 1 meant "very dissatisfied", 2 meant "dissatisfied", 3 meant "neither satisfied nor dissatisfied", 4 meant "satisfied", and 5 meant "very satisfied". The questionnaire contained a few statements about ethics, but according to the research hypothesis the statement that was used in the research of this paper was: *There are situations when you have to compromise your own principles to fit the expectations of the organization.* The response to this statement also used a Likert 5-item scale, where 1 meant "strongly disagree", 2 meant "disagree", 3 meant "neither agree nor disagree", 4 meant "agree" and 5 meant "strongly agree". The collected data was analysed using the SPSS program. The statistical method that was used was the Kruskal-Wallis test.

4. Research results

The research results presentation starts with the research sample characteristics. Table 1 presents the distribution of respondents by gender, education level, years of service and the size of the company where they were employed.

Table 1 Sample characteristics

Characteristic		Frequency	Percentage	Cumulative percentage
Gender	Male	12	21.8	21.8
	Female	43	78.2	100
	Total	55	100	
Educational level	High school degree	2	3.6	3.6
	College degree	7	12.7	16.4
	University degree	34	61.8	78.2
	Master's degree or PhD	12	21.8	100
	Total	55	100	
Years of service	Up to 5 years	6	10.9	10.9
	From 6 to10	6	10.9	21.8
	From 11 to 20	13	23.6	45.5
	From 21 to 30	14	25.5	70.9
	More than 30	16	29.1	100
	Total	55	100	
Company size	Large	2	3.6	3.6
	Medium	17	30.9	36.5
	Small	18	32.7	71.2
	Micro	6	10.9	82.7
	Craft	9	16.4	94.5
	Missing	3	5.5	100
	Total	55	100	

Source: Authors

According to Table 1, sample characteristics could be summarized as follows. Out of 55 respondents, 78.2% were women and 21.8% were men. The majority of respondents (61.8%) had a university degree. Regarding the years of service, the greatest number of respondents had more than 30 years of service (29.1%). Similarly, a high number of them had be-

tween 21 to 30 years (5.5%). And finally, the majority of respondents were employed in small companies (32.7%). Also, a high number of respondents were employed in medium sized companies (30.9%).

Table 2 represents the descriptive statistical analysis data about job satisfaction of accountants.

Table 2 Descriptive statistical analysis data about job satisfaction of accountants

N	Valid	54
	Missing	1
Mean	4.2037	
Median	4.0000	
Mode	4.00	
Std. Deviation	.83281	

Source: Authors

From Table 2 it can be seen that the average value of job satisfaction of accountants is 4.2 which suggests that, on average, they are satisfied with their jobs. The values of median and mean support this conclusion.

The frequency analysis presented in Table 3 shows that 48.1% of accountants are satisfied in their job. From this table it is also evident that 38.9% of them are very satisfied in their job. These results suggest a very positive finding about accountants' job satisfaction.

Table 3 Frequency analysis of job satisfaction

Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (Very dissatisfied)	1	1.8	1.9	1.9
	2 (Dissatisfied)	1	1.8	1.9	3.7
	3 (Neither satisfied nor dissatisfied)	5	9.1	9.3	13.0
	4 (Satisfied)	26	47.3	48.1	61.1
	5 (Very satisfied)	21	38.2	38.9	100.0
	Total	54	98.2	100.0	
Missing		1	1.8		
Total		55	100.0		

Source: Authors

In order to extend the analysis of the job satisfaction of accountants, the analysis of satisfaction with each job satisfaction factor is provided.

Table 4 represents the descriptive statistical analysis data about satisfaction with each job satisfaction factor.

Table 4 Descriptive statistical analysis data about satisfaction with each job satisfaction factor

Factor	N		Mean	Median	Mode	Std. Deviation
	Valid	Missing				
Nature of work	55	0	4.1273	4.0000	4.00	.92405
Top management	54	1	3.7407	4.0000	4.00	1.21601
Co-workers	55	0	4.0545	4.0000	4.00	.97026
Supervision	54	1	4.0000	4.0000	4.00	.95166
Promotion	55	0	3.5818	4.0000	5.00	1.27208
Pay	55	0	3.6545	4.0000	4.00	1.05792
Status	55	0	4.0000	4.0000	4.00	1.05409
Working conditions	55	0	4.3455	5.0000	5.00	.88649
Training and development	55	0	4.0909	4.0000	5.00	1.02330
Job security	55	0	4.2182	5.0000	5.00	1.13351
Working hours	55	0	4.2182	5.0000	5.00	1.04865

Source: Authors

From Table 4 it is evident that the average value of the satisfaction of the majority of job satisfaction factors is higher than 4.00, which means that accountants are satisfied with the majority of those factors. The factors with which they are less satisfied

are top management, promotion and pay. The mean values of satisfaction with these factors are lower than 4.00 but above 3.50.

Table 5 represents the descriptive statistical analysis data about compromising principles of accountants.

Table 5 Descriptive statistical analysis data about compromising principles of accountants

N	Valid	55
	Missing	0
Mean	2.7273	
Median	3.0000	
Mode	1.00	
Std. Deviation	1.48392	

Source: Authors

Table 5 shows that the average value of the answers to the statement “There are situations when you have to compromise your own principles to fit the expectations of the organization” is 2.7 which means that accountants on average disagree, with a tendency to neither agree nor disagree about the existence of situations when they have to compromise their own principles to fit the expectations of the organization. The value of the mode as the most frequent answer is 1 which means that accountants most often have chosen the answer “strongly disagree” with above stated claim. The frequency analysis presented in Table 6 additionally shows that the majority of respondents (32.7%) strongly disagree that they were faced with the situation

when they had to compromise their own principles to fit the expectations of the organization. But it also could be seen that 21.8% of them agree that they were faced with this kind of situation. Frequency analysis additionally showed that 45.5% of accountants strongly disagreed or disagreed with the statement that they were faced with the situation to have to compromise their own principles to fit the expectations of the organization while 36.3% of them agreed or strongly agreed with the noted statement. So, from the data in Table 5, it could be concluded that the existence of the situation when accountants have to compromise their own principles to fit the expectations of the organization is not absolutely unusual.

Table 6 Frequency analysis of compromising principles

Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	1 (Strongly disagree)	18	32.7	32.7	32.7
	2 (Disagree)	7	12.7	12.7	45.5
	3 (Neither agree nor disagree)	10	18.2	18.2	63.6
	4 (Agree)	12	21.8	21.8	85.5
	5 (Strongly agree)	8	14.5	14.5	100.0
Total		55	100.0	100.0	

Source: Authors

Tables 7 and 8 show the data required to test the research hypothesis, which assumes the existence of differences in job satisfaction of accountants in relation to the situations when s/he has to compro-

mise her/his own principles to fit the expectations of the organization.

Table 7 represents the mean rank of job satisfaction regarding compromising principles.

Table 7 Mean Rank of Job Satisfaction regarding Compromising Principles

	<i>Compromising principles</i> (There are situations when you have to compromise your own principles to fit the expectations of the organization)	N	Mean Rank
<i>Job Satisfaction</i>	1 (Strongly disagree)	18	31.22
	2 (Disagree)	7	15.50
	3 (Neither agree nor disagree)	9	19.67
	4 (Agree)	12	29.00
	5 (Strongly agree)	8	36.19
	Total	54	

Source: Authors

Table 8 represents the results of the Kruskal Wallis Test.

Table 8 The Kruskal Wallis Test regarding overall job satisfaction

	Job Satisfaction
Chi-Square	11.894
df	4
Asymp. Sig.	.018

a. Kruskal Wallis Test b. Grouping Variable: Compromising principles

Source: Authors

The Kruskal Wallis test has shown that there was a statistically significant difference in job satisfaction of accountants in relation to the situations when s/he has to compromise her/his own principles to fit the expectations of the organization, because $\alpha < 0.05$. So, it could be concluded that ethical issues make a difference in accountants' job satisfaction.

5. Conclusion

Accounting is a profession with a significant influence on society so corporate accountants should act in the public interest. In their work, accountants should be objective, accurate, reliable, timely, and loyal to their profession and the company in which they work. Due to this role and importance, it was significant and interesting to explore their job satisfaction as well as the link between job satisfaction and their professional ethics.

When it comes to job satisfaction, the research results of this paper showed that accountants were generally satisfied with their work. Also, the analysis of job satisfaction factors revealed that accountants were satisfied with almost all job satisfaction factors

(the nature of work, top management, co-workers, supervision, promotion, pay, status, working conditions, training and development, job security, and working hours). This is certainly a positive finding because the goal of every employee is to be satisfied at work. Also, it is the objective of every organization to have satisfied employees, because the assumption is that satisfied employees will be successful in their everyday work activities.

Regarding accountants' professional ethics, the research results of this study indicate that the majority of them were not faced with a situation when they had to compromise their own principles to fit the expectations of the organization. Still, research results uncovered that a significant number of them had met this kind of situation. These results were partly understandable given the previously mentioned importance of accounting as a profession. Pressures on accountants in various aspects, including the aspects of ethics are not surprising. However, they should certainly be reduced and hopefully totally eliminated by the institutionalization of ethical standards at the level of individual organizations. The ethical codes of accounting ex-

ist at the general level, but given the results of this study, clearly these standards are not implemented at the level of individual organizations. Companies should consider the IFAC Code of Ethics for Professional Accountants when introducing business ethics into their organizations. Since the IFAC Code represents a well-established framework for the ethical behaviour of accountants, it could be used in the initial phase of institutionalization of ethical standards at the company level. The Code could be additionally enhanced and adapted according to the organizational culture of each company. Therefore, that is the main practical implication of this paper, particularly important for Croatia, since this re-

search was conducted on accountants who worked in Croatian companies.

In this context, future research in this area could be focused on investigation into the institutionalization of ethical standards in Croatian companies and also a more detailed and more extensive exploration of accountants' professional ethics on a larger sample.

Although this study has limitations regarding the scope of empirical investigation, it represents an initial effort in the research of corporate accountants' professional ethics and contributes to knowledge on accountants' job satisfaction.

REFERENCES

1. Adams, J. S. (1963), "Towards an Understanding of Inequality", *Journal of Abnormal and Normal Social Psychology*, Vol. 67, No. 5, pp. 422-436.
2. Adams, J. S. (1965), "Inequality in Social Exchange" in Berkowitz, L. (Ed.), *Advances in Experimental Psychology*, Academic Press, New York, pp. 267-299.
3. Al-Zu'bi, H. A. (2010), "A Study of Relationship between Organizational Justice and Job Satisfaction", *International Journal of Business and Management*, Vol. 5, No. 12, pp. 102-109.
4. Andresen, M. L., Zuber, J. M., Hill, B. D. (2015), "Moral Foundations Theory: An Exploratory Study with Accounting and Other Business Students", *Journal of Business Ethics*, Vol. 132, No. 3, pp. 525-538.
5. Arnold, D. F., Bernardi, R. A., Neidermeyer, P. E., Schmee, J. (2007), "The effect of country and culture on perceptions of appropriate ethical actions prescribed by codes of conduct: A Western European perspective among accountants", *Journal of Business Ethics*, Vol. 70, No. 4, pp. 327-340.
6. Bailey, W., Spicer, A. (2007), "When does national identity matter? Convergence and divergence in international business ethics", *Academy of Management Journal*, Vol. 50, No. 6, pp. 1462-1480.
7. Bendre, K. A., Heywood, J. S. (2006), "Job satisfaction of the highly educated: The role of gender, academic tenure, and earnings", *Scottish Journal of Political Economy*, Vol. 53, No. 2, pp. 253-279.
8. Branson, L., Chen, L., Anderson, L. (2015), "The implementation of the international codes of ethics among professional accountants: Do national cultural differences matter?", *International Journal of Business and Public Administration*, Vol. 12, No. 1, pp. 1-11.
9. Brown, S. P., Peterson, R. A. (1993), "Antecedents and Consequences of Salesperson Job Satisfaction: Meta-Analysis and Assessment of Causal Effects", *Journal of Marketing Research*, Vol. 30, No. 1, pp. 63-77.
10. Clements, C. E., Neill, J. D., Stovall, O. S. (2009), "The impact of cultural differences on the convergence of international accounting codes of ethics", *Journal of Business Ethics*, Vol. 87, No. 3, pp. 383-391.
11. Corey, C., Payne, D. (2012), "Accounting Ethics: Principles to Work by", *International Journal of Advances in Management and Economics*, Vol. 1, No. 5, pp. 175-182.
12. Daft, R. L., Marcic, D. (2001). *Understanding Management*. Mason: South Western/Thomson Learning.

13. Davis, K., Newstrom, J. W. (1989). *Human Behavior at Work*. New York City: McGraw-Hill.
14. Domino, M. A., Wingreen, S. C., Blanton, J. E. (2015), "Social Cognitive Theory: The Antecedents and Effects of Ethical Climate Fit on Organizational Attitudes of Corporate Accounting Professionals – A Reflection of Client Narcissism and Fraud Attitude Risk", *Journal of Business Ethics*, Vol. 131, No. 2, pp. 453-467.
15. Dozier, J. B., Miceli, M. P. (1985), "Potential Predictors of Whistle-Blowing: A Prosocial Behavior Perspective", *Academy of Management Review*, Vol. 10, No. 4, pp. 823-836.
16. Elci, M., Alpkan, L. (2009), "The impact of Perceived Organizational Ethical Climate on Work Satisfaction", *Journal of Business Ethics*, Vol. 84, No. 3, pp. 297-311.
17. Emerson, T. L. N., Conroy, S. J., Stanley, C. W. (2007), "Ethical Attitudes of Accountants: Recent Evidence from Practitioners' Survey", *Journal of Business Ethics*, Vol. 71, No. 1, pp. 73-87.
18. Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Palo Alto: Stanford University Press.
19. George, J. M., Jones, G. R. (2008), *Understanding and Managing Organizational Behavior*. 5th edition. Upper Saddle River: Pearson Prentice Hall.
20. Greenberg, J. (1987), "A taxonomy of organizational justice theories", *Academy of Management Review*, Vol. 12, No. 1, pp. 9-22.
21. Jakubowski, S. T., Chao, P., Huh, S. K., Maheshwari, S. (2002), "A Cross-Country Comparison of the Codes of Professional Conduct of Certified/Chartered Accountants", *Journal of Business Ethics*, Vol. 35, No. 2, pp. 111-129.
22. Jones, G. R., George, J. M., Hill, C. W. L. (2000). *Contemporary Management*. San Francisco: Irwin/McGraw-Hill.
23. Koh, H. C., Boo, E. H. Y. (2001), "The Link Between Organizational Ethics and Job Satisfaction: A Study of Managers in Singapore", *Journal of Business Ethics*, Vol. 29, No. 4, pp. 309-324.
24. Lan, G., Okechuku, C., Zhang, H., Cao, J. (2013), "Impact of Job Satisfaction and Personal Values on the Work Orientation of Chinese Accounting Practitioners", *Journal of Business Ethics*, Vol. 112, No. 4, pp. 627-640.
25. Latham, G. P., Pinder, C. C. (2005), "Work Motivation Theory and Research at the Dawn of the Twenty-First Century", *Annual Review of Psychology*, Vol. 56, pp. 485-516.
26. Metin, I., Metin Camgoz, S. (2001), "The Advances in the History of Cognitive Dissonance Theory", *International Journal of Humanities and Social Science*, Vol. 1, No. 6, pp. 131-136.
27. Mohr, A. T., Puck, J. F. (2007), "Role Conflict, General Manager Job Satisfaction and Stress and the Performance of International Joint Ventures", *European Management Journal*, Vol. 25, No. 1, pp. 25-35.
28. Murphy, P. E. (1989), "Creating Ethical Corporate Structure", *Sloan Management Review*, Vol. 30, No. 2, pp. 81-87.
29. Santhapparaj, A. S., Alam, S. S. (2005), "Job satisfaction among academic staff in private universities in Malaysia", *Journal of Social Sciences*, Vol. 1, No. 2, pp. 72-76.
30. Saunders, M. N. K., Thornhill, A. (2003), "Organizational justice, trust and the management of change: An exploration", *Personnel Review*, Vol. 32, No. 3, pp. 360-375.
31. Schwepker, C. H. (1999), "The Relationship between Ethical Conflict, Organizational Commitment and Turnover Intentions in the Salesforce", *Journal of Personal Selling & Sales Management*, Vol. 19, No. 1, pp. 43-49.
32. Shafer, W. E. (2015), "Ethical Climate, Social Responsibility, and Earnings Management", *Journal of Business Ethics*, Vol. 126, No. 1, pp. 43-60.
33. Shi, M., Yan, X., You, X., Li, J. (2015), "Core Self-evaluations, Emotional Intelligence and Job Satisfaction in Chinese Soldiers", *Social Indicators Research*, Vol. 124, No. 1, pp. 221-229.
34. Sims, R. L., Kroeck, K. G. (1994), "The Influence of Ethical Fit on Employee Satisfaction, Commitment and Turnover", *Journal of Business Ethics*, Vol. 13, No. 12, pp. 939-948.

35. Smith, A., Hume, E. C. (2005), "Linking Culture and Ethics: A Comparison of Accountants' Ethical Belief Systems in the Individualism/Collectivism and Power Distance Contexts", *Journal of Business Ethics*, Vol. 62, No. 3, pp. 209-220.
36. Spalding, A. D., Oddo, A. (2011), "It's Time for Principles-Based Accounting Ethics", *Journal of Business Ethics*, Vol. 99, No. 1, pp. 49-59.
37. Sparks, J. R., Pan, Y. (2010), "Ethical Judgements in Business Ethics Research: Definition, and Research Agenda", *Journal of Business Ethics*, Vol. 91, No. 3, pp. 405-418.
38. Spector, P. E. (1997). *Job Satisfaction, Application, Assessment, Causes, and Consequences*. Thousand Oaks: SAGE Publications.
39. Stevens, B. (1994), "An Analysis of Corporate Ethical Code Studies: Where Do We Go From Here?", *Academy of Management Review*, Vol. 11, No. 3, pp. 601-617.
40. Tormo-Carbó, G., Seguí-Mas, E., Oltra, V. (2016), "Accounting Ethics in Unfriendly Environments: The Educational Challenge", *Journal of Business Ethics*, Vol. 135, No. 1, pp. 161-175.
41. Tu, Y., Lu, X., Yu, Y. (2016), "Supervisors' Ethical leadership and Employee Job Satisfaction: A Social Cognitive Perspective", *Journal of Business Ethics*, Vol. 134, No. 3, pp. 493-504.
42. Tweedie, D., Dyball, M. C., Hazelton, J., Wright, S. (2013), "Teaching Global Ethical Standards: A Case and Strategy for Bordering the Accounting Ethics Curriculum", *Journal of Business Ethics*, Vol. 115, No. 1, pp. 1-15.
43. Viswesvaran, C., Deshpande, S. P., Joseph, J. (1998), "Job Satisfaction as a Function of Top Management Support for Ethical Behavior: A Study of Indian Managers", *Journal of Business Ethics*, Vol. 17, No. 4, pp. 365-371.
44. Vitell, S. J., Davis, D. L. (1990), "Ethical Beliefs of MIS Professionals: The Frequency and Opportunity for Unethical Behavior", *Journal of Business Ethics*, Vol. 9, No. 1, pp. 63-70.
45. Vitell, S. J., Singhapakdi, A. (2008), "The Role of Ethics Institutionalization in Influencing Organizational Commitment, Job Satisfaction, and Esprit de Corps", *Journal of Business Ethics*, Vol. 81, No. 2, pp. 343-353.
46. Weiss, J. W. (1994). *Business Ethics: A Managerial, Stakeholder Approach*. Belmont: Wadsworth Publishing Co.
47. Williams P. F. (2002), "Accounting and the moral order: Justice, accounting and legitimate moral authority", *Accounting and the Public Interest*, Vol. 2, No. 1, pp. 1-21.
48. Wong-On-Wing, B., Lui, G. (2013), "Beyond Cultural Values: An Implicit Theory Approach to Cross-Cultural Research in Accounting Ethics", *Behavioural Research in Accounting*, Vol. 25, No. 1, pp. 15-36.
49. Wright, T. A., Cropanzano, R. (2000), "Psychological well-being and job satisfaction as predictors of job performance", *Journal of Occupational Health Psychology*, Vol. 5, No. 1, pp. 84-94.
50. Yang, C. (2014), "Does Ethical Leadership Lead to Happy Workers? A Study on the Impact of Ethical Leadership, Subjective Well-Being, and Life Happiness in the Chinese Culture", *Journal of Business Ethics*, Vol. 123, No. 3, pp. 513-525.

ENDNOTES

- 1 International Ethics Standards Board for Accountants (2015), "2015 IESBA Annual Report", available at: <https://www.ifac.org/publications-resources/2015-iesba-annual-report> (Accessed on: September 16, 2016)
- 2 International Ethics Standards Board for Accountants (2016), "2016 Handbook of the Code of Ethics for Professional Accountants", available at: <https://www.ethicsboard.org/iesba-code/> (Accessed on: November 18, 2016)

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ZADOVOLJSTVO NA RADU I PROFESIONALNA ETIKA RAČUNOVOĐA

SAŽETAK

Računovođe mogu biti suočene s mnogim etičkim dvojbama i pritiscima, od kojih su neki složeni i teško rješivi. Svrha ovoga rada je dati uvid u zadovoljstvo na radu računovođa u kontekstu njihove poslovne etike. Empirijsko istraživanje provedeno je temeljem anketnog upitnika na uzorku računovođa u Republici Hrvatskoj. Prikupljeni podaci statistički su testirani korištenjem programskog paketa SPSS. Rezultati empirijskog istraživanja pokazuju da postoji značajna razlika u zadovoljstvu rada računovođa u odnosu na situacije kada moraju kompromitirati vlastita načela kako bi udovoljili očekivanjima organizacije. Utvrđeno je da etička pitanja čine razlike u zadovoljstvu u radu računovođa. Stoga, ovi rezultati upućuju na to da bi poduzeća trebala razmotriti uvođenje etičkog kodeksa Međunarodne federacije računovođa prilikom institucionaliziranja poslovne etike. Budući da etički kodeks Međunarodne federacije računovođa predstavlja dobro uspostavljeni okvir za etičko ponašanje računovođa, može se koristiti u početnoj fazi institucionalizacije etičkih standarda, a zatim prilagoditi prema organizacijskoj kulturi svakog poduzeća. Iako ovaj rad ima određenih ograničenja glede opsega empirijskog istraživanja, on ipak predstavlja doprinos oskudnoj literaturi o odnosu zadovoljstva na radu i profesionalne etike računovođa.

Ključne riječi: zadovoljstvo na radu, računovođe, računovodstvena etika, etički kodeks, menadžment ljudskih resursa

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THE IMPACT OF PACKAGING DESIGN ON FUNCTIONAL FRUIT JUICE CONSUMERS' BEHAVIOUR

ABSTRACT

Functional food is considered similar or the same as conventional food that is consumed as part of a regular diet and is shown to have specific physiologic advantages that can reduce risk of chronic diseases. Generally, products put in that group are the ones that are scientifically proven to improve health and prevent diseases. When considering fruit juices as functional products, it is important to emphasize that their primary function is not to relieve one of thirst, but to enhance health and sports activities (in case of isotonic, dietary and energy drinks), and also indicate lifestyle.

The research tried to cover this insufficiently researched territory. The focus of the research is functional food, with an emphasis on fruit juices, an area with very few empirical researches, especially when accepting new products through the influence of packaging. Branding and packaging attract the consumers' attention, identify a product, create interest, generate the product's psychological connotation and specify valuable product characteristics. If packaging is attractive enough to attract consumers' attention, it is very likely that consumers will try the product.

The goal of this research is to find out how great of a role functional fruit juice packaging has on consumers when making a purchasing decision.

Keywords: Design, packaging, functional fruit juice, consumers

1. Introduction

Accepting the concept of functional food and better understanding of its main determinants is the main factor for orientating the market towards functional food, developing products run by consumer feedback and market possibilities (Ares, Gámbaro, 2007).

Based on socio-demographic factors, typical functional food consumers are people with higher education, the senior population and people with health issues who must abide by specific diet restrictions. Based on gender, women are more frequent consumers and show greater interest for functional food than men (Siró et al., 2008).

The goal of food packaging is to contain food in a cost-effective way that satisfies industry requirements and consumer desires, maintains food safety, and minimizes environmental impact (Marsh, Bugusu, 2007).

New materials, mass production, big supply and distribution of similar products started to affect a change in thinking about product appearance and the meaning of packaging. Nowadays, packaging represents a type of advertisement. It is a crucial factor when making a purchase decision for many products.

Development in packaging design has long passed the point where physical protection is its only purpose. The protective function is still one of the main tasks of packaging, but it is only one of the conditions it needs to satisfy in order to be called a quality-designed product. Contemporary design aims to forecast, solve problems, and satisfy the needs of an entire life cycle (Koržinek, 2007).¹

The consumer market for fruit juices and beverages has experienced increasing competition. Although a large variety of detailed design methods for a specific subset of design problems are available, literature does not present a universally accepted method for designing fruit juice packaging (Fey, 2000).

In addition, fruit juices with functional properties can ensure a competitive advantage to companies that produce them.

Based on differentiation – a competitive advantage exists when a company can ensure superior products/services than the competition (differentiation advantage), but at the same costs. The company's offer, in this case, has greater real or perceived value for customers (for which they are ready to pay a price premium) (Horvat et al., 2013).

As functional products are put in a higher price category, the main competitive advantage of functional food is product differentiation that, besides other things, demands continual investments in research and development and innovations in order to be able to offer products with a price premium and high added value. Design and product packaging have an important role here, because they can be a factor when making a purchase decision, which is also the main research hypothesis H1: Functional fruit juice packaging design and redesign represents the product's image consistency, while the auxiliary hypothesis states that packaging and local

producers' fruit juice designs are not behind foreign competition.

2. Literature review

Packaging is the science, art and technology of closing or protecting products in transport, while storing, selling and using. It refers to a process of designing, evaluating and producing packages. Packaging can be described as a coordinated system for transportation, storing, logistics, sales and use. Packaging contains, protects, safeguards, transmits, informs and sells merchandise (Klimchuk et al., 2013).

Many juice manufacturers have begun launching juice and smoothie products that are organic and feature clean, easy-to-read labels. For example, Bolthouse Farm's 1915 brand recently introduced a line of cold-pressed smoothies that are made with organic pureed fruits and vegetables. The line boasts an ingredient panel featuring no more than six ingredients and nutrient-rich fruits and vegetables (Del Buono, 2017).

The connection between packaging design and food waste should be acknowledged and valued by relevant stakeholders: food producers, manufacturers, brand owners, retailers, consumers, and in packaging regulations (Wikström et al., 2013).

Deliza, MacFie, and Hedderley (1999, 2003) demonstrated that consumers inferred product taste from the package/label, revealing many packaging attributes which affected product expectation and perception. Product information (e.g., nutritional, sensory, safety and ingredients) and technology information appeared to be important package attributes (Deliza et al., 2003).

Effective communication between the producer and the consumer about food and nutrition relies on delivering messages that consumers find believable and that convinces them that making healthy food choices is achievable (Borra, Earl, 2000).

Food packages usually include two different types of information: text, such as a brand name, and an image, such as a picture of the product. So far, most studies that have examined the influence of packaging on flavor perception have focused on textual information (Mizutani et al., 2010).

When shopping, the impact of packaging on product choice is proven to be important. It reflects all

its functions and attributes that attract buyers with diversity and originality. The product has to be “in accordance” with packaging because the message it transmits is uniform; packaging transmits experience and the nature of the product, moves our senses while shopping, and depicts an image of a product even before consuming (Tolušić et al., 2011).

Associations that can be brought about with specific outside stimuli are especially important for sensory marketing research and packaging design. Different product characteristics, like its colour, name, logo-type, packaging, etc. will, more or less implicitly, arouse a systemic semantic association that could play an important role in developing a successful marketing strategy (Schifferstein, Hekkert, 2008).

Investigating consumer motivations is relevant given that food industry efforts towards offering processed vegetables aim at addressing two major motives of food demand, namely the convenience and health motive. Finally, besides individual influences, also the potential role of time (moment of purchase) as a situational factor that may influence consumer’s conduct during the purchasing stage merits attention (Assael, 1995; Meiselman, 1996; Mowen, 1993).

The modern methods of consumer marketing would fail were it not for the messages communicated by the package through distinctive branding and labeling. Consumers make purchasing decisions using numerous clues provided by graphics and distinctive shapes of packaging (Robertson, 2009).

Some studies also show how colour harmony might differ from conventional principles when the context (i.e., fruit juice) is considered. Designers should therefore take into account properties or categories of products when using colours as a medium to communicate the characteristics of products to potential customers (Wei et al., 2014).

Along with the product’s physical characteristics, innovation and development, brand and price, packaging is a key element of the product’s image. Physical product characteristics entail a combination of the product’s characteristics aimed at satisfying consumer’s needs. Brand and packaging represent complementary parts of marking products that are important in creating and sustaining the product’s image. A constant increase in product choice and producers in the same category affect the brand’s importance and packaging that ease customer choice among thousands of different products (Mlivić Budeš, 2016).²

However, food packaging no longer has just a passive role in protecting and marketing food products. New concepts of active and intelligent packaging are due to play an increasingly important role by offering numerous and innovative solutions for extending the shelf-life or maintain, improve or monitor food quality and safety (Gontard, 2006). Various terms are used for describing new packaging technologies, e.g. ‘active’, ‘interactive’, ‘smart’, ‘clever’, ‘indicators’, etc. (Fabech et al., 2000; Gontard, 2000).

So, changes in retailing practices such as market globalisation and consumers’ way of life present major challenges to the food packaging industry, and it is very important how consumers will accept new products, and what role design will play in that process.

3. Research methodology

A more extensive research on consumers’ familiarity with the functional food concept was undertaken on a random sample in August of 2012, while data relevant to this topic were used in this paper (Zavišić, 2014). A survey was conducted in two cities in Croatia: Zagreb and Osijek. Zagreb was chosen as the capital and largest city in Croatia, and Osijek as the center of eastern Croatia and agricultural production. Due to specific socioeconomic reasons (different city development levels), this choice seemed logical. A questionnaire consisted of questions related to the consumers’ familiarity with the functional food concept and their buying habits connected to such products. 198 out of 313 respondents (63.26%) heard about the term “functional food”.

A primary research was conducted on a sample that includes respondents aged 18 and over.

Statistical methods were used in data analysis. Division according to place of residence, gender, age, professional qualification and monthly income were determined according to demographic and socioeconomic characteristics. Those characteristics were used later in the analysis as grouped variables. Graphic depiction of respondent’s sampling data was used in order to better visualize the data.

In the analysis, chosen descriptive statistics indicators for ordinal variables were calculated, while appropriate division was determined for nominal variables. Besides descriptive statistics, inferential statistics was also used. A chi-squared test was per-

formed in order to examine the correlation between the chosen characteristics. Nonparametric Mann Whitney and Kruskal-Wallis tests were used due to the nature of specific questions and the measuring scale on which responses have been noted in testing the significance of differences. Statistically significant are differences with p value less than 0.05 ($p < 0.05$).

4. Results

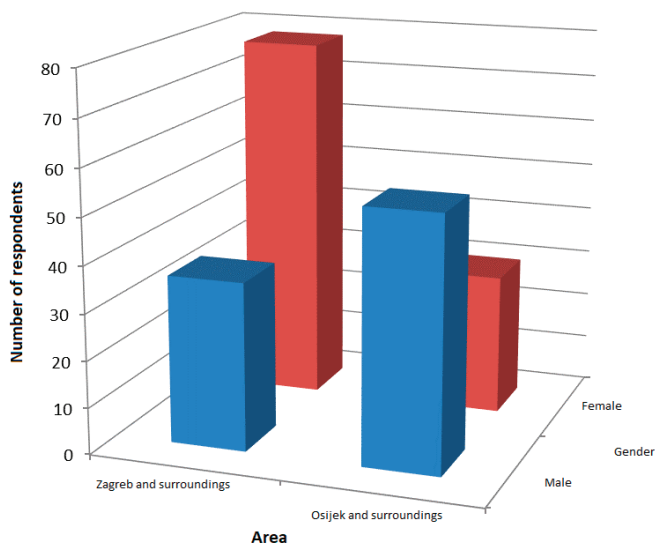
Parameters that related to the effect of packaging design on making a purchase decision were taken, apropos, what packaging design specifically represents to functional fruit juice consumers. The aim was to research how much packaging has to match the product's image that it represents.

4.1 Demographic and socio-economic characteristics of respondents

313 respondents took part in the survey. Among them, 198 were not acquainted with the term "functional food", which represents 63.26% of the total number. Since the research was focused on the perception of the role of marketing in positioning fruit juices as functional food, respondents that were not familiar with the term were excluded from further analysis.

Among 198 respondents, 114 of them lived in Zagreb and its surroundings (57.58%), and 84 in Osijek and its surroundings (42.42%) at the time. There were 90 men (45.45%) and 108 women (54.55%) among the respondents. Graph 1 depicts the division of respondents according to the place of residence and gender.

Graph 1 Respondents according to place of residence and gender



Source: Authors

In order to find out what represents a good functional food packaging design and redesign to the respondents, they were asked to grade the following aspects: the product's usability, ergonomic adaptability, technical/economic sensibility and image consistency. Answers were given on a 5 level

Likert scale (1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, 5 – strongly agree). Table 1 contains the mentioned indicators of descriptive statistics based on the respondents' answers.

Table 1 Chosen descriptive statistics indicators that relate to the meaning of good design and redesign of functional fruit juice packaging for respondents

Meaning	Arithmetic mean	Median	Mode	St. dev.	Coefficient of variation
Product`s usability	3.50	4.00	4.00	1.12	32.03
Ergonomic adaptability	3.63	4.00	4.00	0.83	22.89
Technical/economic reliability	3.61	4.00	4.00	0.86	23.79
Esthetic sensibility	3.91	4.00	4.00	0.89	22.85
Image consistency	4.25	4.00	4.00	0.64	15.14

Source: Authors

Based on calculated arithmetic means, it can be concluded that good design and redesign for fruit juice packaging mostly represents image consistency to respondents. The arithmetic mean only for that variable had a value greater than 4. Next, according to the respondents, is esthetic sensibility. Product usability, ergonomic adaptability and technical/economic reliability were evaluated as less important. Median and mode had a value of 4 for all the ana-

lysed variables. Standard deviations and coefficients of variation indicate that the level of variability in respondent`s rankings cannot be considered small, except in image consistency.

The Mann-Whitney test was performed for testing the significance of differences in the meaning of good functional fruit juice design and redesign related to their place of residence (Table 2).

Table 2 Test results of the significance of differences in the meaning of good functional fruit juice packaging design and redesign related to their place of residence (Mann-Whitney test)

Meaning	Average rank (area)		Z	p
	Zagreb and surroundings	Osijek and surroundings		
Product`s usability	109.57	81.69	-3.595	0.000
Ergonomic adaptability	114.09	76.73	-5.027	0.000
Technical/economic reliability	102.86	90.48	-1.653	0.098
Esthetic sensibility	99.63	98.15	-0.196	0.845
Image consistency	103.47	90.77	-1.769	0.077

Source: Authors

In all analysed cases, higher average ranks were calculated for respondents from Zagreb and its surroundings. According to the Mann-Whitney test, for the people from Zagreb and its surroundings and Osijek and its surroundings, statistically significant are the differences in the perception of good

design and redesign of fruit juice packaging related to product`s usability and ergonomic adaptability.

Table 3 contains Mann-Whitney test results that were used to test the significance of differences between men and women in perception of good functional fruit juice packaging design and redesign.

Table 3 Test results of the significance of differences in the perception of good functional fruit juice packaging design and redesign related to gender (Mann-Whitney test)

Meaning	Average rank (gender)		Z	p
	Male	Female		
Product's usability	86.67	106.68	-2.594	0.009
Ergonomic adaptability	78.09	114.72	-4.957	0.000
Technical/economic reliability	92.40	101.82	-1.265	0.206
Esthetic sensibility	95.43	102.00	-0.872	0.383
Image consistency	94.76	100.78	-0.843	0.399

Source: Authors

Even though in most cases the higher average ranks are determined for female respondents, based on the Man-Whitney test, there is a statistically significant difference in the perception of meaning about good functional juice packaging design and redesign between men and women related to product usability and its ergonomic adaptability.

Therefore, good fruit juice packaging design and redesign represents greater product usability and ergonomic adaptability for men, than women.

The Kruskal-Wallis test was conducted with an intention to test the significance of differences in good fruit juice packaging design and redesign between people divided into three groups. The test results are set forth in Table 4.

Average ranks indicate that younger people, in relation to other respondents, view good fruit juice packaging design and redesign as a representation of esthetic sensibility and image consistency, and less as technical/economic reliability. When compared with other respondents, good fruit juice design and redesign represents, in a greater degree, product usability, ergonomic adaptability and technical/economic reliability for the middle-aged population. For the older population, in relation to other groups, good fruit juice packaging design and redesign, in a lesser degree, represents product usability, ergonomic adaptability, esthetic sensibility and image consistency.

Table 4 Test results of the significance of differences in the meaning of good functional fruit juice packaging design and redesign related to age (Kruskal-Wallis test)

Meaning	Average rank (age)			H	p
	24 and less	25 – 38	39 and more		
Product's usability	90.68	109.99	85.49	7.503	0.023
Ergonomic adaptability	95.53	109.16	80.65	8.458	0.015
Technical/economic reliability	92.61	104.41	93.03	2.381	0.304
Esthetic sensibility	113.61	92.34	84.90	10.081	0.006
Image consistency	111.99	95.11	77.14	13.354	0.001

Source: Authors

The Kruskal-Wallis test results show there are no statistically significant differences between at least two age groups, in case of perception of good fruit juice packaging design and redesign in relation to

technical/economic reliability. The Mann-Whitney test was conducted in order to determine if there is a statistically significant difference among age groups.

Table 5 Mann-Whitney test results

Meaning	Mann-Whitney test	Compared groups (age)		
		24 and less	24 and less	25 – 38
		25 – 38	39 and more	39 and more
Product`s usability	Z	-2.187	-0.392	-2.473
	p	0.029	0.695	0.013
Ergonomic adaptability	Z	-1.730	-1.537	-2.793
	p	0.084	0.124	0.005
Esthetic sensibility	Z	-2.513	-2.751	-0.789
	p	0.012	0.006	0.430
Image consistency	Z	-2.089	-3.513	-2.043
	p	0.037	0.000	0.041

Source: Authors

The results of the Mann-Whitney test show there is a statistically significant difference in the perception of good fruit juice packaging design and redesign in product usability between younger and middle-aged groups and between middle-aged and older age groups. A statistically significant difference exists between perceptions of people in middle-aged and older groups, regarding ergonomic adaptability. Younger and middle-aged people are statistically different in the perception of good fruit

juice packaging in esthetic sensibility, while regarding image consistency, there are statistically significant differences in the perception of people in all age groups.

Table 6 contains the results of the Mann-Whitney test used for the purpose of testing the significance of differences in the meaning of good functional fruit juice design and redesign related to professional qualification.

Table 6 Test results of the significance of differences in the meaning of good functional fruit juice packaging design and redesign related to professional qualification (Mann-Whitney test)

Meaning	Average rank (professional qualification)		Z	p
	Associate or Bachelor	High school		
Product`s usability	106.46	90.30	-2.079	0.038
Ergonomic adaptability	105.44	91.81	-1.833	0.067
Technical/economic reliability	95.48	98.08	-0.345	0.730
Esthetic sensibility	91.66	103.53	-1.569	0.117
Image consistency	88.91	103.79	-2.069	0.039

Source: Authors

Based on calculated average ranks, it can be concluded that for respondents with a higher degree, a good fruit juice packaging design in a greater degree represents product usability and ergonomic adaptability, and in a lesser degree technical/economic reliability, esthetic sensibility and image consistency. According to the Mann-Whitney test, statistically are significant differences in the per-

ception of good fruit juice packaging design and redesign with regard to product usability and image consistency.

Table 7 contains the Kruskal-Wallis test results used for the purpose of testing the significance of differences in the meaning of good functional fruit juice packaging design and redesign between people listed in three income groups.

Table 7 Test results of the significance of differences in the meaning of good functional fruit juice packaging design and redesign related to monthly income (Kruskal-Wallis test)

Meaning	Average rank (monthly income)			H	p
	Less than 2000	2000 – 5000	5000 and more		
Product's usability	85.35	98.81	109.45	5.733	0.057
Ergonomic adaptability	99.70	84.90	116.34	12.141	0.002
Technical/economic reliability	87.87	100.10	104.42	3.236	0.198
Esthetic sensibility	121.33	83.96	97.06	17.580	0.000
Image consistency	122.03	85.88	89.49	20.452	0.000

Source: Authors

Based on average ranks, one can conclude that people with lower monthly incomes, in relation to other respondents, view good fruit juice packaging design and redesign in a greater degree with regard to esthetic sensibility and image consistency, and in lesser degree with regard to product usability and technical/economic reliability. In relation to other respondents, people with monthly incomes from 2000 to 5000 kuna, a good functional fruit juice packaging design and redesign represent, in a lesser degree, the product's ergonomic adaptability, esthetic sensibility and image consistency. For people earning 5000 kuna or more, in relation to people

with smaller monthly incomes, a good fruit juice packaging design and redesign is represented in the product usability, ergonomic adaptability and technical/economic reliability.

The results of the Kruskal-Wallis test show that there are statistically significant differences between at least two income groups, regarding perception related to the meaning of good fruit juice packaging design and redesign in terms of ergonomic adaptability, esthetic sensibility and image consistency. The Man-Whitney test was performed in order to determine such groups in the analysis.

Table 8 Mann-Whitney test results

Meaning	Mann-Whitney test	Compared groups (monthly income)		
		Less than 2000	Less than 2000	2000 – 5000
		2000 – 5000	5000 and more	5000 and more
Ergonomic adaptability	Z	-1.675	-1.686	-3.507
	p	0.094	0.092	0.000
Esthetic sensibility	Z	-4.019	-2.572	-1.616
	p	0.000	0.010	0.106
Image consistency	Z	-4.347	-3.297	-0.354
	p	0.000	0.001	0.723

Source: Authors

The results of the Mann-Whitney test show a statistically significant difference in the perception of good fruit juice packaging design and redesign in terms of ergonomic adaptability between middle and higher income groups. There are no statistically significant differences in the perception of good fruit juice packaging design and redesign in terms

of esthetic sensibility, between lower and middle income groups and lower and higher income groups. In case of image consistency, statistically proven are differences in the perception of younger and middle income groups and younger and older income groups.

A part of the questionnaire related to questions on whether packaging and design of Croatian functional fruit juice producers is falling behind foreign competition, and if packaging and design are a guarantee of the product's quality. Answers were given on a 5 level Likert scale

(1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, 5 – strongly agree).

Table 9 contains the mentioned indicators of descriptive statistics based on the respondents' answers.

Table 9 Chosen descriptive statistics related to attitudes on different packaging and design of functional juices

Statement	Arithmetic mean	Median	Mode	St. Dev.	Coefficient of variation
Packaging and design of local producer's functional juices are not behind foreign competition	3.63	4.00	4.00	0.91	24.99
Packaging and product design are not a guarantee of quality	4.07	4.00	4.00	0.90	22.23

Source: Authors

On average, a high percentage of respondents agreed with statements that packaging and design are not a guarantee of quality, while an arithmetic mean for a statement that packaging and design of functional fruit juice producers is not falling behind foreign competition was 3.63.

The Mann-Whitney test was performed for the purpose of testing the significance of differences about specific statements by the people from Zagreb and Osijek, and their surroundings. The test results are shown in Table 10.

Table 10 Test results of the significance of differences in attitudes about packaging and design of functional juices related to place of residence (Mann-Whitney test)

Statement	Average rank (area)		Z	P
	Zagreb and surroundings	Osijek and surroundings		
Packaging and design of local producer's functional juices are not behind foreign competition	88.25	113.77	-3.352	0.001
Packaging and product design are not a guarantee of quality	96.90	101.88	-0.657	0.511

Source: Authors

According to the Mann-Whitney test, there are statistically significant differences between the attitudes of respondents from Zagreb and its surroundings and Osijek and its surroundings relating to the statement that packaging and design of local functional fruit juice producers are not far behind foreign competition. It can be concluded that people from Osijek and its surroundings believe more

than people from Zagreb and its surrounding that packaging and design of local functional fruit juice producers are not far behind foreign competition.

Table 11 contains the Mann-Whitney test results which were used to test the significance of differences in attitudes about specific statements between men and women.

Table 11 Test results of the significance of differences in attitudes about packaging and design of functional juices related to gender (Mann-Whitney test)

Statement	Average rank (gender)		Z	p
	Male	Female		
Packaging and design of local producer`s functional juices are not behind foreign competition	108.52	91.15	-2.300	0.021
Packaging and product design are not a guarantee of quality	105.79	93.41	-1.648	0.099

Source: Authors

Higher average ranks were calculated based on responses by men in the case of the following statements: packaging and local functional juice producers are not far behind foreign competition, and packaging and product design are not a guarantee of quality. Results of the Mann-Whitney test indicate there are statistically significant differences in men`s and women`s attitudes towards the statement: packaging and local functional juice pro-

ducers are not far behind foreign competition. Therefore, men, more than women, agree that packaging and local functional juice producers are not behind foreign competition. The Kruskal-Wallis test was performed in order to test the significance of differences in attitudes related to specific questions between people listed in three age groups.

Table 12 Test results of the significance of differences in attitudes about packaging and design of functional juices related to age (Kruskal-Wallis test)

Statement	Average rank (age)			H	p
	24 and less	25 – 38	39 and more		
Packaging and design of local producer`s functional juices are not behind foreign competition	109.53	84.10	109.15	10.965	0.004
Packaging and product design are not a guarantee of quality	104.59	95.46	95.55	1.405	0.495
Health claim increases functional juice sales	97.08	98.73	100.75	0.162	0.922

Source: Authors

For younger people, in relation to other groups, higher average ranks were determined for the following statements: packaging and local functional juice producers are not behind foreign competition, packaging and design are not a guarantee of quality and higher prices do not mean higher quality. When compared with other groups, higher average ranks were calculated for older respondents for the following statement: health statement increases sales

of functional drinks. The Kruskal-Wallis test confirmed a statistically significant difference between at least two age groups in relation to the following statements: local functional juice producers have an adequate supply (offer), packaging and design of local functional juice producers are not behind foreign competition. In order to determine among which groups a statistically significant difference exists, the Mann-Whitney test was performed.

Table 13 Mann-Whitney test results

Statement	Mann-Whitney test	Compared groups (age)		
		24 and less	24 and less	25 – 38
		25 – 38	39 and more	39 and more
Local producers of functional juices have adequate demand	Z	-0.339	-2.283	-2.274
	p	0.734	0.022	0.023
Packaging and design of local producer`s functional juices are not behind foreign competition	Z	-2.690	-0.477	-2.964
	p	0.007	0.633	0.003

Source: Authors

In the case of the first statement, a statistically significant difference was confirmed between the attitudes of younger and middle-aged people and middle-aged and older people.

Table 14 contains the results of the Mann-Whitney test used to test the difference in attitudes related to the stated questions between people with a higher degree and those who have a high school degree.

Table 14 Test results of the significance of differences in attitudes about packaging and design of functional juices related to professional qualification (Mann-Whitney test)

Statement	Average rank (professional qualification)		Z	p
	Associate or Bachelor	High school		
Packaging and design of local producer`s functional juices are not behind foreign competition	85.46	108.28	-3.014	0.003
Packaging and product design are not a guarantee of quality	98.04	98.85	-0.108	0.914

Source: Authors

According to the Mann-Whitney test, people with a higher education degree and those with a high school degree are statistically significantly different in the following attitudes: packaging and design of local functional juice producers are not behind foreign competition. Therefore, people with high school diplomas are keener to think that packaging and local functional juice

producers are not behind foreign competition, while those with a higher degree are more convinced that a health statement increases the sales of functional juices.

Results of the Kruskal-Wallis test (in Table 15) tested the significance of differences in attitudes about questions between people listed in three income groups.

Table 15 Test results of the significance of differences in attitudes about different aspects of functional juices shopping related to monthly income (Kruskal-Wallis test)

Statement	Average rank (monthly income)			H	p
	Less than 2000	2000 – 5000	5000 and more		
Packaging and design of local producer`s functional juices are not behind foreign competition	113.86	103.28	76.89	15.122	0.001
Packaging and product design are not a guarantee of quality	116.02	91.54	91.55	9.072	0.011

Source: Authors

According to calculated average ranks, it can be concluded that respondents with a lower monthly income agree more that packaging and design of local functional juice producers does not fall behind foreign competition, that packaging and product design are not a guarantee of quality and that health statement increases functional juice sales.

The results of the Kruskal-Wallis test show there is a statistically significant difference between at least two groups related to the following statements: packaging and design of local functional juice producers is not behind the competition, and packaging and product design are not a guarantee of quality. The Mann-Whitney test was performed in order to determine income groups between which statistically significant differences exist.

Table 16 Mann-Whitney test results

Statement	Mann-Whitney test	Compared groups (monthly income)		
		Less than 2000	Less than 2000	2000 – 5000
		2000 – 5000	5000 and more	5000 and more
Packaging and design of local producer's functional juices are not behind foreign competition	Z	-1.570	-3.156	-3.399
	p	0.116	0.002	0.001
Packaging and product design are not a guarantee of quality	Z	-2.784	-2.420	-0.046
	p	0.005	0.016	0.963

Source: Authors

In the case of the first and second statement, the results of the Mann-Whitney test show that there are statistically significant differences in attitudes of people with lower and middle incomes.

5. Discussion

This research showed that respondents rated design and packaging of functional fruit juices in Croatia with an average grade of 3.5. On average, respondents expressed a high degree of similarity related to statements that packaging and product design are not a guarantee of quality, while the statement that local producers of functional fruit juices are not falling behind foreign competition has 3.63 as arithmetic mean.

It can be concluded, based on the calculated arithmetic means, that good design and redesign of functional fruit juice packaging represents consistency with the image. Only that variable had an arithmetic mean greater than 4.

According to the Mann-Whitney test, there are statistically significant differences in the perception about the meaning of good design and redesign in packaging functional fruit juices between the respondents from Zagreb and its surroundings and the respondents from Osijek and its surroundings

with regard to the product's usability and ergonomic adaptability.

Furthermore, according to the Mann-Whitney test, statistically significant differences exist in perception of good design and redesign of functional fruit juices between men and women related to the product's usability and ergonomic adaptability.

Average ranks indicate that the younger population, in relation to other respondents, views design and redesign of functional fruit juices more in relation to esthetic sensibility and consistency with image, and less with technical/economic reliability.

The younger and older population are statistically different in the perception of good design and redesign of functional fruit juices in relation to esthetic sensibility, while there is a statistically significant difference in image consistency for all age groups.

Based on calculated average ranks, it can be concluded that for respondents with higher education degrees, good design and redesign of functional fruit juices is represented in a higher degree by the product's usability and ergonomic adaptability, and in lesser degree by its technical/economic reliability, esthetic sensibility and image consistency.

In relation to other respondents, people with lower monthly incomes view good design and redesign of

functional fruit juice packaging, in a higher degree with regard to esthetic sensibility and image consistency, and in a lesser degree with regard to the product's usability and technical/economic reliability.

Besides that, research showed that respondents from Osijek and its surroundings were more likely to believe that packaging and design of functional fruit juices are not far behind foreign competition than respondents from Zagreb and its surroundings. In terms of gender, more respondents holding this opinion were males with high school degrees and lower monthly incomes.

Among the analysed data, the two following statements reflected an auxiliary hypothesis in itself, that producers of functional fruit juices in Croatia are adjusting to world trends in producing functional food, that is, the packaging and design of local functional juice producers is not falling behind foreign competition. Considering the attitudes of the respondents, this claim can only be partially accepted. The respondent's ratings undoubtedly show that local functional fruit juice producers have not yet reached a satisfactory level in production and functional food placement.

6. Conclusion

Packaging is one of the most important, if not the most important reason why a consumer chooses one product over the other. It is also a means with which companies try to influence customer's emotions. Research confirms that people do not buy guided by logic, but by their subconsciousness that is shaped by their feelings. A choice to buy some product is based on emotional stimuli. Therefore, investing in professional packaging is more than a return on investment in design and production. A brand looks professional with adequate packaging, differentiates from the competition, and increases sales, which is the most important aspect.

The whole packaging design is a process that involves working on the packaging design, design principles, creative process, production and questions related to preproduction. It is also connected to branding, business strategies, social responsibility and sustainability. A successful packaging design that will be used as a marketing driver for consumer products can be created with a successful synergy of all the elements.

The results of this research give an account of attitudes on the importance of the packaging of functional fruit juices by Croatian producers. The main hypothesis H1: functional fruit juice packaging design and redesign represents consistency in the product's image, can be considered as confirmed. An auxiliary hypothesis that packaging and functional fruit juices made by local producers do not fall behind foreign competition can be considered as partially accepted, meaning there is still space for growth, with arithmetic mean of 3.63.

The main limiting factor of this paper is that the research was done in only two cities. A suggestion for future research is to expand the research to two more cities (Rijeka and Split) and gain a larger sample. Besides that, it would be interesting to explore how a specific health statement located on the packaging can affect product sales.

As far as packaging itself is concerned, in the last decades, however, one of the most innovative developments in the area of food packaging is the 'active and intelligent' (A&I) packaging, based on deliberate interactions with food or the food environment. The purpose of 'active packaging' is the extension of the food's shelf-life and maintenance or even improvement of its quality. The purpose of 'intelligent packaging' is to monitor food freshness.

This would be particularly important for functional fruit drinks, so a research suggestion is to investigate reactions of Croatian consumers and the impact of marketing on future trends of active and intelligent packaging.

REFERENCES

1. Ares, G., Gámbaro, A. (2008), "Influence of gender, age and motives underlying food choice on perceived healthiness and willingness to try functional foods", *Appetite*, Vol. 49, No. 1, pp. 148-158.
2. Assael, H. (1995). *Consumer Behavior and Marketing Action*. Cincinnati: South-Western College Publishing.
3. Borra, S. T., Earl, R. (2000), "The art and science of health promotion", *Nutrition Today*, Vol. 35, No. 2, pp. 47-52.
4. Dainelli, D., Gontard, N., Spyropoulos, D., Zondervan van den Beukend, E., Tobbacke, P. (2008), "Active and intelligent food packaging: legal aspects and safety concerns", *Trends in Food Science & Technology*, Vol. 19, No. 1, pp. S103-S112.
5. Del Buono, A. (2017), "Functional, clean label trends drive growth of vegetable juices, juice smoothies", *Dairy Foods*, Vol. 118, No. 5, pp. 51-52.
6. Deliza, R., MacFie, H., Hedderley, D. (1999), "An investigation on the package features affecting consumer perception of fruit juice using Repertory Grid and Focus Group methods", *Brazilian Journal of Food Technology*, Vol. 2, No. 1, pp. 63-71.
7. Deliza, R., Rosenthal, A., Silva, A. (2003), "Consumer attitude towards information on non conventional technology", *Trends in Food Science & Technology*, Vol. 14, No. 1-2, pp. 43-49.
8. Fabech, B., Hellström, T., Henrysdotter, G., Hjulmand-Lassen, M., Nilsson, J., Rüdinger, L. (2000). *Active and Intelligent Packaging: a Nordic report on the legislative aspects*. Copenhagen: Nordic Council of Ministers.
9. Fey, J. J. H. (2000). *Design of a Fruit Juice Blending and Packaging Plant*. Doctoral dissertation. Eindhoven: Eindhoven University of Technology.
10. Gontard, N. (2006), "Tailor made food packaging concept", in *IUFoST, 13th World Congress of Food Science and Technology, Food is Life*, September 17-21, 2006, Nantes, France.
11. Gontard, N. (2000). *Les Emballages Actifs*. Paris: Lavoisier.
12. Horvat, Đ., Perkov, D., Trojak, N. (2012). *Strategijsko upravljanje i konkurentnost u novoj ekonomiji*. Zagreb: Edukator d.o.o.
13. Klimchuk, M., Krasovec S. (2013). *Packaging Design: Successful Product Branding from Concept to Shelf*. 2nd edition. Hoboken: John Wiley & Sons, Inc.
14. Marsh, K., Bugusu, B. (2007) "Food Packaging—Roles, Materials, and Environmental Issues", *Journal of Food Science*, Vol. 72, No. 3, pp. 39-55.
15. Meiselman, H. L., MacFie, H. J. H. (1996). *Food Choice, Acceptance and Consumption*. London: Blackie Academic & Professional.
16. Mizutani, N., Okamoto, M., Yamaguchi, Y., Kusakabe, Y., Dan, I., Yamanaka, T. (2010), "Package images modulate flavor perception for orange juice", *Food Quality and Preference*, Vol. 21, No. 7, pp. 867-872.
17. Mowen, J. C. (1993). *Consumer Behavior*. New York: MacMillan Publishing.
18. Robertson, G. L. (2009). *Food Packaging and Shelf Life: A Practical Guide*. Boca Raton: CRC Press.
19. Siró, I., Kápolna, E., Kápolna, B., Lugasi, A. (2008), "Functional food. Product development, marketing and consumer acceptance—A review", *Appetite* Vol. 51, No. 3, pp. 456-467.
20. Schifferstein, H. N. J., Spence, C. (2008), "Multisensory product experience", in Schifferstein, H. N. J., Hekkert, P. (Eds.), *Product Experience*, Elsevier, Amsterdam, pp. 133-161.
21. Tolušić, M., Mikolčević, M., Tolušić, Z. (2011), "Utjecaj ambalaže na prodaju proizvoda", *Praktični menadžment*, Vol. 2, No. 2, pp. 24-26.
22. Wei, S. T., Ou, L. C., Luo, M. R., Hutchings, J. B. (2014), "Package design: Colour harmony and consumer expectations", *International Journal of Design*, Vol. 8, No. 1, pp. 109-126.

23. Wikström, F., Williams, H., Vergheze, K., Clune, S. (2014), "The influence of packaging attributes on consumer behaviour in food-packaging life cycle assessment studies - a neglected topic", *Journal of Cleaner Production*, Vol. 73, p. 100-108.

ENDNOTES

- 1 Koržinek, M. (2007), "Dizajn ambalaže", available at: <http://dizajn.hr/blog/dizajn-ambalaze> (Accessed on: May 5, 2018)
- 2 Mlivić Budeš, E. (2016), "Koliko ambalaža utječe na prodaju proizvoda?", available at: <http://profitiraj.hr/koliko-ambalaza-utjece-na-prodaju-proizvoda> (Accessed on: May 5, 2018)

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UTJECAJ DIZAJNA AMBALAŽE NA PONAŠANJE POTROŠAČA FUNKCIONALNIH VOĆNIH SOKOVA

SAŽETAK

Funkcionalnom hranom smatramo hranu izgledom sličnu ili istu kao konvencionalna hrana koja se konzumira kao dio uobičajene prehrane, a pokazalo se da ima ili može imati određene fiziološke prednosti kojima se može smanjiti rizik od kroničnih bolesti. Općenito se u tu skupinu ubrajaju proizvodi za koje je znanstveno dokazano da poboljšavaju zdravlje ili sprječavaju bolesti. Kada je riječ o voćnom soku kao funkcionalnom proizvodu, treba naglasiti da njegova današnja primarna funkcija nije samo utažiti žeđ konzumenta, nego se doživljava i na drugačiji način, odnosno kao proizvod koji primarno mora asociirati na zdravlje ili sportske izvedbe i energiju (u slučaju izotoničnih, dijetetskih ili energetske napitaka), a ujedno bi trebao na neki način nositi i obilježje stila života.

Ovim istraživanjem nastojalo se detaljnije prikazati u nas, dosada, tek neznatno istraženo područje. U središtu je istraživanja funkcionalna hrana, s naglaskom na voćne sokove, o čemu je u Republici Hrvatskoj do sada provedeno vrlo malo empirijskih istraživanja, posebno kada je riječ o prihvatanju novih proizvoda kroz utjecaj ambalaže u cijelom procesu. Markom i pakiranjem privlači se pozornost potrošača, identificira proizvod, stvara interes, generiraju psihološke konotacije proizvoda i specificiraju korisna svojstva proizvoda. Ako je pakiranje dovoljno atraktivno da privuče pozornost potrošača, velika je vjerojatnost da će doći i do degustacije i konzumacije proizvoda.

Cilj je ovog rada ispitati koliko ulogu dizajn ambalaže funkcionalnih voćnih sokova ima kod potrošača pri donošenju odluke o kupnji.

Ključne riječi: dizajn, ambalaža, funkcionalni voćni sok, potrošači

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IMPLICATIONS OF THE NEW ACCOUNTING MODEL FOR LEASES

ABSTRACT

Leases often appear to be a practical way of securing some property. The advantage of the lease is in easy replacement and minimum engagement of resources for the acquisition of assets. However, sometimes leases, depending on their form, also serve to hide the financing through the so-called “off-balance financing”. With the aim of eliminating these unwanted effects, the IASB has adopted a new standard for leases – the International Financial Reporting Standard 16 Leases. The key change from the previous accounting model for lease recognition is in the financial statements of the lessee. This change results in recognition of lease liabilities for practically all forms of leases. Of course, this also entails recording the appropriate property item of asset in the financial statements. The result of this approach is also significantly different recognition of expenses during rental time, as well as the nature of expense. This applies particularly to operating leases that do not recognize assets and liabilities in the existing model, and the effect on profit and loss is based on a linear model that most often corresponds to the contractual lease payment dynamics. In this paper the authors research the implication of the new accounting model for leases on financial statements.

Keywords: Lease, operating, financial, IFRS 16, present value, discounting

1. Introduction

Leasing is an important source of finance to business and according to PWC (2016: 2) it enables companies to access and use property and equipment without incurring large cash outflows at the start. In January 2016, the IASB adopted the International Financial Reporting Standard 16 Leases (IFRS 16). This is a completely new standard that replaced International Accounting Standard 17 Leases (IAS 17), but also changed a significant number of other standards. The main changes brought by this new lease standard are the accounting for leases by lessees and the accounting treatment of leases in their financial statements.

IFRS 16 should lead to improved quality of financial reporting, which will benefit investors and analysts, as well as companies. Investors who analyse financial information will not have to adjust financial statements for off-balance sheet leases and companies with significant off-balance sheet leases will benefit from managing all leases in the same way for internal and external reporting purposes, which should lead to improved decision-making.

Also, IFRS 16 should lead to improved comparability because companies will recognise assets and liabilities, in essence, for all leases; measure all lease assets and all lease liabilities in the same way; and recognise only the rights that are obtained, and the

liabilities that are incurred, through a lease. As a result, financial statements will reflect the differing operating decisions made by different companies (IASB, 2016a)¹.

The U.S. Securities and Exchange Commission (U.S.SEC) recognized the inadequacies of the existing lease accounting standards and recommended that the FASB undertake a project to reconsider the leasing standards, preferably as a joint project with the IASB (U.S. SEC, 2005)².

In 1996, the G4+1³ published a discussion paper that proposed an approach to lease accounting that would abolish the requirement to classify leases as operating leases or finance leases. Under this approach, a lessee would recognize as assets and liabilities all material rights and obligations arising in a lease contract (McGregor, 1996). Under the G4+1 proposal, lessees recognize the fair value of any assets and liabilities contained in a lease contract. Recognition begins when the lessor makes the property available to the lessee. Thus, lessee balance sheets are expected to reflect additional lease liabilities if this new approach is adopted. The research paper by Imhoff and Thomas (1988) suggests that additional lease liabilities could be substantial. Using the operating lease commitments disclosed under SFAS No. 13, they constructively capitalize operating leases by estimating the present value of operating leases (PVOL) for a sample of 29 airlines and 51 grocery stores. The median PVOL is US\$ 195 million for airlines and US\$ 57 million for grocery stores, and these amounts are 35-40 percent as large as median total on-balance sheet liabilities (Imhoff, Thomas, 1988). The G4+1 published another discussion paper that set out proposals for how the approach described in the 1996 paper might be made to work and included proposals on lessor accounting (Lennard, Nailor, 2000).

The adoption process of IFRS 16 was rather long. The process started in July 2006, when the issue of lease accounting and the development of an appropriate standard were included in the plan of the International Accounting Standards Board (IASB). The discussion paper was published in early 2009, while the standard draft was published in August 2010. However, due to significant updates and reactions, the IASB announced in mid-2011 that it intends to prepare a completely new standard draft. This new draft was published in May 2013, and almost three years later, a new standard – IFRS 16 was finally adopted. The standard was adopted in

November 2017 by the European Union. The start of the application of this standard is foreseen for the beginning of 2019 (European Financial Reporting Advisory Group – EFRAG, 2017)⁴.

2. Theoretical ex ante and ex post framework

Eisfeldt and Rampini (2008: 1647-1650) divided the literature into two parts: (1) theories of leasing (Miller, Upton, 1976; Lewellen et al., 1976; Myers et al., 1976; Smith, Wakeman, 1985; Wolfson, 1985; Kim et al., 1978; Coase, 1972; Bulow, 1986 and (2) empirical literature on leasing (Graham et al., 1998; Krishnan, Moyer, 1994; Sharpe, Nguyen, 1995; Ang, Peterson, 1984; Yan, 2006; Lewis, Schallheim, 1992; Slovin et al., 1990; Ezzell, Vora, 2001; Gilligan, 2004). Lipe (2001: 300) highlights how most empirical research on lessee accounting is based on financial statement analysis as the decision context, with particular emphasis on how unrecorded lease commitments might affect assessments of shareholder risk. Possible reasons for this emphasis are: 1. finance theory links debt-like obligations to risk (Modigliani, Miller, 1958; Hamada, 1969; Rubenstein, 1973; Bowman, 1979, and Christie, 1982); 2. unrecorded leases are large for some companies (Ely, 1995); and 3. mandated disclosures facilitate estimation of the unrecorded obligations (Imhoff et al., 1993).

Before, Eisfeldt and Rampini (2008) and Lipe (2001), Lasfer and Levis (1998: 161-162) show the essential division of leasing and identified the following three main reasons for the existence of leasing: (1) tax differential - if the lessee pays little or no corporation tax, he/she will pass on the capital allowances to the lessor. Part of these allowances will be returned to the lessee through lower rental payments; (2) debt substitutability - leasing can be a substitute for debt finance because both of them reduce debt capacity. However, given the fact that lessors have first claim on the asset leased, leasing is likely to be advantageous for financially distressed companies; and (3) agency costs - modern corporations characterized by a divorce between ownership and control are likely to suffer from the free cash flow problem where managers undertake negative NPV projects. Given that leasing is not an investment decision and lessors have first claim over the asset, it can reduce the agency conflict.

Miller and Upton (1976: 761) state how the choice between renting or buying for any firm would depend on which method of acquiring the services of

capital goods had the lower nonfinancial costs in the sense of the costs of acquisition, maintenance and disposal. Lewellen, Long, and McConnell (1976: 797) went a step further than Miller and Upton (1976) and conclude that environmental factors which can bring about significant differences in the costs of asset purchase and asset leasing will seldom prevail, especially since the tax rate effect on the transaction can go either way. Myers, Dill, and Bautista (1976: 799) present a formula for evaluating financial lease contracts and use it to solve the firm's lease vs. borrow problem, and to examine the economic rationale for leasing. Smith and Wakeman (1985: 895) provide a unified analysis of the various incentives affecting the lease-versus-buy decision and employ that analysis to explain observed variation in corporate leasing policy. Wolfson's (1985: 159) study is designed to augment the buy-versus-lease literature by incorporating risk-sharing motives, moral hazard-related incentive problems and their mitigation, and tax considerations in the choice of how to allocate an asset's property rights. Sale-and-leaseback agreements and enterprise valuation showed up in Kim, Lewellen, and McConnell (1978: 871). Yan (2006: 709) presents a model to incorporate different theories on the substitutability and complementarity between leases and debt, and test the model implications empirically in a GMM framework (generalized method of moments) that simultaneously controls for endogeneity problems and firms' fixed effects and, second, finds that in those firms with more growth options or larger marginal tax rates, or in those firms paying no dividends, the substitutability is more pronounced, i.e., the cost of new debt increases to a larger degree with extra leases. Evidence from Slovin, Sushka, and Polonchek (1990: 289) indicates that the announcements are associated with positive abnormal returns to lessees and they conclude that this positive market reaction results from an overall reduction in the present value of expected taxes occasioned by the transactions. Their evidence, also, suggests that the gains from sale-and-leasebacks accrue solely to lessee firms. Ezzell and Vora (2001: 44-45) begin the paper by confirming the Slovin et al. (1990) finding that lessee equity values increase when new sale and leasebacks are announced. Additionally, they show that lessee equity values remain unchanged when new direct leases are announced; second, that the lessee's tax rate is significantly negatively related to lessee return, that is, the lower the lessee's tax rate, the greater the return from the sale and leaseback

and, also, find that equity value increases are greater for nondividend-paying lessees than for dividend-paying lessees. On the other hand, they show that in direct leases the gains from leasing are lower for high information asymmetry firms that lease assets whose values are sensitive to use and maintenance decisions. Gilligan's study (2004: 1179) uncovers a negative and statistically significant relationship between trading volume and depreciation when evaluated for above-average qualitative uncertainty and below-average leasing frequency which is inconsistent with results contained in the paper by Porter and Sattler (1999).

Therefore, it is important that lease accounting provides users of financial statements with a complete and understandable picture of an entity's leasing activities. The existing accounting model for leases has been criticized for failing to meet the needs of users of financial statements. In particular (IASB, 2009: 14)⁵:

- many users think that operating leases give rise to assets and liabilities that should be recognized in the financial statements of lessees. Consequently, users routinely adjust the recognized amounts in an attempt to recognize those assets and liabilities and reflect the effect of lease contracts in profit or loss. However, the information available to users in the notes to the financial statements is insufficient for them to make reliable adjustments to the recognized amounts.
- the existence of two very different accounting models for leases (the finance lease model and the operating lease model) means that similar transactions can be accounted for very differently. This reduces comparability for users.
- the existing standards provide opportunities to structure transactions so as to achieve a particular lease classification. If the lease is classified as an operating lease, the lessee obtains a source of unrecognized financing that can be difficult for users to understand.

Preparers and auditors, also, have criticized the existing model for its complexity. In particular, it has proved difficult to define the dividing line between finance leases and operating leases in a principled way. Consequently, the standards use a mixture of subjective judgements and 'bright-line' tests that can be difficult to apply. (IASB, 2009: 15)⁵. Changes,

according to PWC (2016)⁶, to the lease accounting standards have a far-reaching impact on lessees' business processes, systems and controls that will require significantly more data around their leases than before given the on balance sheet accounting for almost all leases (i.e. cross-functional approach).

3. Definition of leases

In 2016, the IASB published a report in which they observed that over 14.000 listed companies (of about 30.000 listed companies) disclose information about off balance sheet leases in their latest annual reports. The future payments for off balance sheet leases for those 14.000 listed companies totalled US\$ 2.86 trillion (on an undiscounted basis). The present value of those payments is estimated to be US\$ 2.18 trillion (IASB, 2016)¹⁰. For the purposes of accounting for leases, it is crucial to define, or to recognize, whether the contract is, or contains, a lease. However, the definition of a lease is different from current IFRIC 4 guidance and might result in some contracts being treated differently in the future (PWC, 2016: 3)⁶.

According to Biondi et al. (2011: 3-4), inappropriate distinctions between operating and financing leases are achieved by managers due to the following weaknesses of current lease standards:

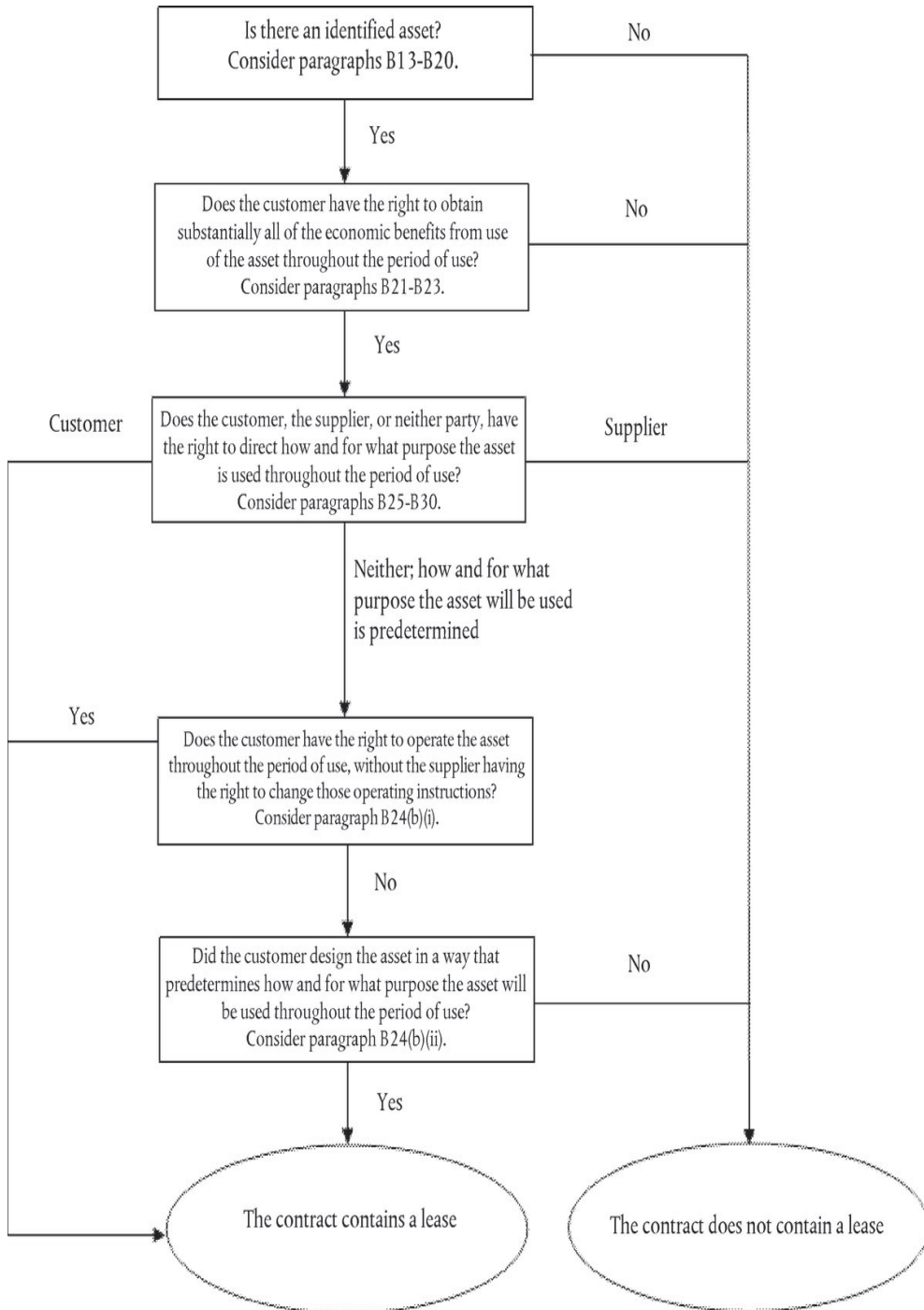
- a) knife-edged accounting, whereby small changes in a transaction lead to large differences in how the transaction is accounted for. Current lease accounting standards create such knife-edged accounting whereby small changes in a transaction can result in either 0% or 100% of the transaction reported on the balance sheet.
- b) bright line tests to determine accounting classifications as described above in point a (e.g., 75% and 90% thresholds in current lease standards) make it easy for managers

to structure transactions to achieve the accounting treatment they desire.

- c) there is lack of symmetry in the way a transaction is accounted for by the lessee and the lessor. Having the same transaction reported differently by the two parties to the same transaction creates lack of comparability and consistency.
- d) scope exceptions create loopholes that can be used by management to defeat the intent of the standard (Jamal, Tan, 2010).
- e) executory service contracts are not considered to be part of the lease standard (and are not reported on the balance sheet), so management can get around the lease standard by structuring a lease transaction as a contract for services and not report any debt (see Ryan et al., 2001).
- f) management can use renewal terms, options and contingent payments to get around the intent of the standard (Jamal, Tan, 2010).
- g) management can use special purpose entities to move leases off balance sheet.

Further, in accordance with paragraph 9 of IFRS 16, this assessment must be carried out at the very beginning of the contract or agreement. It is considered that the agreement is a lease agreement, or it contains lease elements, if it gives the right to control the use of an identified asset over a period of time in exchange for a consideration. It is therefore crucial to determine which asset is the subject of the lease and to determine the existence of control over that asset. Once assessed, the lease contract is not reassessed unless the lease conditions change. In that case, it is necessary to determine again whether the contract is a lease or contains a lease. To determine whether a contract contains a lease, the following decision tree can be used (Figure 1).

Figure 1 Decision tree

Source: IASB, 2017⁷

A certain asset is subject to rent if it is explicitly or implicitly stipulated by the contract and if the lessor cannot and does not have the right to substitute that asset with another. It is considered that by lease agreement the lessor transfers the right of use of a particular asset to a lessee if economic benefits of using the asset during the lease period will flow to the lessee, and the lessee decides on the use of the asset during the lease period.

In the end, leases are different from services because, at the start of a lease, the customer obtains control of a resource (the right to use an item). So the definition and accompanying guidance focus on whether a customer controls the use of an item when the customer has exclusive use of the item for a period of time and can decide how to use it (IFRS, 2015: 3)⁹. In contrast, in a service contract, the supplier retains control of the use of any items needed to deliver the service, even if those items are located at the customer's premises. In such contracts, the customer does not obtain control of a resource at the start of the contract but, instead, commits to purchasing a particular service that it will receive in the future (IFRS, 2015: 3)⁹.

4. Recognition and measurement in the financial statements of the lessee

The most significant changes in the accounting model for the recognition and measurement of leases are related to their accounting treatment in the financial statements of the lessee. The new standard provides only one unique model for the recognition and measurement of all leases instead of the two-model approach used so far (one model for on-balance sheet leases and another model for off-balance sheet leases). With the application of the new lease standard, it will become irrelevant to determine whether it is an operating or finance lease. Furthermore, the lessee will, in both cases, recognize the asset and the lease liability in their financial statements. In other words, there will be a uniform approach to the lessor lease accounting. In doing so, the model to be applied by the lessee is comparable to the current model applicable to finance leases.

4.1 Recognition and measurement

With the adoption of the new standard, the lessee will, in accordance with paragraph 23 of IFRS 16, at initial recognition of the lease, measure the right to use assets at cost. The cost of this asset includes (IFRS 16, paragraph 24):

- a) the amount of the initial measurement of the lease liability;
- b) any lease payments made at or before the commencement date, less any *lease incentives* received;
- c) any *initial direct costs* incurred by the lessee; and
- d) an estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, unless those costs are incurred to produce inventories. The lessee incurs the obligation for those costs either at the commencement date or as a consequence of having used the underlying asset during a particular period.

As apparent from the aforementioned, the amount recognized as an asset under the lease contract is based primarily on the present value of the liability and not on the value of the asset as such. However, the cost includes all the related costs normally associated with the acquisition of long-term intangible and tangible assets.

At the commencement date, the lessee shall measure the lease liability at the present value of the lease payments that are not paid at that date. The lease payments shall be discounted using the interest rate implicit in the lease, if that rate can be readily determined. If that rate cannot be readily determined, the lessee shall use the lessee's incremental borrowing rate (IFRS 16, paragraph 26).

The interest rate included in the lease can be relatively easily determined for lease agreements that involve the transfer of ownership of the asset, which is the subject of the lease contract, at the end of the lease period. Furthermore, determining the interest rate that will equalize the contractual cash flows with the fair value of the leased asset in the aforementioned case will result with the interest rate implicit in the lease. However, if asset ownership is not transferred nor will be transferred, the determination of interest rate to be applied in measurement of lease asset and liabilities is usually not possible. In that case, it is much more practical and in accordance with the standard to apply the interest rate at which the lessee would be able to get financing at that time and for a similar financing period.

This means that the lessee will have to calculate the present value of the liability upon initial recognition

of the assets and liabilities so that the contractual amount of the lease is discounted to the present value using the interest rate to be determined on the level of the interest rates that company is currently paying, or would be paying, to creditors (source of financing). Then, the present value would be determined as follows:

$$Present\ value = \sum_{i=1}^n \frac{N_i}{r^i}$$

$$r = 1 + \frac{p}{100}$$

Where:

n ... total number of rent payments (compounding periods)

N_i ... rent amount (payment) in the period i

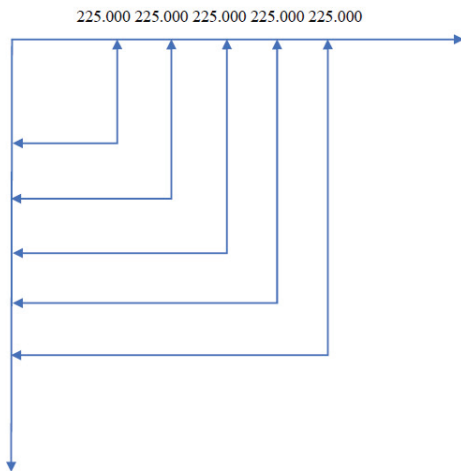
p ... discount rate for one compounding period (in the case of monthly payments that would be a monthly discount rate).

If the amount of each payment is equal (annuity payments), then this calculation can be simplified by using the following annuity formula:

$$Present\ value = N \times \frac{r^n - 1}{r^n \times (r - 1)}$$

This can be shown on a graph, as follows:

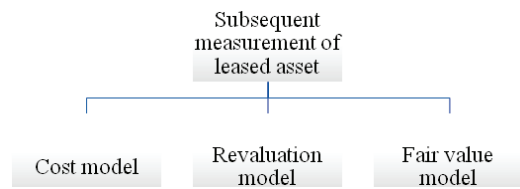
Figure 2 Present value determination



Source: Authors' work

Based on this initially recognized amount, subsequent measurement of recognized asset and liability will be carried out according to the applicable standard in a particular situation. This means that the assets recognized under the lease will be subsequently measured at cost and depreciated over the useful life of the lease period according to IAS 16 – Property, Plant and Equipment. However, it is also permitted to subsequently measure the leased asset at revalued amounts if the lessee's accounting policy for that type of asset is the revaluation model for subsequent measurement (IAS 16). However, if the leased asset is subleased or, in other words, released by the lessee and the asset satisfies the definition of investment property measured at fair value, this asset must be measured at fair value according to IAS 40 – Investment Property.

Figure 3 Alternative subsequent measurement models for the leased asset



Source: Authors' work

Subsequent measurement of lease liability is based on the initially recognized amount by (IFRS 16, paragraph 36):

- a) increasing the carrying amount to reflect interest on the lease liability;
- b) reducing the carrying amount to reflect the lease payments made; and
- c) re-measuring the carrying amount to reflect any reassessment or lease modifications, or to reflect revised in-substance fixed lease payments.

Therefore, it follows that the subsequent measurement of liabilities is in fact equal to the regular measurement of liabilities, for example, loans set in the International Financial Reporting Standard 9 – Financial Instruments. In other words, the initial amount recognized is increased by interest accrued by applying the interest rate determined at the beginning of the lease term on the outstanding principal. This will also require an allocation of total amount of payment to principal repayment and payment of interest accrued.

4.2 Exemptions

This complex approach to recognition and measurement of leases has to be applied to all lease agreements, but two. A company can choose not to apply the regular approach to recognition and measurement of the lease to either short-term leases or leases for which the underlying asset is of low value. Paragraph 6 of IFRS 16 prescribes that the lessee in that case may choose to recognize all payments associated with such leases as an expense either on a straight-line basis during the lease period or on some other systematic basis. The lessee shall apply another systematic basis if that basis is more representative of the pattern of the lessee's benefit.

A short-term lease is a lease that, at the commencement date, has a lease term of 12 months or less. The same exemption applies to a lease where the underlying asset is of low value. In this case, the lease term is not important because the exemption is based on the low value of the asset. However, unlike for short-term leases, "low value" is not defined by an absolute number, nor can it be related to the size of the company. Examples of such assets can be computers, printers, etc. Although the standard does not specify the top limit for the "low value" asset, at the time the standard was drafted, the amount of US\$ 5,000 was considered, which could serve as a guideline for determining the significance of the leased asset.

4.3 Implications of changes in the accounting model for leases

In addition to the additional recognition and measurement requirements for assets and liabilities, the application of a new lease model will result in an increase in leverage (gearing) of the lessee, as existing liabilities will be increased for those relating to operating leases that were off-balance sheet according to the current lease standard.

Figure 4 Implications of the new lease model on the lessee's statement of financial position

Statement of financial position	
Right-to-use asset	Non-current lease liability
	Current lease liability

Source: Authors' work

For companies that have material off-balance sheet leases (operating leases), application of the new lease model will result in an increase in lease assets and financial liabilities. As a result of an increase in non-current assets, the asset turnover ratio will decrease, implicating the lower efficiency of the asset. Recognition of lease liabilities will also increase current liabilities (for the part due within 12 months), which will decrease the liquidity of a company, since current assets are not affected by new lease accounting.

The carrying amount of lease assets will normally decrease more quickly than the carrying amount of lease liabilities. This will result in a reduction in reported equity compared to IAS 17 for companies with material off-balance sheet leases. This is similar to the effect on reported equity that arises from financing the purchase of an asset, either through a former on balance sheet lease or a loan (IASB, 2016a). Accrued interest expenses will be recognized under financial expenses in the income statement. Furthermore, there will be a change in operating expenses as well. According to the current lease model, the lessee recognizes accrued rent expense on a straight-line basis as part of operating expense in the total amount of payment made. The new model allocates the total amount of payment on interest expense and depreciation expense, hence decreasing the amount of operating expenses. Consequently, the EBITDA will increase, as it excludes interest and depreciation, which are now fully included as rent expense and are not excluded from calculation of this indicator. EBIT, or operating profit, will also be higher, but only for the amount of interest expenses included in financial expenses.

Figure 5 Implications of the new lease model on lessee's income statement

Income statement	
Depreciation expenses	Operating expenses
Interest expense	Financial expenses

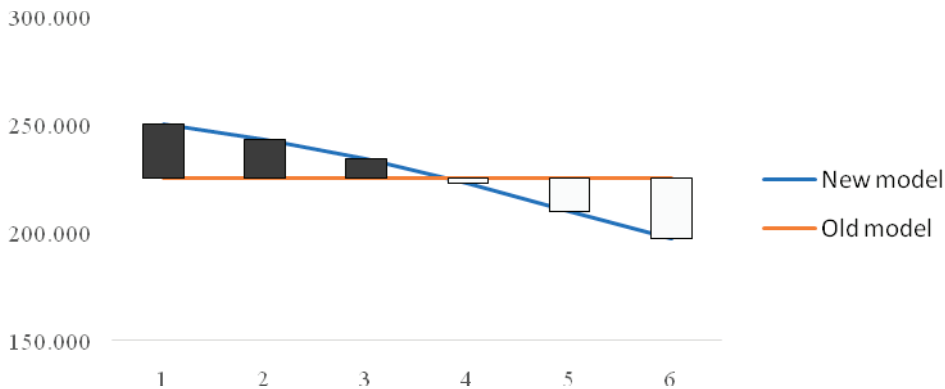
Source: Authors' work

Due to the fact that rent expense, which is mainly recognized on a straight-line basis, is substituted by depreciation expense (which will mainly be recognized on a straight-line basis also), and

the interest expense accrued on the outstanding lease liability, and thus does not have a linear effect over the lease period, there will be *ceteris paribus*, a decrease in income in the initial years of the lease agreement compared to the existing

model. However, in the later years of the lease agreement, this relation will be reversed. The following figure shows the impact of the current and new lease model on total costs in the income statement.

Figure 6 Comparison of total costs in the income statement according to the “new model” and the “old model”



Source: Authors' work

Finally, application of the new model will also have implications on reporting cash flows. Payments made under the current lease model are included in cash flows from operating activities as rent payment. Since payment is comprised of interest payment and principle repayment under the new lease model, this means that it will also be presented differently in the statement of cash flows. Repayment of principal will be presented in financing activities, and interest payment will be presented, depending on the chosen accounting policy, in operating or financing activities. There will be no change to the total net cash flow, but, the operating cash flow will increase.

Figure 7 Implications of the new lease model on lessee's statement of cash flows

Statement of cash flows	
Principle repayment	Financing activity
Interest payment	Financing / Operating activity

Source: Authors' work

Since operating income will increase by the amount of interest expense in the lease payment that is ex-

cluded from operating expenses, and net operating cash flow will increase by the amount of lease principal in the lease payment that is excluded from operating activity, this will impact the quality of earnings ratio. The impact will depend on the length of the lease period, interest rate and the amount of principal outstanding. Different than for other financial statements, impact on the cash flow statement would be only structural. The same amount of cash would be used by an entity for lease payments and, consequently, total net cash flow will be the same. Instead, cash flow from operating activities will increase and cash flow from financial activities will be decreased by the principal payment. There will be no impact on investment activities, or it will be limited to prepayments. This is because only cash or cash equivalent, which will be used for asset acquisition, is limited to advance payment at the beginning of the lease.

The impact of adopting the new standard on statement of changes in equity will be reflected only in the fact that profit or loss for the year is going to be different. The direct impact of applying IFRS 16 will be limited only to the first year and the transition effect. However, due to a different transition model adopted by the standard, even this impact could be eliminated.

5. Recognition and measurement in the financial statements of the lessor

Accounting for leases in the financial statement of the lessor did not experience such significant changes. The lessor will continue to classify the lease as operating or finance lease. According to paragraph 63 of IFRS 16, a lease is classified as a finance lease if:

- a) the lease transfers ownership of the underlying asset to the lessee by the end of the lease term;
- b) the lessee has the option to purchase the underlying asset at a price that is expected to be sufficiently lower than the fair value at the date the option becomes exercisable for it to be reasonably certain, at the inception date, that the option will be exercised;
- c) the lease term is for the major part of the economic life of the underlying asset even if title is not transferred;
- d) at the inception date, the present value of the lease payments amounts to at least substantially all of the fair value of the underlying asset; and
- e) the underlying asset is of such a specialized nature that only the lessee can use it without major modifications.

Figure 8 Expected impact on lessees with significant operating leases

Metric	What it Measures Calculation	Calculation	FRS 116 effect *	Explanation
Leverage (gearing)	Long term solvency	Liability/ Equity	Increase	Increase because financial liabilities increase (and equity is expected to decrease).
Current Ratio	Liquidity	Current Asset/ Current Liability	Decrease	Decrease because current lease liabilities increase while current assets do not.
Asset turnover	Profitability	Sales/Total Asset	Decrease	Decrease because lease assets will be recognised as part of total asset
EBIT (Earnings before interest and tax)	Profitability	Various	Increase	Increase because the depreciation charge added is lower than the expense for off balance sheet leases excluded.
EBITDA (Earnings before interest, tax and depreciation)	Profitability	Various	Increase	Increase because expenses for off balance sheet leases are excluded.
Operating cash flow	Profitability	Various Methods	Increase	Increase because at least part of the lease payments (those payments relating to the principal) will be moved to the financing section of the cash flow statement.
Net cash flow	Profitability and liquidity	Difference between cash inflows and cash outflows	No change	No change because cash will not be affected.

* FRS 116 Leases as the Singapore equivalent of IFRS 16 according to ISCA (2016: 1)

Source: Extracted from IASB's IFRS 16 - Effect Analysis according to ISCA (2016: 4)⁸

If the lease is a finance lease, the leased asset will be derecognized, and the receivable will be recognized, while lease payments will be allocated to the interest income and the initially recognized lease receivables. If the lease is an operating lease, the lessor will continue to recognize the asset that is the subject of the lease contract and will continue to depreciate leased asset in its business books as well as recognize rent income in the agreed amount shown in Figure 8.

6. Conclusion

Like any other change in standards, this change in accounting for leases carries new demands that need to be taken into account when preparing financial statements. Recognition of leases under the new model will significantly change the financial statements of the lessees. Operating leases will not

have accounting benefits for the lessee, anymore. Operating leases will be accounted for in the same way as finance leases. Therefore, companies that have significant assets leased under operating lease will show a great increase in leverage (gearing). The positive effect is reflected in the increase of commonly used profitability measures used in various analyses, as well as for estimating the value of the company itself. Other than financial ratios, the new standard might also have a negative influence on the borrowing costs and debt covenants for the lessee. Future research in this field could be focused on the investigation of total cost that occurred in the implementation of a new accounting model. Also, it would be important to investigate whether the expectations of financial statement users are achieved. Finally, it would be interesting to investigate the relation of those two aspects and make some cost-benefit analysis.

REFERENCES

1. Biondi, Y., Bloomfield, R. J., Glover, J. C., Jamal, K., Ohlson, J. A., Penman, S. H., Eiko Tsujiyama, E., Wilks, T. J. (2011), "A Perspective on the Joint IASB/FASB Exposure Draft on Accounting for Leases", *Accounting Horizons*, Vol. 25, No. 4, pp. 1-14, available at: <http://ssrn.com/abstract=1768083> (Accessed on: February 15, 2019)
2. Ezzell, J. R., Vora, P. P. (2001), "Leasing versus Purchasing: Direct Evidence on a Corporation's Motivations for Leasing and Consequences of Leasing", *Quarterly Review of Economics and Finance*, Vol. 41, No. 1, pp. 33-47.
3. Gilligan, T. W. (2004), "Lemons and Leases in the Used Business Aircraft Market", *Journal of Political Economy*, Vol. 112, No. 5, pp. 1157-1180.
4. Imhoff, E. A., Thomas, J. K. (1988), "Economic consequences of accounting standards: The lease disclosure rule change", *Journal of Accounting and Economics*, Vol. 10, No. 4, pp. 277-310.
5. Kim, E. H., Lewellen, W. G., McConnell, J. J. (1978), "Sale-and-leaseback Agreements and Enterprise Valuation", *Journal of Financial and Quantitative Analysis*, Vol. 13, No. 5, pp. 871-881.
6. Lasfer, M. A., Levis, M. (1998), "The Determinants of the Leasing Decision of Small and Large Companies", *European Financial Management*, Vol. 4, No. 2, pp. 159-184.
7. Lennard, A., Nailor, H. (2000), "Leases: implementation of a new approach", Series No. 206-A., Norwalk: Financial Accounting Standards Board.
8. Lewellen, W. G., Long, M. S., McConnell, J. J. (1976), "Asset Leasing in Competitive Capital Markets", *Journal of Finance*, Vol. 31, No. 3, pp. 787-798.
9. Lipe, R. C. (2001), "Commentary: Lease Accounting Research and the G4+1 Proposal", *American Accounting Association Accounting Horizons*, Vol. 15, No. 3, pp. 299-310.

10. McGregor, W. J. (1996). Accounting for leases: a new approach: recognition by lessees of assets and liabilities arising under lease contracts, Norwalk: Financial Accounting Standards Board.
11. Miller, M., Upton, C. (1976), "Leasing, Buying, and the Cost of Capital Services", *Journal of Finance*, Vol. 31, No. 3, pp. 761-786.
12. Myers, S. C., Dill, D. A., Bautista, A. J. (1976), "Valuation of Financial Lease Contracts", *Journal of Finance*, Vol. 31, No. 3, pp. 799-819.
13. Slovin, M. B., Sushka, M. E., Poloncheck, J. A. (1990), "Corporate Sale-and-leasebacks and Shareholder Wealth", *Journal of Finance*, Vol. 45, No. 1, pp. 289-299.
14. Smith, C. W., Jr., Wakeman, L. M. (1985), "Determinants of Corporate Leasing Policy", *Journal of Finance*, Vol. 40, No. 3, pp. 895-908.
15. Tai, B. Y. (2013), "Constructive Capitalization of Operating Leases in the Hong Kong Fast-Food Industry", *International Journal of Accounting and Financial Reporting*, Vol. 3, No. 1, pp. 128-142.
16. Wolfson, M. A. (1985), "Tax, Inventive, and Risk-sharing Issues in the Allocation of Property Rights: The Generalized Lease-or-buy Problem", *Journal of Business*, Vol. 58, No. 2, pp. 159-171.
17. Yan, A. (2006), "Leasing and Debt Financing: Substitutes or Complements?", *Journal of Financial and Quantitative Analysis*, Vol. 41, No. 3, pp. 709-731.

ENDNOTES

- 1 IASB (2016a), "Effects Analysis International Financial Reporting Standard 16 – Leases", available at: <https://www.ifrs.org/-/media/project/leases/ifrs/published-documents/ifrs16-effects-analysis.pdf> (Accessed on: October 15, 2018)
- 2 U.S. SEC (2005), "Report and Recommendations Pursuant to Section 401(c) of the Sarbanes-Oxley Act of 2002 On Arrangements with Off-Balance Sheet Implications, Special Purpose Entities, and Transparency of Filings by Issuers", available at: <https://www.sec.gov/news/studies/soxoffbalancerpt.pdf> (Accessed on: October 15, 2018)
- 3 The G4+1 comprises members of national standard-setters of Australia, Canada, New Zealand, the United Kingdom and the United States and of the International Accounting Standards Committee (the IASB's predecessor organization).
- 4 EFRAG, (2017), "The EU Endorsement Status Report - Position as at 6 July 2017", available at: <http://www.efrag.org> (Accessed on: October 15, 2018)
- 5 IASB (2009), "Leases - Preliminary Views", Discussion Paper DP/2009/1, International Accounting Standards Board, March 2009, available at: <http://archive.ifrs.org/Current-Projects/IASB-Projects/Leases/DPMar09/Documents/DPLEasesPreliminaryViews.pdf> (Accessed on: October 15, 2018)
- 6 PWC, (2016), IFRS 16: The leases standard is changing – are you ready?, available at: <https://www.pwc.com.au/> (Accessed on: February 20, 2019)
- 7 IASB (2017), "International Financial Reporting Standard 16 – Leases", Official Journal of the European Union, Volume 60, L 291/1, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1986&from=LT> (Accessed on: October 15, 2018)
- 8 ISCA, (2016), "Getting Ready for FRS 116 (Leases)", available at: https://isca.org.sg/media/779571/isca_lease-accounting-report.pdf (Accessed on: February 20, 2019)
- 9 IFRS, (2015), "Leases: Definition of a Lease", available at: <https://www.ifrs.org/-/media/project/leases/project-updates/project-update-definition-lease-february-2015.pdf> (Accessed on: February 20, 2019)
- 10 IASB, (2016), "IFRS 16 Leases Illustrative Examples", available at: <http://www.ifrs.org> (Accessed on: October 15, 2018)

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UČINCI NOVOG RAČUNOVODSTVENOG MODELA ZA NAJMOVE

SAŽETAK

Najmovi se često pojavljuju kao praktičan način osiguranja neke imovine. Prednost najmova je u lakoj zamjeni i manjem angažiranju resursa za nabavu imovine. Međutim, ponekad najmovi, ovisno o njihovom obliku, služe i za prikrivanje financiranja kroz tzv. izvanbilančno financiranje. S ciljem eliminacije ovih nepoželjnih učinaka, IASB je usvojio novi standard za najmove – MSFI 16. Ključna promjena u odnosu na prethodni računovodstveni model priznavanja najmova je upravo na strani najmoprimca. Ova promjena rezultira priznavanjem obveza praktično u svim oblicima najmova. Dakako, ovo sa sobom povlači i priznavanje odgovarajuće imovinske stavke. Rezultat ovog pristupa je i značajno drugačije priznavanje naknade tijekom vremena korištenja najma. Ovo se posebno odnosi na operativne najmove kod kojih se prema postojećem modelu ne priznaju imovina i obveze, a učinak na dobit i gubitak je temeljen na linearnom modelu koji najčešće odgovara ugovorenoj dinamici plaćanja najamnina.

Ključne riječi: najam, operativni, financijski, MSFI 16, sadašnja vrijednost, diskontiranje

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CROATIAN ADJUSTMENT TO THE FREEDOM OF MOVEMENT FOR WORKERS AND ITS EFFECT IN THE PERIOD AFTER ACCESSION TO THE EUROPEAN UNION

ABSTRACT

Freedom of Movement for Workers in the European Union is one of the most attractive topics during the accession of new states to the membership of the European Union. Free movement of workers allows citizens of the Member States to look for new and better working conditions within the borders of the European Union. Free movement of workers was the subject of the second chapter of the accession negotiations between Croatia and the European Union. To enable not only its own citizens, but also the citizens of other EU Member States to move freely, Croatia had to adjust relevant legislation and tailor the governing systems in the state. The changes that were necessary within the Croatian legislation in order to fully align it with the *acquis* were connected to non-discrimination policies towards migrant workers. It was necessary to put in effort towards changing and adapting legislation and developing administrative abilities for coordination of social security systems. In addition, it was necessary to join the EURES network and introduce European Health Insurance Card. The government bodies in charge of supervising the free movement of workers in the sense of the social security are the Croatian Pension Insurance Institute, the Croatian Health Insurance Fund and the Croatian Employment Service.

Keywords: Free movement of workers, Croatia

1. Introduction

Croatia signed the accession treaty with the European Union on 9 December 2011. The negotiation process preceding the accession lasted ten years, and it was the longest negotiation process compared to other Member States. During the negotiation process, Croatia opened and closed 35 negotiation chapters, and had aligned its legislation with the

Community *acquis* thus meeting the preconditions for equal participation in the membership and work of the institutions of the EU. Croatia's chronological path to gaining full EU membership was as follows:

- *October 2001 the Stabilisation and Association Agreement signed – it represents a special type of an agreement of accession that the EU offered to the countries in the Stabilisation*

and Accession Process. The agreement allows the signing state the status of a potential candidate for the membership in the EU

- *February 2003 Croatia applies for EU membership*
- *20 July 2003 the president of the European Commission Romano Prodi delivers the Questionnaire with 4560 questions to the Croatian Government*
- *20 April 2004 the European Commission gives a positive Opinion (Avis) on Croatia's application for membership in the European Union and suggests the start of the negotiations with Croatia*
- *18 June 2004 the European Commission accords Croatia the status of a candidate country*
- *3 October 2005 start of the accession negotiations – the opening of the negotiations was late due to the lack of cooperation with the Hague court (ICJ)*
- *30 June 2011 end of the accession negotiations*
- *9 December 2011 Croatia and the European Union sign the accession treaty*
- *July 2013 Croatia becomes a full-fledged member of the European Union.*

During the negotiation phase, Croatia opened and closed 35 negotiation chapters in order to align its legislation with the Community *acquis*. The accession negotiation chapters comprised the following areas:

1. Free Movement of Goods
2. Freedom of Movement for Workers
3. Right of Establishment and Freedom to Provide Services
4. Free Movement of Capital
5. Public Procurement
6. Company Law
7. Intellectual Property Law
8. Competition Policy
9. Financial Services
10. Information Society and Media
11. Agriculture and Rural Development

12. Food Safety, Veterinary and Phytosanitary Policy
13. Fisheries Policy
14. Transport Policy
15. Energy
16. Taxation
17. Economic and Monetary Policy
18. Statistics
19. Social Policy and Employment
20. Enterprise and Industrial Policy
21. Trans-European Networks
22. Regional Policy and Coordination of Structural Instruments
23. Judiciary and Fundamental Rights
24. Justice, Freedom and Security
25. Science and Research
26. Education and Culture
27. Environment
28. Consumer and Health Protection
29. Customs Union
30. External Relations
31. Foreign, Security and Defence Policy
32. Financial Control
33. Financial and Budgetary Provisions
34. Institutions
35. Other Issues.

The second negotiation chapter – Freedom of Movement for Workers – represents the key chapter for one of the “four freedoms” which support the Single European Market, that is, the Internal Market of the EU. This allows free movement for workers who seek better work conditions and, consequently, better life conditions. Free movement of people relates to the freedom of employment and the access to the labour market in a non-native country and to the freedom of movement of the worker's family, together with social security including the health insurance. This paper will present the complete negotiation process between the Republic of Croatia and the European Union regarding the second negotiation chapter Freedom of Movement for Workers and the process of adjusting the system of

employment and the social system with the *acquis* through the revision of the screening reports, negotiation stances and progress reports. The paper will finish with the overview of the movement of workers after Croatia joined the EU and try to answer whether Croatia has been successful in ensuring the freedom of movement for workers from other Member States.

2. Legal ground for the freedom of movement for workers

Freedom of movement for workers is a sub-division of the freedom of movement of persons which is one of the four cornerstones of the European Single Market, i.e. free movement of goods, capital, services, and persons. The legislative basis for the freedom of movement for workers is Article 3 (1) of the Treaty on European Union (Treaty on European Union, 2016¹), Article 4 (2) point (a) and Articles 20, 26, and 45 – 48 of the Treaty on the Functioning of the European Union (The Treaty on the Functioning of the European Union, 2016²). The mentioned Articles of the Agreement are based on the non-discrimination principle on the basis of citizenship of workers from the Member States with regard to their employment, wages and other working and employment conditions. Furthermore, it is based on the Directive 2004/38/EC of the European Parliament on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States; Regulation (EU) No 492/2011 on freedom of movement for workers within the Union; Regulation (EC) No 883/2004 on the coordination of social security systems and its implementing Regulation (EC) No 987/2009. Each citizen of the Member State has the right to seek employment in other Member States in accordance with the legislation which applies to the national workers. The migrant worker has the right to get the same assistance as national workers from the national employment agency of the host Member State without discrimination on the grounds of nationality and the right to stay in the host country in search of an employment and during the job applications. These rights apply equally to all migrant workers from the Union regardless if they have long-term contracts, fixed-term contracts, if they are seasonal workers or offering cross-border provision of services. Workers cannot be discriminated against – for example, the demands for knowing a

language cannot exceed the needs of the workplace and of what is sensible.

Regulation (EU) No 492/2011 on freedom of movement for workers within the Union, with its provisions or more specifically Article 7, has kept the principle of equal treatment and has established that the worker who is a citizen of the Member State, may not, in the territory of another Member State, be treated differently from national workers by reason of his nationality in respect of any conditions of employment and work. Article 9 says that a worker who is a national of a Member State and who is employed in the territory of another Member State shall enjoy all the rights and benefits accorded to national workers in matters of housing (Regulation (EU) No 492/11, 2011³).

Directive 2004/ 38 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States takes into consideration new legal and political circumstances created by EU citizenship. It leans on the EU citizenship as the legal basis for the citizens of the Member States and their family members to the right to move and reside within the Member States (Goldner Lang, 2007).

Article 6 of Directive 2004/38 gives Union citizens the right of residence on the territory of another Member State for a period of up to three months without any conditions or any formalities other than the requirement to hold a valid identity card or passport. That Directive determines that after five years of residing in the host Member State, the worker and family members gain the right of permanent residence in the host Member State (Directive 2004/38/EC, 2004⁴).

By accession to the European Union, each Member State gains these four freedoms. Croatia has acquired all the rights and obligations after gaining full membership in the European Union. The rights regarding the freedom of movement for workers established through the Stabilisation and Association Agreement (Stabilisation and Association Agreement between the Republic of Croatia and the European Communities and their Member States⁵) entail:

- the right to work without the work permit (after the end of a transition period if it is determined)

- equal treatment in seeking employment in the territory of another Member State as nationals of that State
- the right to the same social benefits as national workers of the host Member State
- the right of family members to join the worker and receive family benefits
- complete coordination between social security systems (pensions and contributions)
- mutual recognition of qualifications.

The accession of a country to the EU presents workers with the opportunity to migrate and find better working conditions elsewhere. Mobility of the workforce is necessary for successful functioning of the Internal Market, stimulating employment rates and economic growth. Free movement of workers is a field of special importance for the EU. However, it does entail some negative aspects such as sudden weakening of an economic sector to which migrating workers belong. To avoid disturbances of the Internal Market by the accession of a new country to the EU and potential sudden migration wave, the EU can set limitations to the freedom of movement for workers. One of the measures is the transition period, which usually lasts for seven years and can be introduced by individual governments for the new members. During the transition period, the workers of the new Member State have to possess residence and work permits, same as workers from non-member countries.

3. Chapter 2. - Freedom of Movement for Workers

The 6th Intergovernmental Conference was held on 17 June 2008 in Luxembourg during which Croatia and the EU officially opened the second chapter of the accession negotiations entitled Freedom of Movement for Workers. Preceding the framework of that chapter, a screening report concerning the free movement of workers in Croatia was adopted in January 2007. The report outlined the main tasks for Croatia and the issues that needed to be amended and adjusted within its system to ensure the freedom of movement for workers in EU Member States. The part of the *acquis* concerned with the access to the labour market and requiring alignment was non-discriminatory treatment based on

nationality, residence and language towards the workers who are legally employed in a non-native country. Essential parts of the *acquis* regarding the free movement of workers (in the moment of opening the second negotiation chapter) were:

- the Treaty on European Union (now the Treaty on the Functioning of the European Union)
- Council Regulation No 1612/68 of 15 October 1968 on freedom of movement for workers within the Community
- Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States amending Regulation (EEC) No 1612/68 and repealing Directives 64/221/EEC, 68/360/EEC, 72/194/EEC, 73/148/EEC, 75/34/EEC, 75/35/EEC, 90/364/EEC, 90/365/EEC and 93/96/EE
- Council Directive 98/49/EC of 29 June 1998 on safeguarding the supplementary pension rights of employed and self-employed persons moving within the Community.

Principal tasks for Croatia are: the participation in the EURES system (European Employment Services) aimed at promoting the freedom of movement for workers within the Community by close cooperation between national employment services to exchange information on employment opportunities and using all social rights (through coordination between social security systems of Member States) such as pension and health care insurance. The health care insurance entails health care coverage for citizens of the European Union during the stay in any of the Member States. To this end, a European Health Insurance Card has to be issued to all nationals (Screening Report Croatia, 2007⁶).

3.1 The state of the freedom of movement for workers before the negotiations – overview and necessary measures

As for the freedom of movement for workers, the situation in the Republic of Croatia allowed for fast adjustment to the *acquis*. In the context of freedom of employment and social security rights through the coordination of social security systems, there

were certain conditions that needed to be amended, as described below.

Generally, the employment of foreign workers in Croatia was regulated by the Act on Foreigners which has been in force since 2004. Pursuant to this legislation, foreigners may work if they hold a work permit; at the time when the accession negotiations started, the same conditions for work permits were applied to nationals of third countries and for migrant workers from the EU (Screening report Croatia, 2007). This was a logical concept of the state towards non-citizens although there were some exceptions. According to the data delivered by the Croatian authorities (Ministry of the Interior as the supervising body), EU nationals and their family members were favoured in procedures allowing them to work without a work permit if they held key positions in a company as defined by the SAA, i.e. work permits were granted to them outside the annual work permit quota for the non-citizens of the Republic of Croatia (Screening report Croatia, 2007). In this manner Croatia showed flexibility which led to the easier adjustment to the *acquis* in this specific area. In April 2005, a task force was formed to analyse the Act on Foreigners and start creating its amendments to ensure the abolition of work permits and business permits as a condition of employment of EU citizens and their family members in Croatia. The amendments of the Act provided the abolition of work permits also for positions of government employees (when these posts did not involve the exercise of State power). Foreigners would be able to be employed as civil servants only with the prior approval by the central State administration body competent for civil servants' affairs, independent of the country from which the worker originates (Screening report Croatia, 2007). This was the beginning of alignment to the *acquis* concerning the employment of the foreign workers.

Further on, there were language requirements good knowledge of the Croatian language in the fields of health care and primary education (Screening report Croatia, 2007). The Republic of Croatia was aware that the language prerequisite should be applied in certain cases under the proportionality test. Taking into consideration the previously mentioned and the legal importance of the regulation (vertical and horizontal directive effect), Croatia undertook that it would, from the day it becomes a full member of the EU, directly apply the relevant directives and Regulation 1612/68, and in that sense it was not

necessary to alter the Croatian legislation (Government of the Republic of Croatia, 2007).

To allow an unemployed foreign person to register with the Croatian Employment Service, it was necessary to have permanent residence. This regulation had to be changed by the end of 2007 through the amendments of the Act on Employment Mediation and Unemployment Rights.

Family members of EU migrant workers had the right to temporary residence for the purpose of family reunion regardless whether they were citizens of EU Member States or third countries. The residence permit of an EU migrant worker could have been revoked in case his work or business permit expired with the same effect on family members (Directive 2004/38, 2004). The Directive is explicit about that question taking into consideration that most often migrant workers use the possibility of family reunion. The amendments to the Act on Foreigners aimed at regulating the independent stay of family members of an EU migrant worker in the case of worker's death, divorce, etc. as well as the approval of permanent residence to EU migrant workers and their family members (Directive 2004/38/EC, 2004). This is one of the more popular measures in the European Union regarding the freedom of movement for workers.

Migrant workers who gained permanent residence and are issued work permit in Croatia must register in the pension insurance scheme when they start working. They enjoy the same rights and obligations as Croatian nationals and pensions are paid directly to beneficiaries in their country of residence (Directive 2004/38/EC, 2004). In the negotiation chapter from 2007, the Government of Croatia concluded that, in relation to the supplementary pension systems, the alignment with the Directive 98/49/EC is necessary for the third pillar of the pension system – voluntary pension insurance based on individual capital savings, in the part which concerns closed voluntary pension funds. The purpose of the mentioned Directive is preservation of the rights of the beneficiaries of supplementary pension systems who use the right to freedom of movement from one state to another, and that relates to pensions from obligatory and voluntary pension systems. Further on, in the negotiation chapter from 2007, the Government of Croatia states that for the purpose of implementation of Directive 98/49/EC it was necessary

to begin with drafting of amendments of the Act on Pension Insurance Companies and Pensions Based on Individual Capitalized Savings. In this regard, Act on Amendments to the Compulsory and Voluntary Pension Funds Act was passed in the Croatian Parliament on 21 June 2007. These legislative changes and amendments would, from the day that Croatia joined the Union, allow migrant workers from EU Member States the access to the voluntary pension insurance regardless of their residence because the amended act eliminated the requirement of permanent residence in the Republic of Croatia as a prerequisite for voluntary pension insurance. In addition, new terms were introduced – supplementary pension system and supplementary pension, which previously had not been regulated in Croatian legislation, as well as the term posted worker, which was previously legislated only in the system of generational solidarity – the first pillar of the pension insurance. With regard to payment of contributions for posted workers, sponsors of the closed pension fund were obliged to ensure continuation of payment of contributions to the personal account of the posted worker was introduced. Further on, cross-border payment of contributions was introduced, as well as the obligation to notify the beneficiary and potential beneficiaries of rights on the contributions and possibilities which are offered when migrating to work in another Member State.

Croatian self-evaluation regarding the free movement of workers was positive. The amendments, which were necessary within the Croatian legislation in order to align its legislation with EU rules on access to the labour market, were connected to non-discrimination policies toward migrant workers. It was necessary to work towards amendments of legislation and development of administrative coordination of social security systems. Further efforts were needed to develop participation in the EURES network as well as in view of the introduction of the European Health Insurance Card. The government bodies in charge of supervising the free movement of workers in the sense of social security are the Croatian Pension Insurance Institute, the Croatian Health Insurance Fund and the Croatian Employment Service.

4. Progress of Croatia in adjustments to the *acquis*

After detecting the state of the Croatian system regarding the implementation of free movement of workers, European Commission had created a Monitoring report on Croatia's accession preparations every year from the beginning to the end of the negotiations. Altogether, five reports were written in the period from 2007 to 2011.

In the **2007 progress report** regarding the second negotiation chapter, it was established that there had been adjustments and amendments to the Act on Foreigners in terms of abolishing work permits for the citizens of EU Member States their family members, and the amendments would enter into force from the moment Croatia becomes a full member of the Union. There had been no progress made regarding participation in EURES; there were still some discrepancies due to language barriers of potential EURES advisors. The infrastructure for gathering information for the EURES platform from the Croatian Employment Service regarding vacancies on the labour market was not enabled. No progress had been made concerning the improvement of the administrative coordination of social systems, as well no progress around the introduction of the European Health Insurance Card (Commission of the European Communities, 2007⁸).

The progress report from 2008 showed further development regarding the second negotiation chapter. Amendments to the Act on Pension Insurance Companies and the Payment of Pensions Based on Individualised Capital Savings were adopted aiming at enabling cross-border payment of pension benefits in the supplementary pension scheme. In addition, Act on Amendments to the Act on Employment Mediation and Unemployment Rights were made, which allowed migrant workers from other Member States the same assistance from the Croatian Employment Service with the process of finding employment as for Croatian workers. The organisational structure of the Croatian Employment Service was adjusted and administrative capacity strengthened but gaps remained in the language skills of potential EURES advisers and in connection to the EURES portal ensuring that all job vacancies of the public employment services were displayed on its public website. No progress had been made regarding coordination of social security systems and administrative capacity was still insufficient.

Preparations were ongoing for the introduction of the European Health Insurance Card (Commission of the European Communities, 2008⁹). In conclusion, a satisfactory level of legal alignment had been reached, but sustained efforts were needed to develop the necessary administrative capacity.

The progress report from 2009 finally confirmed that Croatia was largely fulfilling the *acquis* requirements in the area of free movement for workers. Good progress was reported on participation in the EURES network which meant that the administrative capacity of the Croatian Employment Service (CES) was strengthened (language gap was removed) and the organisational structure was adjusted to the demands. There had been good progress on coordination of social security systems which was a key element for the accession negotiations in this chapter and further preparations were ongoing for the introduction of the European Health Insurance Card (Commission of the European Communities, 2009¹⁰).

The progress report from 2010 confirmed continued good progress of Croatia. The Croatian Employment Service continued with the strengthening of capacities for inclusion in the EURES system, and good progress continued in the area of strengthening administrative powers for social security systems. Croatia was, for the first time, participating as an observer in the preparations for the EESSI project (on electronic exchanges of data under the new EU regulations). Preparations had been made for the introduction of the European Health Insurance Card upon accession (Commission of the European Communities, 2010¹¹).

The final **progress report was from 2011** and it concluded that Croatia made great progress in fulfilling the commitments of the *acquis* and enabling the freedom of movement for workers. In all fields which required adjustments, Croatia made progress regarding the administrative and IT capacities. The Croatian Employment Service had opened two new Migrant Information Centres in cross-border regions (Commission of the European Communities, 2011¹²).

5. Information on the Results of the EU Accession Negotiations with Croatia

In 2011 European Commission brought forth a report on the results of the accession negotiation for the second chapter - the Freedom of Movement for

Workers. The information was related to the manner of admission of Croatian workers to the Member States after Croatia became a member. The Commission brought forward the following measures which would refer to Croatia from the moment of becoming a Member State (Directorate General for Enlargement, 2011¹³):

- a two-year period during which national measures will be applied by current Member States to Croatia;
- after this period, reviews will be held: one automatic review before the end of the second year after accession and a further review at the request of Croatia;
- the transitional arrangement should in principle come to an end after five years, but may be prolonged for a further two years in those current Member States where there would be serious disturbances of the labour market or a threat of such disruption;
- safeguards may be applied by Member States up to the end of the seventh year;
- a standstill clause will apply, whereby current Member State labour markets cannot be more restricted than that prevailing at the time of the signature of the Accession Treaty. Current Member States must give preference to Croatian nationals over non-EU labour;
- Austria and Germany have the right to apply flanking national measures to address serious disturbances or the threat thereof, in specific sensitive service sectors on their labour markets, which could arise in certain regions from transnational provision of services;
- under the transitional arrangements the rights of Croatian nationals who are already legally resident and employed in a current Member State are protected;
- on the basis of reciprocity, Croatia may apply restrictions equivalent to the national measures applied by the respective Member State.

6. Freedom of Movement for Workers after the Accession

Croatia adjusted its legislation and systems before the accession on 1 July 2013 in order to be fully competent to satisfy the needs of the freedom of movement for workers and to enable entry of foreign workers into Croatia and migration of native workers elsewhere. After the accession, free movement of workers is functioning without difficulties. The competent institutions, the Croatian Employment Service, the Croatian Pension Insurance Institute and the Croatian Health Insurance Fund are carrying out all the tasks necessary to provide each EU citizen with easy access to the labour market and other social benefits pertaining to the worker.

The Croatian Employment Service gained the ability of tracking jobs within EU Member States through the EURES network and EURES contact centres within its own system. The Croatian Employment Service offers information not only to the workers who seek employment, but also to the employers who need workers from different states who have specific language skills. Moreover, the Croatian Employment Service, in cooperation with EURES networks in other Member States, organises projects of employment and offers information about European Job Days.

Concerning the social security system, the Croatian Parliament passed the Act on Implementation of the Regulations of the European Union on Coordination of Social Security Systems. The Act came into force on the same date Croatia became a full member of the EU, 1 July 2013. The basic postulates set by the Act are as follows:

- establishment of the competent authority in charge of implementing regulations of the European Union on coordination of social security systems, that is, the competent authorities are established for all aspects of the social security by the regulations on coordination, as well as competent authorities for the compulsory insurance;
- establishment of the competent authority in charge of dealing with issues of the EU Access Point for electronic exchange of information in the social security system;
- establishment of the competent authority in charge of setting legislation which applies

to, and shapes the process of making resolutions in that field;

- establishment of the competent authority for coordination according to the regulations of the European Union on the social security systems, and prescribing the manner of cooperation of the competent authorities and institutions in the area of social security coordination;
- establishment of the competent authority and the manner of participation of liaison offices within working bodies of the European Commission;
- establishment of the permanent Interdepartmental Group for coordination of social security systems, as the basic form of cooperation in the field of coordination of social security systems.

The following regulations apply to the area of coordination of social security systems: Regulation (EC) 883/2004, (EC) 987/2009, (EC) 988/2009, (EC)1231/201, (EC) 1244/2010, (EC)465/2012 and (EC) 1224/12. Considering that the regulations relate to the area of the pension insurance, health insurance, unemployment insurance and family benefits, the competent authorities implementing the mentioned areas under national legislation are in charge of implementing EU regulations concerning coordination of social security systems. The Ministry of Labour and the Pension System is in charge of pension insurance and unemployment insurance, the Ministry of Health is in charge of compulsory health insurance and health protection, whereas Ministry of Demographics, Family, Youth and Social Policy is responsible for administering family benefits as well as maternity and paternity benefits. The Croatian Pension Insurance Institute is appointed the authority for distribution of old age benefits, disability contributions, contributions to the surviving family members, insurance for accidents at work and occupational diseases from the generational solidarity pension scheme and for child benefits. The Croatian Health Care Insurance Fund is the institution in charge of distributing of benefits for illness, occupational diseases and accidents at work, maternity and paternity allowances, all from the compulsory insurance, whereas the Croatian Employment Service is in charge of contributions for unemployment. The Central Registry of Insured Persons is in charge of distribution of old

age benefits, disability contributions, contributions to the surviving family members based on voluntary pension insurance i.e. on individual capital savings (the third pillar of pension insurance), as well as being the Access Point for electronic exchange of information between the competent authorities of Member States in the system of social security. The institution appointed for the area of contributions for the compulsory insurance in the framework of coordination of social security system in the Ministry of Finance.

It can be concluded that there is administrative alignment with the EU *acquis* in the context of the freedom of movement for workers. All obstacles for the free exchange of the labour force had been removed with the accession of Croatia to the European Union. Croatia has been continually implementing all the obligations to ensure the freedom of movement for workers.

7. Conclusion

While working through the second chapter of accession negotiations (Freedom of Movement for Workers) Croatia has opened up its market to EU citizens and provided opportunity of finding employment in Croatia, as well as ensured that workers' families have the right of residence on the territory of the Republic of Croatia. In order to achieve this, it was necessary to adjust the system within the country, which Croatia successfully managed and is continuing to do so. In practice,

this refers to the migration of citizens, especially the labour force, which presents a major issue for Croatia due to the high number of people leaving the country. From 2013 on there has been a steady rise in emigration. Figures from the Croatian Bureau of Statistics (CBS) show that 15,262 people left the country in 2013, the following year it was 20,858 people, in 2015 there were 29,651 citizens who emigrated and in 2016 a total of 36,436 (CBS, 2017¹⁴). The data for 2017 is not yet available, but there is an evident growth in the emigration numbers. For the most part, Croatian citizens migrate to other Member States. Free movement of workers has been properly realised, but creates the issue of higher emigration out of the country than immigration to the country. Regarding the immigrants, 10,378 people moved to Croatia in 2013, in 2014 it was 10,638 people, in 2015 the figure was 11,706 and in 2016 13,985 people (CBS, 2017). The consequences of the migrations are not visible yet, but the continuation of the emigration trend might raise the question of the purpose of the Internal Market. The Internal Market was set up with the goal of equal development of the Member States. With great emigrations from one state to the other, and insufficient immigration to the states that are losing citizens, the latter might experience economic stagnation and decline. It is worth mentioning that Austria, Malta, the Netherlands, Slovenia and the United Kingdom are using the right to national measures of limited freedom of movement for Croatian workers.

REFERENCES

1. Goldner Lang, I. (2007). *Sloboda kretanja ljudi u EU*. Zagreb: Školska knjiga.

ENDNOTES

- 1 Treaty on European Union, Official Journal of the European Communities, 2016, C 202/1
- 2 Treaty on the Functioning of the European Union, Official Journal of the European Communities, 2016, C 202/1
- 3 Regulation (EU) No. 492/2011 of the European Parliament and of the Council of 5 April 2011 on freedom of movement for workers within the Union, Official Journal of the European Communities and their Member States, L 141, 27.05.2011
- 4 Directive 2004/38/EC of the European Parliament and the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States amending Regulation (EEC) No. 1612/68 and repealing Directives 64/221/EEC, 68/360/EEC, 72/194/EEC, 73/148/EEC, 75/34/EEC, 75/35/EEC, 90/364/EEC, 90/365/EEC and 93/96/EEC (Text with EEA relevance), Official Journal of the European Communities, L 158/77, 30.04.2004
- 5 The Stabilisation and Association Agreement between the Republic of Croatia and the European Communities and their Member States
- 6 Screening report Croatia, Chapter 2 – Freedom of movement for workers, 19.01.2007
- 7 Government of the Republic of Croatia: Croatia's negotiating position for Intergovernmental Conference on the Accession of the Republic of Croatia to the European Union for Chapter 2 „Freedom of movement for workers“, Zagreb, 19 July 2007
- 8 Commission of the European Communities: Croatia 2007 Progress Report, SEC (2007) 1431, Brussels, 06.11.2007
- 9 Commission of the European Communities: Croatia 2008 Progress Report, SEC (2008) 2694, Brussels, 05.11.2008
- 10 Commission of the European Communities: Croatia 2009 Progress Report, SEC (2009) 1333, Brussels, 14.10.2009
- 11 Commission of the European Communities: Croatia 2010 Progress Report, SEC (2010) 1326, Brussels, 09.11.2010
- 12 Commission of the European Communities: Croatia 2011 Progress Report, SEC (2011) 1200, Brussels, 12.10.2011
- 13 Directorate General for Enlargement: Information on the results of the EU accession negotiations with Croatia, November 2011
- 14 Croatian Bureau of Statistics: Migration of the citizens of Republic of Croatia in 2016, Zagreb, 21 July 2017, No. 7.1.2.

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PRILAGODBA HRVATSKE NA SLOBODU KRETANJA RADNIKA I UČINAK U RAZDOBLJU NAKON PRIDRUŽIVANJA EUROPSKOJ UNIJI

SAŽETAK

Sloboda kretanja radnika u Europskoj uniji predstavlja jednu od najatraktivnijih tema prilikom ulaska novih država u punopravno članstvo Europske unije. Naime, sloboda kretanja radnika omogućuje državljanima država članica mogućnosti pronalaženja novih i boljih uvjeta rada unutar granica Europske unije. Sloboda kretanja radnika obuhvaćena je 2. pregovaračkim poglavljem između Republike Hrvatske i Europske unije. Kako bi omogućila svojim državljanima, ali i ostalima državljanima država članica Europske unije, slobodno kretanje radnika, Republika Hrvatska je u fazi pregovora morala uskladiti određeno zakonodavstvo i prilagoditi upravljačke sustave unutar države. Izmjene koje su bile potrebne unutar hrvatskog zakonodavstva kako bi se u potpunosti uskladilo sa *acquisom* ticale su se nediskriminacije prema radnicima migrantima te je bilo potrebno uložiti napore u smislu donošenja izmjena i dopuna zakonodavstva te razvoja administrativnih sposobnosti za koordinaciju sustava socijalne sigurnosti. Također, potrebno je bilo uložiti napore vezano za uključivanje u EURES mrežu i uvođenje Europske kartice zdravstvenog osiguranja. Državna tijela nadležna za slobodu kretanja radnika u smislu socijalne sigurnosti su Hrvatski zavod za mirovinsko osiguranje, Hrvatski zavod za zdravstveno osiguranje i Hrvatski zavod za zapošljavanje.

Gljučne riječi: sloboda kretanja radnika, Republika Hrvatska

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DIGITAL TRADE AS AN IMPETUS FOR NEW REGULATORY INITIATIVES

ABSTRACT

Digital technologies are affecting all types of global flows, including trade and migration flows, thus reducing spatial, temporal and cost barriers. Digital trade is an important part of these new global trends, supporting and changing the globalization process. The main aim of this paper is to identify key challenges in regulating and governing digital trade on different levels, as each level of governance encounters specific challenges. The contribution of the paper is twofold. First, it gives an overview of key digital trade regulatory issues at the national, regional and global level. Second, some specifics of digital trade are explored with the purpose of gaining a broader understanding of the need for new, or at least modified trading rules that would support digital trade and the digital economy.

Keywords: Digital trade, regulatory framework, WTO

1. Introduction

Digitalization is at the center of the new industrial revolution that is more comprehensive than any before. Reduced barriers between markets and inventors can be distinguished as a central feature of this new revolution due to the application of novel digital technologies. Digital technologies are altering all types of global flows, including trade and migration, thus reducing spatial, temporal and cost barriers. Digital trade represents a growing global trend, supporting and changing the globalization process. Digital or electronic trade can be defined as production, advertising, sales and distribution of products through telecommunication networks (Bachetta, 1998). Digital trade can also be described as a process of buying and selling through computer networks. It includes the exchange of physical

goods as well as the exchange of intangible goods and services (UNCTAD, 2015). In other words, digital trade includes new and different services as well as the exchange of traditional or physical products traded through the use of digital technologies. Digital trade is enabled by digital technologies, but the delivery of goods and services does not necessarily have to be carried out digitally. In this case, when physical deliveries are made, existing trade rules and administration are implemented. One of the most common categories of products that are digitally exchanged are audio-visual media and software, because those are digitized more easily than other types of goods. Digital services, on the other hand, can be defined as a broad set of services that can be delivered through the ICT network (World Economic Forum, 2018). The most common type of services that are provided digitally are online gam-

ing. Telemedicine, customer support, travel planning, and such, are some additional examples of services that can be provided digitally. The fact that an increasing number of products is being traded digitally and that differentiating between digital products and services is sometimes complicated, specific rules and policies have to be designed in order to enable monitoring and governing of those flows, thus digital trade regulations are the focus of this paper.

Digital trade is characterized by an intricate international network of production. It involves comprehensive co-operation between different stakeholders in different parts of the world and in different time zones. Digital trade determines data flows in global supply chains by simplifying the administration process or contractual obligations related to cross-border transfer of inputs. As such, digital trade can result in savings for traders through faster flows of goods and greater efficiency at border crossings in cases where trade involves lengthy administration. It allows businesses to fulfil certain regulatory obligations more easily and efficiently, at lower cost, and enables them to spread to international markets. Reducing trading costs and reducing paperwork is particularly important for small and medium-sized enterprises that use digital trade to access international markets. In addition to the impact on trading costs, the introduction of digital trade has inspired innovations in global supply chains. Examples are just-in-time delivery systems. By applying such an approach, companies no longer have to hold large stocks because products are produced when needed and in ordered quantities. Contemporary supply chains must adapt to constantly changeable and shorter product life cycles, consumer tastes and rapid technological development (World Economic Forum, 2017)¹. With the development of digital trade, new intermediaries have resurfaced that offer distribution and logistics support services to customers. Products that are delivered from one location to another are more easily monitored by the use of sensors or other digital solutions to improve operational efficiency and reduce costs. New technologies are being developed that will enable and significantly expand the possibilities for digital exchange. The development of three-dimensional (3D) or additive printing will greatly change the global flow of physical goods. Instead of producing large quantities of goods in one location and delivering them to another location, businesses will be able to send digital designs over the Internet and the use of a 3D printer will allow smaller quanti-

ties to be produced locally. This will change the way products are traded and the existing monitoring systems, customs or VAT rules will not be adequate.

Digitalization changes and shapes the habits and needs of consumers. The once unimaginable trend of buying products online has become a widely accepted practice. Although the development of hardware and infrastructure is important for the growth and development of digital trade, new ways of applying technology and information, including social networks, cloud computing and Big Data have become an integral part of digital trade. Consequently, rules and laws about customer privacy, security and data protection need to be ensured.

There are opinions that governments can more effectively solve the security problem through digital trade and ensure that there are no hidden threats in commercial shipments. Digital trade can play an important role in cross-border regulatory co-operation. Many countries are developing a single window electronic system through which the requested documents and other evidence will be submitted when importing or exporting. Facilitation measures and market access are therefore of great importance. Yet, digital protectionism is on the rise and it has been characterized by a series of restrictions on digital trade (BSA, 2014): limiting cross-border data flows, discriminatory procurement rules, stringent security rules, national technology standards, tariffs on information and communication technology (ICT) products, and weak protection of intellectual property rights. It limits digital flows and poses barriers for countries to participate in digital trade. The digital divide between developed and developing countries can also be a barrier to further integration of the digital economy (WTO, 2018). To enable digital trade in all countries it is necessary to strengthen capacities, provide Internet access, necessary digital skills and adequate institutional infrastructure and regulation.

The main aim of this paper is to identify key challenges in regulating and governing digital trade on different levels, as each level of governance encounters specific challenges. The contribution of the paper is in identifying and exploring policy concerns thus leading to better understanding of the need for a new, or at least modified regulation of digital trade. In line with the practice of scientific research, methods of analysis, compilation and deduction have been applied to achieve the defined research objective. The former two methods have been used with the intent of defining digital trade and its impact on

trade and businesses, as well as for exploring digital trade governance issues at different levels, with the purpose of providing a broader understanding of this subject. Through the deduction method certain conclusions were made about the major digital trade regulatory concerns at the national, regional and global level. Conclusions were made about the current situation and potential solutions in regard to digital trade governance. The paper consists of five parts. After the introduction follows the review of literature regarding digital trade and its significance. The third part of the paper contains methodology description, while the fourth part gives an overview of the regulatory framework and the governance issues of digital trade at different levels. The final part of the paper is the conclusion.

2. Literature review

Both the theoretical and the empirical literature on digital trade is rather scarce due to the fact that it is a relatively new topic that emerged on the eve of the new industrial revolution, and due to the lack of available and comparable data. However, based on the existing work, there are some common standpoints regarding the changes digital trade will bring to the way trade is done, its effects on the production process and productivity, and adjustments in the regulatory framework.

The growth of the digital market and the success in the upgrading, sometimes even in substituting of traditional markets, is evidence that digital trade is a new trend which can reduce communication and other operating costs. Moreover, it is commonly accepted that digitalization reduces marginal costs of production and distribution on the one hand, while allowing for wider access to global trade, on the other hand. In this way, the cost of participating in global trade decreases for companies of all sizes, as well as for individuals. Internet of Things, as one type of digital technologies embedded into the Fourth industrial revolution, enables monitoring and management of physical objects electronically (Mărcuț, 2017) and it will further stimulate and accelerate trends of digital exchange. All of the mentioned affects and changes the globalization process, which will then affect people's lives and business performance in developed and developing countries.

Digital trade changes the scope, the volume and the speed of trade. It enables businesses to access a large number of customers through the Internet and

outsource specific activities that enable productivity growth. Moreover, digitalization is changing the set of activities that companies engage in and causes rapid growth of cross-border data flows. Three quarters of businesses have an online presence and almost as many engage in digital trade (OECD, 2015). Also, research has shown that the development of digital trade has increased exports of small and medium-sized enterprises, and has contributed to the growth of trade in developing countries where logistics and transport costs are relatively high (Lund, Manyika, 2016; Lopez-Gonzalez, Ferencz, 2018).

In addition to rising competition, security and data privacy issues, the digital divide and determining whether digital technologies really boost productivity represent important questions and challenges. Some economists claim that digital technologies increase productivity significantly less than innovations in the past (Gordon, 2012), partly because they reduce the benefits of programming; partly because certain human tasks cannot be replaced by computers; and because most digital technology investments are driven by the need to preserve market share or to replace tangible products with digital ones. On the other hand, there are those who claim that digital technologies increase productivity (Barua et al., 2013), and those who claim that digital technologies raise productivity only in certain sectors due to a different diffusion pace (Clavino et al., 2018; Aghion et al., 2017). However, sectors that have achieved rapid productivity growth are rapidly reducing their share in the economy while sectors with slow growth in productivity are increasing their share in the economy (Aghion et al., 2017). Consequently, overall productivity of the economy has been reduced due to stagnant sectors that represent a larger share among all sectors.

As mentioned, digitally enabled trade brings forth the role of the Internet. The dialogue between the trade community and the Internet community needs to be strengthened (UNCTAD, 2017). The inclusion of the Internet community represents an opportunity for stakeholders to advance and create a dynamic digital economy. Trade policy makers can benefit from collaborating with the Internet community by ensuring that relevant agreements are operationally feasible and politically viable with less negative consequences. Trade negotiations should involve a wider analysis and dialogue to encourage collective learning, development of international standards and convergence at the national level.

Lately, more attention has been given to policies and rules that regulate digital trade at the national, regional and global level (Darsinouei, 2018; Sampath, 2018; Wu, 2017; Lopez-Gonzalez, Jouanjean, 2017; Monteiro, Teh, 2017). The regulatory framework needs to be adapted to contemporary conditions in order to allow for more efficient digital trade. However, it is also necessary to note that countries have different policy stances on issues such as privacy or security and there will be certain differences in national rules and regulations (Lopez-Gonzalez, Jouanjean, 2017). Traditionally, trade rules have been determined based on the nature of what is being exchanged. In other words, trade rules for goods were built on the premise that it is possible to identify the geographic origin of the product and attach a tariff or other condition on its international sale, usually at the point where the product crosses the border. Digital products, by contrast, are not bound by geography, nationality or even physical properties (Dawson, 2018). In the digital age, the difference between a product and a service is no longer so clear and there is a greater need for more efficient cross-border delivery of goods, support services and for providing data and information about the production process and products. With more small packages crossing borders, more efforts will be needed to identify the impact on customs authorities and to determine the impact of different *de minimis* provisions on both firms and consumers (Lopez-Gonzalez, Jouanjean, 2017). Acceptance of e-signatures and e-documents will contribute to relieve trade transactions helping SMEs and consumers alike. Digitalization of information enables more effective identification of risks and management of global supply chains since large volumes of data are needed to meet the growing demands for the tracking and traceability of products across international borders.

It is often said that the most important issues related to digital trade can be divided into three categories (Darsinouei, 2018): (1) market access which includes a wide range of topics such as customs duties, movement of natural persons and valuation issues, (2) rules and regulation commitments including intellectual property rights and competition, and (3) facilitation through e-signatures, paperless trading or digital authentication. Governments have a responsible task to create and modify the regulatory and tax framework and policies in order to adapt to changes caused by digitalization and digital trade. It is necessary to find solutions to the problem of

data transfer security, data privacy protection and Internet governance. Each country should develop initiatives, policies and measures that fit its priorities and national goals (UNCTAD, 2017)².

3. Methodology

The main objective of this paper is to identify the key challenges in regulating and governing digital trade on different levels. The paper aims to provide an overview of the existing regulations and to clarify the need for modifications of the trade regulatory framework so it includes digital trade, a fast growing global trend. Since digital trade blurs the line between goods and services and includes a large amount of data flow, there is a need for appropriate and updated regulations that would enable better monitoring of those digital flows. There is also an important regulatory dimension that covers issues such as privacy, security and the like. Besides reviewing the literature in the field, the paper also describes some of the pressing issues regarding the governance of digital trade at the national, regional and the multilateral level by compiling and reviewing different papers and studies. Writing this paper was based upon previous research elaborated in the literature, studies and other relevant sources. However, since digital trade is still modestly represented in the literature, there are not many empirical research results, so conclusions are more theoretical. In accordance with the practice of scientific research, methods of analysis, compilation and deduction have been applied in this paper. The former two have been used for the purpose of defining digital trade and explaining its role in the global market and also for exploring digital trade governance issues at different levels. Through deduction method certain conclusions were made about the development of digital trade and the regulatory framework concerns in order to provide a broader understanding of the significance of digital trade and the necessity to modify or create a new regulatory framework. Governance of digital trade is analyzed at the national, regional and multilateral level, identifying the most important issues and potential solutions.

4. Overview and discussion over the digital trade regulatory framework

While digital trade is rapidly developing and expanding, trade rules do not follow the same pace

of change. In this part of the paper, an overview of different governance issues is given for the purpose of analyzing existing challenges and possible solutions. Governance of digital trade is analyzed at the national, regional and multilateral level. Concerning the governance on the regional level, special attention was given to the European Union (EU).

Just as the multilateral trade rules had to be changed during the 1980s, which was done during the Uruguay round of negotiations under the auspices of the World Trade Organization (WTO), today there is the need again to adjust trade rules to ensure consistency with the growth strategies in the digital economy. The problem is that the digital economy is not well understood by most, and policy discussions and decisions do not capture its value appropriately or assign it in any meaningful way. The Internet and the way it serves as the backbone for trade and innovation creates a great overlap between trade, individual privacy and development (Sampath, 2018). There are at least three types of challenges before policy adjustments needed to better regulate the digital economy (BSA, 2014)³:

- Modernizing trade rules to reflect the trend of digital trade. This implies the inclusion of innovative services in trade agreements, open borders for cross-border data flows, the abolition of specific requests for locating servers or other infrastructure.
- Promoting the development of technological innovations in order to take advantage of future opportunities. It is primarily about establishing the protection of intellectual property rights and encouraging the application of voluntary, market-based technological standards.
- Allowing entry of different competitors to provide customers with access to the best global goods and services. Here, public procurement practices and the selection of goods or services based on the degree of satisfaction they bring, instead of exclusively on the basis of their origin, are of great importance.

There has been a new wave of digital protectionism in many of the fast-growing markets (Holleyman, 2012). A number of countries have already adopted or plan to adopt policies that would significantly limit the cross-border data flows or require data servers to be located within their jurisdictions as

a prerequisite for serving the local market. Such constraints significantly reduce the benefits from the economy of scale and the benefits of the digital distribution of services. It is therefore a challenge to find a balance between protecting data privacy from prudent policies that prevent the cross-border exchange of data-based services. National policy design should seek to protect their citizens and nurture digital trade by enabling the movement of data across borders, but it should not neglect that countries have different policy stances on issues such as privacy or security (Lopez-Gonzalez, Jouanjan, 2017).

Furthermore, the government represents one of the largest consumers of information and telecommunication (IT) services. However, when purchasing these services, the government often imposes restrictions on foreign suppliers which makes it difficult or impossible for them to serve the market. This prevents foreign suppliers from getting jobs in the local market and the government has no freedom to choose the best available products or services.

Cyber security is another important issue (Dawson, Omar, 2015). Governments often use security as a justification to impose certain barriers regarding the supply of software or other IT equipment from foreign suppliers or setting up superfluous tests or certification requirements. Also, the role of technology standards in facilitating global digital trade is important. Technological standards that are market-accepted and established on a voluntary basis through industrial processes will facilitate the development and transfer of new products or services. These would also prevent favoring domestic suppliers.

Approximately 30% of regional trade agreements reported to the World Trade Organization (WTO) contain rules on digital trade (Monteiro, Teh, 2017) and the rules on transparency and the most favored nation, very similar to those within the WTO itself. In fact, more than 69 regional agreements worldwide have included standalone e-commerce chapters (Darsinouei, 2018). The European Union is often used as an example of a structured regulatory framework. The main part of EU legislation regulating digital trade is the E-Commerce Directive 2000/31/EC. It covers business to customer (B2C) and business to business (B2B) transactions as well as services provided free of charge to the recipient. It does not apply to traditional radio broadcasting, television broad-

casting, most legal services, or to gambling services. Moreover, in 2015 the EU released the Digital Single Market strategy to create an open, interconnected and digital single market and to maximize the positive impact of the digital transformation on society and on business activity in the EU. E-commerce is one of the cornerstones of the Digital Single Market strategy but there are some barriers to realizing its full potential including geo-blocking, that is, preventing customers' access to products or services from a certain country, too many differences in the member states contract law, difficult VAT registration and declaration procedure, and data protection issues. Regulatory fragmentation is a major obstacle to innovation in Europe (Aslund, Djankov, 2017; Mărcuț, 2017). In order to resolve some of the mentioned obstacles, the EU has worked on (European Commission, 2019)⁴:

- the revised Payment Services Directive and new rules on cross-border parcel delivery services that are already in force
- new rules to stop unjustified geo-blocking
- revised consumer protection rules that will enter into force in 2020
- new VAT rules for online sales of goods and services that will enter into force in 2021.

In addition, the EU is working on revolutionizing its industries and addressing key issues affecting businesses now and in the future by strong digital cooperation with various trading partners such as Japan and the US.

Regional or bilateral agreements are generally more adaptable and can be tailored to the needs of partners. But while they benefit partner countries, they can lead to a large number of different policies and to marginalization of those countries that do not have the institutional, legal or technical infrastructure needed to engage in complex trade negotiations, which is why the importance of the multilateral trade framework is still recognized. E-commerce was introduced in the World Trade Organization agreements at the end of the 1990s. However, the speed of digital technology development and the growth in digital trade volume could not be predicted. Hence, although the WTO has certain rules for governing the ICT products market, these rules are not adapted to rapid technological development and a wide range of newly devel-

oped goods or services are not covered by these rules. Having in mind the difficulties in distinguishing between digital products and services it can be said that a different set of trade rules affect different aspects of digital trade.

The General Agreement on Trade in Services affects the flow of digital trade because it includes the principle of the most favored nation and transparency and rules on trade in services. Within this agreement there are additional rules for telecommunications and financial services which are now often delivered digitally.

Negotiations are ongoing within the WTO for a new Trade in Services Agreement. However, participation in the agreement is voluntary and includes only a small percentage of the WTO's members. While a number of members have made far-reaching commitments for market access and national treatment of computer and related services, there are variations in the levels of commitments and many of the countries have not made commitments in the other sectors (Burri, 2017)⁵.

Other rules within the WTO are also important for digital trade. Given that these are physical goods that often have to cross international borders the rules of the General Trade and Tariffs Agreement have an important role. The Trade Facilitation Agreement includes requirements for applying or maintaining measures that facilitate imports and exports. On the one hand, simplified and more efficient customs procedures are important for traditional merchandise trade as they provide faster and cheaper delivery. On the other hand, the technological development that has made it possible to modernize these procedures with greater application of technology can further facilitate digital trade rights (Lopez-Gonzales, Ferencz, 2018). Additive printing may raise interpretation challenges regarding rules of origin or customs valuation. Digital technologies enable the exchange of goods including goods ordered online. The aim should be to reduce tariffs on digitally traded goods by adjusting and expanding existing trade agreements. In addition to trade barriers to digital trade, there is a further problem of protection of intellectual property rights. This is particularly important in software, as intellectual property rights are a significant barrier to sales and performance of international companies and present a high security risk for end users, because if they use unlicensed products, they do not have access to additional or elementary upgrades to protect them from various viruses (Lopez-Gonzales,

Ferencz, 2018). Also, having in mind that most of the global research, development and innovation activities are concentrated in a small number of developed and rich countries and in few developing countries, it is not surprising that there are different approaches to intellectual property rights (Breitweiser, Foster, 2012). Until 1995, the international intellectual property regime consisted of several voluntary conventions under the jurisdiction of the World Intellectual Property Organization. By strengthening the process of globalization, trade and investment flows as well as technological development, differences in national standards for the protection of intellectual property rights have become particularly important. It was precisely from this that the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) was developed as a result of the Uruguay round of trade negotiations. According to this agreement, countries may have their own intellectual property rights policies, but minimum standards are required that must be included over a certain period of time. This question is especially important in the digital economy where innovation and intellectual property rights play a crucial role in development.

The Agreement on Technical Barriers covers government measures on technical rules and standards applicable to ICT and electronic products

(e.g. standards for telecommunications network governance). The Information Technology Agreement includes rules on trading ICT products, some of which are part of the infrastructure required for digital trade, such as computer and telecommunications equipment. It also includes the principle of the most favored nation and eliminates tariff barriers on ICT products.

The stalled Doha round is another obstacle which not only impedes progress in related trade areas, but also questions the role of the WTO, due to a lack of deliverables and puts further doubts on the success of negotiations within the WTO in general (Baldwin, 2016).

In addition to the WTO framework, digital trade is also discussed at the plurilateral level. Mostly within the framework of negotiations on mega-regional agreements that merge countries of different sizes, development levels and cultural backgrounds. Plurilateral trade agreements involve several countries with a common interest but do not involve all WTO countries.

The summary of the most important governance issues specific to the national, regional and multilateral level is given in Table 1.

Table 1 Digital trade governance issues

Level	Potential challenge	Possible solutions
National level	<ul style="list-style-type: none"> • Market access rules • Restrictions on foreign suppliers • Low level of digitization • Limiting cross-border data flow • Low level of knowledge about the digital economy 	<ul style="list-style-type: none"> • Modernizing trade rules • Introduction of technological innovations • Introduction of technological standards • Public campaigns for raising awareness about the digital economy
Regional level	<ul style="list-style-type: none"> • Differences in the contract law • Different VAT rules • Geo-blocking • Customer protection • Limited cross-border data flow • Digital divide • Intellectual property rights 	<ul style="list-style-type: none"> • Introduction of common contract law • Limiting geo-blocking • Chapter on intellectual property rights • Linking single windows • Enabling cross-border data flows
Multilateral level	<ul style="list-style-type: none"> • Modernizing trade rules acceptable to all members • Digital divide • Diverging views between less developed and developed countries • Intellectual property rights • Unfinished Doha round of negotiations • Plurilateral agreements 	<ul style="list-style-type: none"> • Dialogue on the future of the multilateral trading system • Clear statement regarding classification of digitally traded products and services • Ensuring that existing GATS rules and obligations unambiguously apply to digital trade transactions • "Multi-speed" regulations

Source: Author's compilation

Restrictions on data flows and on foreign suppliers are some of the most common restrictions to digital trade. Understanding the benefits of the digital economy, closing the digital divide, ensuring market competition and access, and focusing more on consumers should be a priority for all countries. New initiatives to modify and expand existing trade rules and policies should be presented and the regulatory framework should be aligned at all levels.

5. Conclusion

Digital technologies have influenced the process of globalization by altering business and social practices and communication methods and have contributed to the creation of the digital economy. New business models based on networking are being developed while information and data have become of utmost importance for creating value.

The speed of digital transformation varies among countries, but it certainly represents both an opportunity and a risk for economies at all stages of development, having in mind that the digital economy requires certain infrastructure and a modified regulatory framework. Given that an increasing volume of trade is under the influence of digitalization and is being conducted using computer networks, it is important that governments and policymakers take into account these new trends and engage the In-

ternet as part of their policies. More focus should be put on consumers' rights and protection and on monitoring the increasing volume of data flows. Digital trade is becoming a frequently debated aspect of international trade relations. Digitalization should be seen as an opportunity to enhance efficiency, reduce trade costs and time needed for customs procedures. Nonetheless, with fast technological progress, more ambiguities will arise, such as implications of additive manufacturing, just-in-time delivery, classification of data within the WTO framework, data privacy and security, or taxation of the digital economy. Taking this into account, it is necessary to adapt or create new multilateral rules that should include new technologies and new types of digital goods and services, as well as enable better monitoring and measuring of overall digital trade flows. By creating a better environment for digital networks and services and developing a comprehensive monitoring and measurement system, it would be possible to include more data on digital trade in trade statistics. This is important for bringing informed policy decisions. The limitations of this paper lie in the fact that it presents neither concrete recommendations nor data analysis, but rather a global overview. For further research it would be interesting to compare regulatory frameworks of selected countries or regions in order to identify best practices and further contribute to the governance issue debate.

REFERENCES

1. Aghion, P., Jones, B. F., Jones, C. I. (2017), "Artificial Intelligence and Economic Growth", Working Paper No. 23928, National Bureau of Economic Research, Cambridge.
2. Aslund, A., Djankov, S. (2017). Europe's growth challenge. New York: Oxford University Press.
3. Bacchetta, M. (1998), "Electronic commerce and the role of the WTO", WTO Special Studies, No. 2, Geneva, World Trade Organization.
4. Baldwin, R. E. (2016), "The World Trade Organization and Future of Multilateralism", *Journal of Economic Perspectives*, Vol. 30, No. 1, pp. 113.
5. Barua, A., Mani, D., Mukherjee, R. (2013), "Measuring the Business Impacts of Effective Data", Chapter 1 of the Research Study, University of Texas, available at: <http://middleman.heltenkelt.se/anvandbart.se/images/drupalbilder/blogsources/div/EffectiveDataStudyPt1-MeasuringtheBusinessImpactsofEffectiveData-WP.pdf> (Accessed on: March 21, 2019)
6. Breitwieser, A., Foster, N. (2012), "Intellectual property rights, innovation and technology transfer: a survey", Working Paper No. 88, The Vienna Institute for International Economic Studies – WIIW, Vienna.
7. Calvino, F., Criscuolo, C., Marcolin, L., Squicciarini, M. (2018), "A taxonomy of digital intensive sectors", OECD Science, Technology and Industry Working Papers 2018/14, OECD Publishing, Paris.
8. Darsinouei, A. E. (2018), "Understanding e-commerce issues in trade agreements: a development perspective towards MC11 and beyond", Research Study, Cuts International, Geneva.
9. Dawson, M., Omar, M. (2015). *New Threats and Countermeasures in Digital Crime and Cyber Terrorism*. Hershey: Information Science Reference.
10. Gordon, R. J. (2012), "Is US economic growth over? Faltering innovation confronts the six headwinds", Working Paper No. 18315, National Bureau of Economic Research, Cambridge.
11. Lopez-Gonzales, J., Ferencz, J. (2018), "Digital Trade and Market Openness", OECD Trade Policy Papers No. 217, OECD Publishing, Paris.
12. Lopez-Gonzalez, J., Jouanjean, A. (2017), "Digital Trade: Developing a Framework for Analysis", OECD Trade Policy Papers No. 205, OECD Publishing, Paris.
13. Mărcuț, M. (2017). *Crystalizing the EU Digital Policy*. Cham: Springer International Publishing.
14. Monteiro, J. A., Teh, R. (2017), "Provisions on electronic commerce in regional trade agreements", WTO Staff Working Paper No. ERSD-2017-11, World Trade Organization, Geneva.
15. OECD (2015). *Digital Economy Outlook*. Paris: OECD Publishing.
16. Sampath, P. G. (2018), "Regulating the digital economy: Are we moving towards a 'win-win' or a 'lose-lose'?", UNU-MERIT Working Paper No. 2018-005, Maastricht Economic and Social Research Institute on Innovation and Technology, Maastricht.
17. Wu, M. (2017). *Digital trade-related provisions in regional trade agreements: existing models and lessons for multilateral trade system*. Geneva: International Centre for Trade and Sustainable Development; Washington: Inter-American Development Bank.

ENDNOTES

- 1 World Economic Forum (2017), "Paperless trading: how does it impact the trade system?", WEF, Geneva.
- 2 UNCTAD (2017), "Information Economy Report 2017: Digitalization, Trade and Development", UNCTAD, Geneva.
- 3 BSA (2014), "Powering the digital economy. A trade agenda to drive growth", available at: https://www.bsa.org/studies/study-listing/market-access-report/2014-digital-trade-agenda/?sc_lang=en-US (Accessed on: November 11, 2018)
- 4 European Commission (2019), "New EU rules on e-commerce", EC, available at: <https://ec.europa.eu/digital-single-market/en/new-eu-rules-e-commerce> (Accessed on: March 21, 2019)
- 5 Burri, M. (2017), "Current and Emerging Trends in Disruptive Technologies: Implications for the Present and Future of EU's Trade Policy", Paper for the Directorate-General for External Policies of the European Union, Belgium, September 2017 (Accessed on: November 15, 2018)

Sanja Franc

DIGITALNA TRGOVINA KAO POTICAJ ZA STVARANJE NOVOG REGULATORNOG OKVIRA

SAŽETAK

Digitalne tehnologije utječu na sve vrste globalnih tijekova, uključujući trgovinske i migracijske tijekove, smanjujući prostorne, vremenske i troškovne prepreke razmjene. Digitalna trgovina važan je dio novih globalnih trendova te oblikuje i mijenja proces globalizacije. Glavni cilj ovoga rada je identificirati ključne izazove u reguliranju i upravljanju digitalnom trgovinom na različitim razinama, uzimajući u obzir da na svakoj razini postoje specifični izazovi. Doprinos rada se ogleda se u dvama dijelovima. Prvo, daje se pregled ključnih izazova vezano uz regulaciju digitalne trgovine na nacionalnoj, regionalnoj i globalnoj razini. Drugo, istražuju se određene specifičnosti digitalne trgovine sa svrhom šireg razumijevanja potrebe za novim, ili barem modificiranim pravilima trgovanja koja bi podržavala digitalnu trgovinu i digitalnu ekonomiju.

Ključne riječi: digitalna trgovina, regulatorni okvir, WTO

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INTERNATIONALISATION OF SMALL AND MEDIUM-SIZED ENTERPRISES IN THE EU-28

ABSTRACT

International trade activities of the European Union Member States do not only influence the world trade but also make a substantial contribution to the European economy. Free trade between the European Union Member States is one of the EU's founding principles. Small and medium-sized enterprises, engaged in cross-border activities, do not only develop new business opportunities, but become more innovative, productive, and hence grow faster. The purpose of this paper is to provide a better grasp of the internationalisation of SMEs and its benefits within the current globalised world trade. Using newly gathered data from the Eurostat and World Bank, this paper outlines the main features of a broad range of data on international trade focusing on the SMEs actively engaged in importing and exporting within and outside the EU.

Analyses show that despite the significant direct and indirect benefits internationalisation can have for small and medium-sized enterprises, the majority of SMEs are not engaged in international trade. Although, overall, SMEs make a substantial contribution to European Union exports and imports, there is still a huge share of SMEs which are not involved in international activities at all due to a consistent set of obstacles and barriers. Although, large enterprises contribute with only a small share of the number of importing and exporting enterprises for both intra and extra EU trade in goods, still many Member States account for the largest share in trade value among the four size classes.

Keywords: Internationalisation, small and medium-sized enterprises, international trade, intra and extra EU trade

1. Introduction

The internationalization of small and medium-sized enterprises is a key priority of the European Commission objectives in boosting Europe's competitiveness, economic growth, and innovation. Internationalisation in this context comprises a number of activities which are not mutually exclusive: export and import of goods and services, inward and outward foreign direct investment, international R&D

and innovation cooperation, participation in a national value chain or in global value chain and licencing or franchising products or services (Annual Report on European SMEs 2017/2018, 2018:9,78)¹. Although the value of goods exported by small and medium-sized enterprises has increased by nearly 20% since 2012, and global demand was for many years an important driver of the EU-28 economic recovery, according to the European Commission,

only a minority of small and medium-sized enterprises export in the EU and only a few small businesses in Europe export beyond the EU (Annual Report on European SMEs 2017/2018, 2018: 9,78; The European Commission, SME Internationalisation beyond the EU)². In 2016, small and medium-sized enterprises exported 35% of all goods exported by the EU-28 enterprises. Also, in 2016, almost 70% of all exports from small and medium-sized enterprises (in value) went to other Member States and 30% of all exports went outside the EU-28. In addition, in 2016, 80% of all exports from small and medium-sized enterprises were accomplished in intra-EU trade, while less than half of exports went to markets outside the EU-28, and slightly more than a quarter of exports included both markets (Annual Report on European SMEs 2017/2018, 2018: 9,85)³. Not only small and medium-sized exporting enterprises can benefit from successful participation in the global economy directly from growing global demand. Non-exporting small and medium-sized enterprises can also participate in international trade through the global value chain as domestic suppliers of exporting enterprises and benefit indirectly from increases in foreign demand (Annual Report on European SMEs 2017/2018, 2018: 9,89,94)⁴. That kind of multiplier effect, influenced by an increase in foreign demand, immediately increases production and sales of exporting enterprises that require additional materials and services provided by non-exporting small and medium-sized enterprises. Increasing the internationalisation of small and medium-sized enterprises (SMEs) and helping them access third markets is crucial for Europe's future. In line with that, the European Commission's priority is helping SMEs to expand their business outside the EU. According to the OECD⁵, developing and emerging markets are expected to account for 60% of world's GDP by 2030. Hence, major emerging markets outside the EU as China, Russia, India and Brazil represent significant opportunities for the internationalisation of small and medium-sized enterprises (COM (2011)702)⁶. As outlined in the Europe 2020 flagship Communication on an Integrated Industrial Policy⁷, the reviewed Small Business Act for Europe (SBA)⁸ and the recent EU trade policy communications, the promoting and supporting SMEs' economic activities outside the EU is therefore an important part of the Union's overall competitiveness strategy (COM(2011)702)⁹. The tenth SBA principle addresses the internationalisation of SMEs, encouraging SMEs to benefit from growth of global mar-

kets and supporting them in this pursuit. In 2011, the Commission proposed a new strategy in order to make more effective and efficient the support of business services for integration of European enterprises into the world economy. The Communication "Small business, big world"¹⁰ set out six fields of action in order to strengthen the support environment for European SMEs' international growth (COM (2011)702)¹¹. According to European Commission, (Internationalisation of European SMEs, 2010)¹², international SMEs create more jobs and are more innovative than national SMEs. A Eurobarometer survey (2015)¹³ confirmed that at least three out of ten companies in the EU either imported from or exported to another EU Member State in the last three years and that most of the SMEs have not undertaken business activities outside the Internal Market in the last three years. Moreover, prior research has shown that complicated administrative procedures, high delivery costs and identifying business partners were identified as the major barriers for exporting.

Consequently, much of the academic analysis has analysed issues on the internationalisation of the small and medium-sized enterprises. This paper is closely linked to the survey of the European Commission and the Bpifrance and their initiatives to improve the understanding of the specific needs for the internationalisation of SMEs. Using newly gathered data from the Eurostat and the World Bank, this paper outlines the main features of a broad range of data on international trade focusing on the SMEs actively engaged in importing and exporting within the EU-28 and outside the EU.

Hence, the paper contributes to the literature in several ways. Firstly, it provides a deeper insight into the obstacles and challenges that SMEs face when trying to access external markets. Secondly, it analyses the international trade among EU Member States enterprises, focusses on trade by size class of the enterprises involved in international trade in goods. As such, it provides a comprehensive analysis of the importance of internationalisation on the business performance of SMEs.

The purpose of this paper is to provide a better grasp of the internationalisation of SMEs and its benefits within the current global world trade. The paper is organised as follows. After the introduction, the next section provides key findings from literature on internationally engaged SMEs. The third section analyses recent trends in international trade followed by concluding remarks.

2. *The importance of internationalisation - key findings from the literature*

A number of studies were conducted in order to understand the importance and problems SMEs face when they participate in international trade. As in previous years, in 2017, SMEs' strong recovery continues with their consecutive contribution to growth in value added and employment (Annual Report on European SMEs 2017/2018, 2018: 7)¹⁴. Although SMEs are part of all industrial sectors in the EU-28 economy, they operate mainly in low export industries. Furthermore, according to Bpifrance (2018)¹⁵, though SMEs account for almost all the EU-28 non-financial business sector enterprises and provide two out of three jobs, they still account for far less than half of all exports and imports and are underrepresented in international trade. Moreover, in other forms of internationalisation, such as foreign direct investments, SMEs are even more underrepresented meaning that many of the SMEs failed from boosting benefits from internationalisation such as higher productivity, faster growth, greater innovation and better chances of survival. The European Commission (2018)¹⁶ conducted a survey on the reasons why so many SMEs do not export. The results revealed that SMEs do not export because of several reasons, some of which are external to the enterprise and some of which are internal. According to the analyses, the most important external reasons are 'lack of knowledge about foreign markets', 'lack of awareness of the opportunities such markets offer', 'lack of understanding of economic developments outside the home country', 'lack of understanding of regulatory and legal environment of foreign markets', 'perceived costs of resolving cross-border disputes and complaints' and 'difficulties in finding business partners'. The most internal reasons refer to 'lack of staff specialised in dealing with export issues and language skills' and the 'size of the investment required to serve foreign markets. Similar to the European Commission's survey, Paul et al. (2017) provided a list of barriers that SMEs face when they internationalise. According to the author, internal barriers such as difficulty in finding reliable distributors, lack of negotiating power, lack of knowledge of target markets and its challenges, unorganised export department, inability to access information, limited international experience and insufficient financial resources are micro barriers which, to some extent, are under the control of the companies. On the other hand, external

barriers, such as lack of proper trade institutions, lack of government incentives and protections, political instability, legal and political problems and likewise, are not under the control and influence of companies, rather clearly the exogenous influence by the government.

Furthermore, according to microdata from the Eurobarometer 421 survey from 2015¹⁷ with emphasis on SMEs that undertake foreign direct investments (FDI), key findings are as follows. Only 4% of SMEs undertake FDI in the EU-28, with huge variation across Member States. Medium-sized enterprises, with turnover exceeding €10m and with growth of more than 25% between 2008 and 2014, were identified as more likely to undertake FDI than the average SME. Moreover, enterprises that are part of an international group were also identified as more likely to undertake FDI. According to Bpifrance (2018)¹⁸ and followed by interpretation of several studies which have advanced our understanding of internationalisation, the relevance of this issue includes several crucial reasons why the internationalisation of SMEs is important. Namely, internationally active SMEs reinforce growth and employment, enhance innovations and competitiveness and grow faster.

In line with that, Falk and Hagsten (2015), based on a sample of 110,000 SMEs from 19 European Member States, provided evidence that the level of labour productivity of small- and medium-sized exporting enterprises is 13% higher than that of non-exporting ones in a given industry and country. Furthermore, according to survey evidence from the European Commission (2010)¹⁹, internationally active European SMEs are three times more likely to introduce new products or services and they grow more than twice as fast as European SMEs which are not internationally active. Matiusinaite and Sekliuckiene (2017) argued that the growth and survival of SMEs often depend on international expansion. According to the authors, the rapid development of globalization, increased competition among enterprises and the changes of the business environment have encouraged SMEs to internationalize their activities since their establishment. These companies characterized as innovative, proactive and risk-accepting are known as born global or international new ventures. In line with that, Moen and Servais (2002) analysed the international involvement of enterprises as a gradual development process, questioning whether they were born

global or gradual global. The authors revealed that the time period between the establishment of the enterprises and exporting was less than two years for one-third of the sampled enterprises. In terms of export intensity, these firms outperformed those that waited several years before exporting. The results also indicate that the future export involvement of a firm is influenced by its behaviour shortly after establishment. In addition, authors argued that the firms' development of resources in order to be competitive in international markets, is the key issue and that the basic resources and competencies of a firm are determined during the establishment phase. The authors concluded that a strong international focus is a key priority for developing into high-involvement exporters. Pickernell et al. (2016) analysed determinants of exporting SMEs based on an analysis of firm characteristics and their resources. The authors concluded that the determinants of exporting SMEs include industry sector, age and the characteristics of the owner-manager, along with the firms' available resources, including the human capital of the owner-manager, use of technology and intellectual property. Furthermore, innovation was found to be positively linked to exporting while growth was not.

Despite the benefits internationalisation has for SMEs, their engagement in international activities is still relatively weak mainly because of the obstacles and challenges that they face when trying to access external markets, whether exporting or importing. According to the Eurobarometer Survey (2015)²⁰, major obstacles SMEs face when exporting and importing are as follows. More than half of all SMEs (52%) say the administrative procedures when exporting are too complicated, with 24% identifying this as a major problem. Also, at least four in ten companies with export experience found the following to be either minor or major problems for them: 49% claimed that delivery costs are too high, 45% stated identifying business partners abroad is too difficult and 42% considered the financial investment to be too large. In addition, one in five SMEs also identified the fact that resolving cross-border complaints and disputes is too expensive, as a major problem when exporting (20%), and overall this has been a problem (minor and major) for 38% of SMEs. The cost or complication of dealing with foreign taxation has been a problem for 39% of SMEs. As one of the problems when exporting, at least one third named the lack of security in payments from

other countries (36%), not knowing where to find information about the potential market (35%) or not knowing the rules (33%). SMEs engaged with importing identified high delivery costs as the main problem encountered when importing. More than half of the companies engaged in importing named as a problem the fact that delivery costs are too high (53%), with 22% of them naming this as a major problem. Furthermore, 46% of SMEs named the fact that administrative procedures are too complicated as a problem, and for 18% it is a major problem. The difficulty in controlling the quality of their orders, 40% companies identified as a problem, while 39% identified the difficulty in identifying business partners abroad as a problem. For 37% of SMEs not knowing the rules to be followed presented a problem. Not knowing where to find information about potential suppliers presented a problem for 31% of SMEs, and not having the specialised staff to deal with imports presented a problem for 30% of SMEs, while 29% identified as a problem lacking the language skills to deal with foreign countries. In order to assist them in overcoming these challenges, companies identified grants, subsidies and loans as most likely measures that could help them to internationalise. 30% of SMEs named grants, subsidies or low interest loans as the most common measures that could help them, while 28% of the companies named tax incentives and 27% named support for finding business partners and networking. One in five companies identified opportunities to take part in international trade fairs and information on market opportunities as a problem, while 19% named as a problem information on rules and regulations and 17% named advice or training as a problem. For only 25% of SMEs none of these measures could help their company engage in business abroad.

Along with all obstacles and challenges SMEs face when trying to access external markets, boosting benefits from internationalisation such as higher productivity, faster growth, greater innovation and better chances of survival are crucial reasons for further research and investigation on internationalisation of SMEs.

3. Analysis of data on international trade of SMEs in EU-28

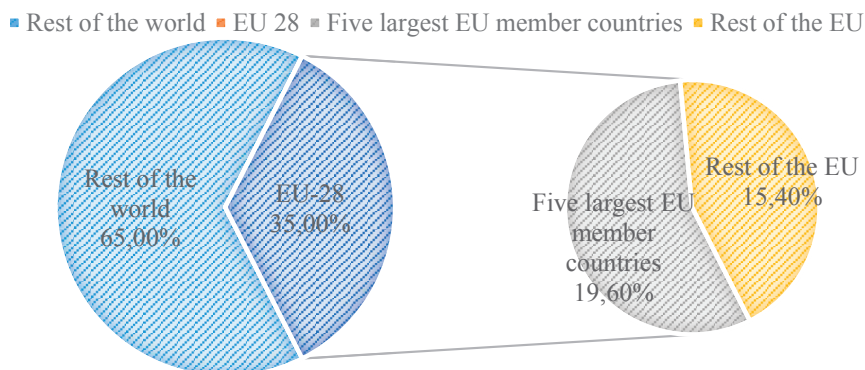
The analysis uses company-level data from several sources. The World Bank is one of the bodies from which data are collected, followed by Bpifrance.

More precisely, the analysis predominantly uses data from the Eurostat database. The most recent data covers the EU-28 Member States on intra and extra EU exports.

According to Bpifrance (2018)²¹, international trade is a key engine for growth and welfare, particularly for France, Germany, Italy, Spain and the United Kingdom, which are not only the largest economies

in Europe but also among the largest traders on the European market. Together they account for more than half of all intra- and extra-EU trade flows. In 2016, the European Union Member States exported around 6.8 trillion EUR and imported around 6.4 trillion EUR of goods and services (Eurostat)²². Hence, EU Member States accounted for around one third of the world's exports and imports (Figures 1 and 2).

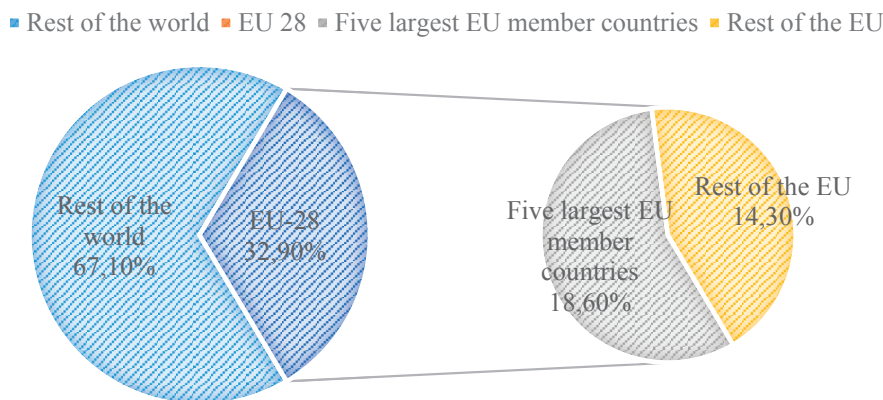
Figure 1 Regional shares in world exports of goods and services in 2016



Source: UNCTAD

Note: EU exports are computed as the sum of the exports of the single Member States, without deducting intra-EU trade²³

Figure 2 Regional shares in world imports of goods and services in 2016



Source: UNCTAD

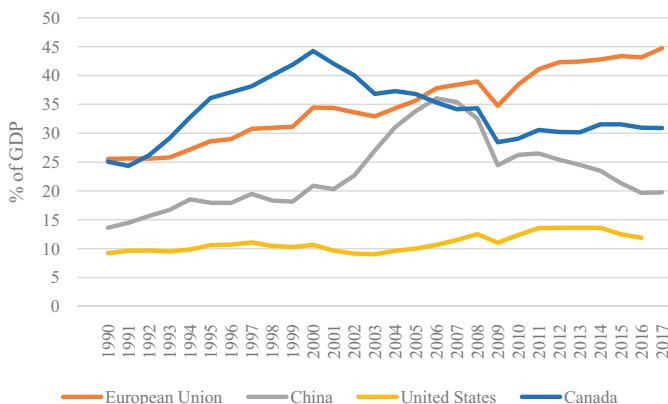
Note: EU imports are computed as the sum of the imports of the single Member States, without deducting intra-EU trade.

The five largest EU-28 Member States measured by their GDP, France, Germany, Italy, Spain and the United Kingdom, account for more than half of EU exports and imports of goods and services and for almost 20% of overall world trade. SMEs account for up to 40% of exports and 50% of imports in these five Member States, while on domestic markets they generate more than 50% of value added and provide two out of three jobs. The majority of SMEs in France, Germany, Italy, Spain and the UK do not trade internationally. Less than 30% of all SMEs export mostly to other EU Member States and less than 3% invest abroad. Furthermore, despite the benefits internationalisation can have on

their productivity, growth and chances of survival, only a limited number of those SMEs currently inactive on global markets are considering exporting or importing in the future. Still, an important part of exports and imports is driven by large enterprises (Bpifrance, 2018)²⁴.

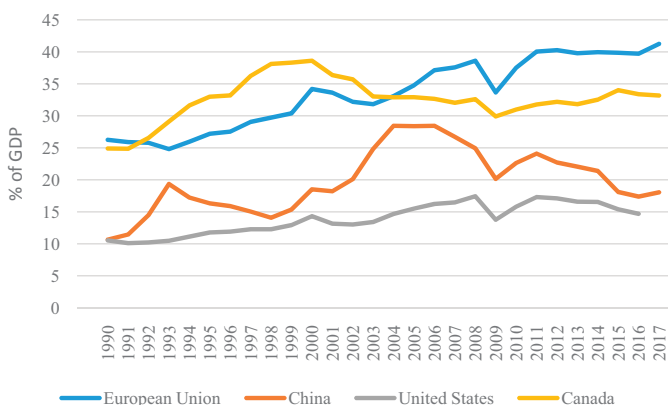
The EU Member States involved in export and imports do not influence only the world trade but also make a significant contribution to the EU economy. In 2017, the EU Member States exported 44,71% and imported 41, 25% of the EU GDP in goods and services, compared to other leading world traders (World Bank)²⁵ (Figure 3 and Figure 4).

Figure 3 Exports of goods and services (% of GDP)



Source: Author's work according to data published by the World Bank

Figure 4 Imports of goods and services (% of GDP)

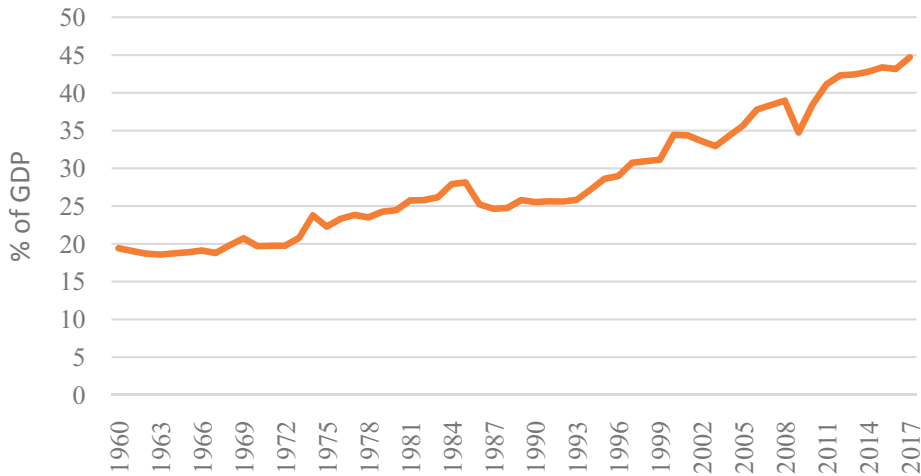


Source: Author's work according to data published by the World Bank

As can be seen in Figure 5, exports of goods and services in the EU recovered after a rapid decline in 2009, following the financial crisis at the end of 2008. As a result, from 2013 to 2017 the EU trade

balance was positive. In 2018, imports grew faster than exports and consequently the trade surplus of EUR 22 billion turned into a trade deficit of EUR 25 billion.

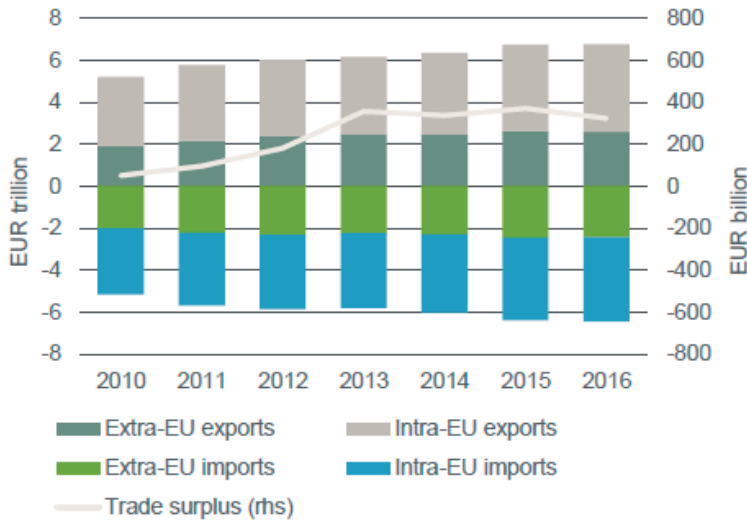
Figure 5 Exports of goods and services (% of GDP) in the EU, 1960-2017



Source: Author's work according to data published by the World Bank

Furthermore, in 2016, intra-EU exports and imports represented more than three fifths of the total EU trade in goods and services (Figure 6).

Figure 6 Intra and extra EU trade

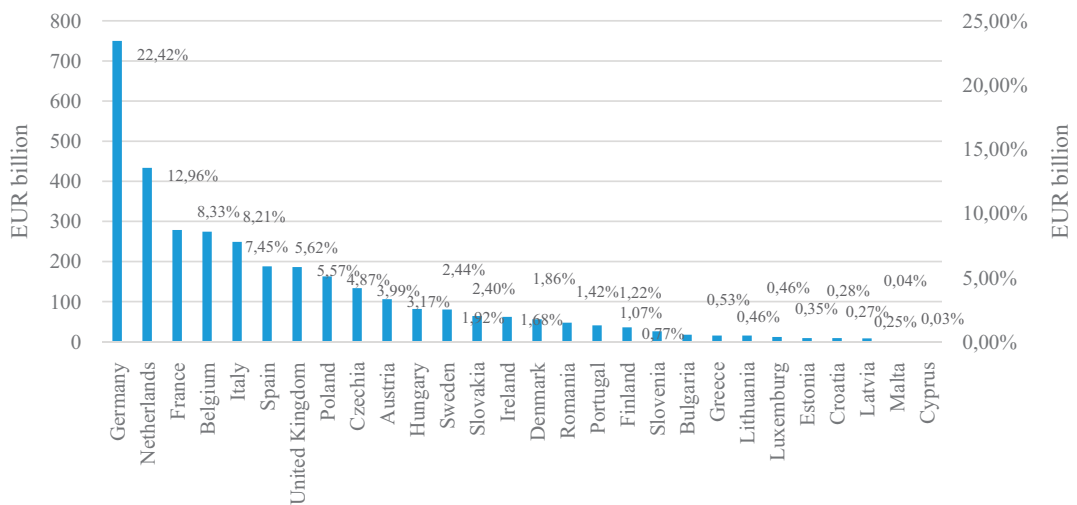


Source: Bpifrance (2018)

The largest share of EU trade is based on free trade among its Member States. A high degree of trade integration within the EU-28 Member States and 500 million people is based on the European Single Market, which is more than just a free trade agreement. It aims at ensuring the free movement of goods, services, capital and persons – the four freedoms – within the EU and thus makes an important contribution to reducing barriers to internationali-

sation (Bpifrance, 2018)²⁶. According to data provided by Eurostat, there is a wide range in the value of export trade in goods by Member States with partners within the EU, as can be seen in Figure 7. In 2017 the value of export trade in goods within the EU ranged from EUR 750 billion for Germany (22.4% of total intra-EU exports) to just over EUR 1 billion for Cyprus, only 0.03% of total intra-EU exports (Eurostat)²⁷.

Figure 7 Exports of goods to other Member States, 2017 (Intra-EU trade)

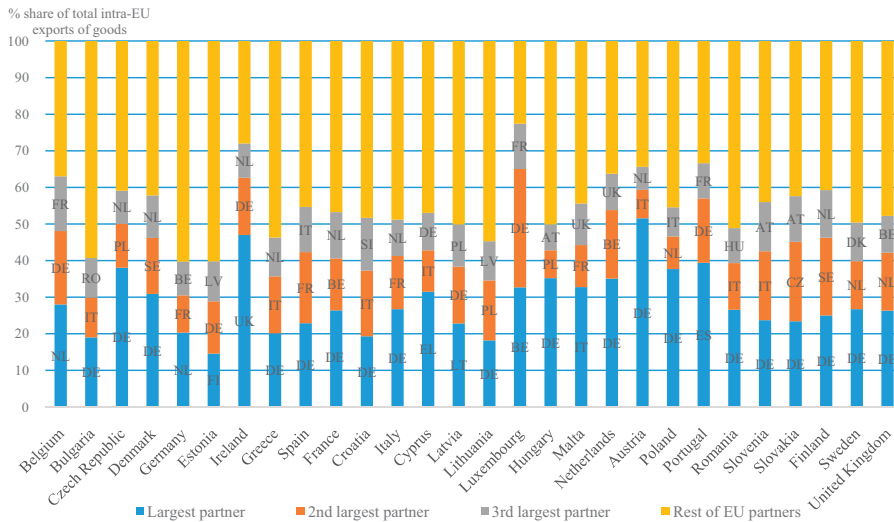


Source: Author's work according to data published by Eurostat

As can be seen in Figure 7, the exports of goods to other Member States of the following ten Member States (Belgium, Czech Republic, Germany, France, Spain, Italy, Netherlands, Austria, Poland and the United Kingdom) exceeded EUR 100 billion in 2017, accounting for almost 83% of the total value of intra-EU exports of goods. Furthermore, twenty Member States (Belgium, Czech Republic, Denmark, Ireland, Spain, France, Croatia, Italy, Cyprus, Luxemburg, Malta, Netherlands, Austria, Poland, Portugal, Slovenia, Slovakia, Finland, Sweden and the United Kingdom) had three partners within the EU, accounting for over 50% of their intra-EU exports (Figure 7). The rest of the eight Member

States (Bulgaria, Germany, Estonia, Greece, Latvia, Lithuania, Hungary and Romania) have a share of top three intra-EU export partners that is between 39% and 50%. For most of the Member States, the top three partners are often the largest Member States in the EU and neighbour countries or countries in close geographical proximity. Germany is for all but two Member States (Malta and Germany itself) one of their top three partners. For thirteen Member States, the Netherlands was a top three partner, while Italy was a top three partner for ten Member States. All Member States had at least one neighbour Member State among their top three partners.

Figure 8 Top three partners in intra-EU exports of goods for EU Member States, 2017

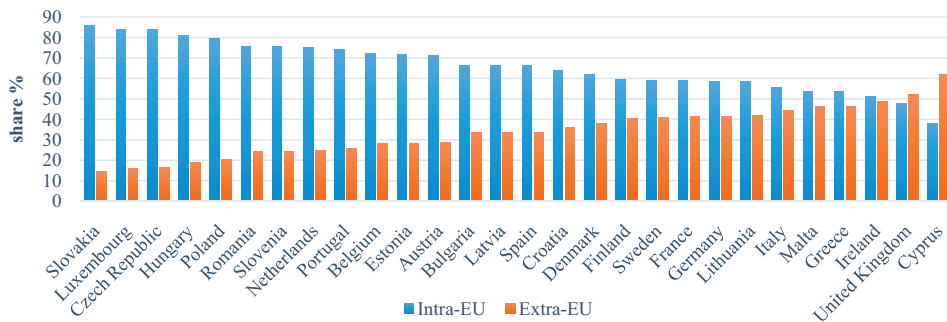


Source: Author's work according to data published by Eurostat

In addition, in 2017, the EU Member States on the whole have traded goods more with other Member States than with countries outside the EU. Besides the United Kingdom (above 50% of Extra-EU exports) and Cyprus (above 60% of Extra-EU exports), all Member States exported more goods within the EU than out-

side the EU. And in this case, there is a large range among the Member States in this proportion, ranging from 86% of Slovakia's total exports of goods among the Member States (Intra-EU exports) to below 38% of Cyprus' total goods exports among the Member States (Intra-EU exports) (Figure 9) (Eurostat)²⁸.

Figure 9 Intra EU exports of goods compared with Extra EU exports of goods by Member State, 2017

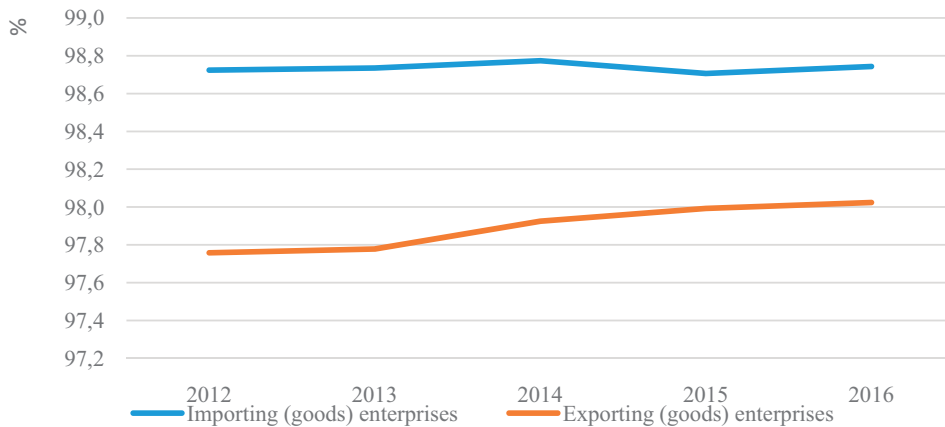


Source: Author's work according to data published by Eurostat

The characteristics of the SMEs actively engaged in importing and exporting within the EU-28 and outside the EU (in total trade) show that for importing enterprises the share of SMEs in total trade stayed unchanged at 98.7% between 2012 and 2016. Moreover, in 2012, the value of exporting enterprises

was almost 1 p.p. lower than the value of importing enterprises. In 2016, the value of exporting enterprises was still lower than the value of importing enterprises but increased slightly to 98.0% from 97.8% in 2012 (Figure 10).

Figure 10 Share of SMEs in the number of enterprises in total trade (intra+extra-EU trade), 2012-2016



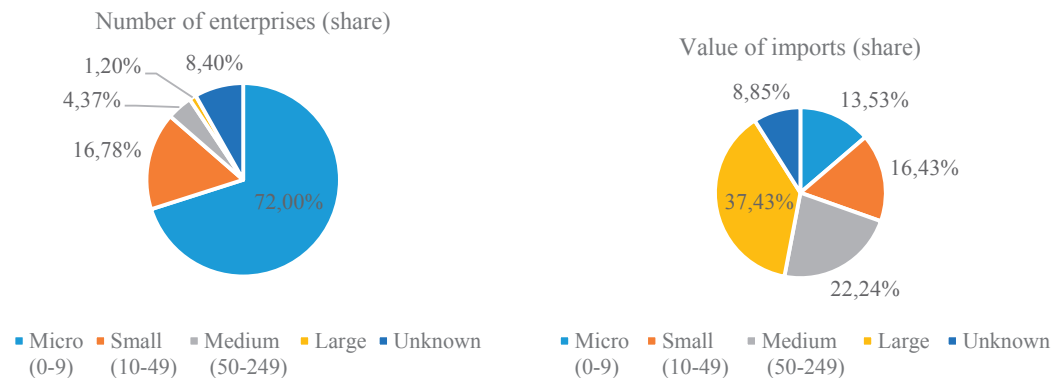
Source: Author's work according to data published by Eurostat

Note: Share of SMEs in the number of enterprises is calculated as the median value for the Member States

Figures 11 and 12 show that, still, the vast majority of importers and exporters of goods in 2016 are SMEs within all three categories, led by micro enterprises with 72% of the number of importing enterprises and with 62.3% of the number of exporting enterprises for both intra and extra EU trade in goods in 2016. Although, large enterprises contributed with only 1.2% of the number of importing enterprises and with only 1.8% of the number of exporting enterprises for both intra and extra EU trade in goods in 2016, in many Member States they account for the largest share in trade value among

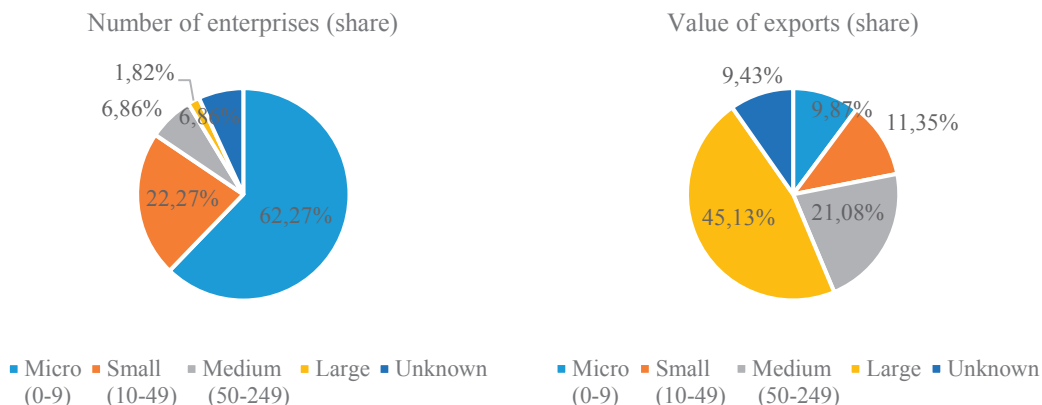
the four size classes. Large enterprises accounted with 37.43% of the value of imports and with 45.13% value of exports for both intra and extra EU trade in goods in 2016. Small and medium sized enterprises accounted for 98.8% of the number of importing enterprises with 52.2% of the value of imports and 98.2% of the exporting enterprises with 42% of the value of exports for both intra and extra EU trade in goods in 2016. For 8.4% of enterprises, accounting for 8.6% of the value of imports, and for 6.9% of enterprises, accounting for 9.4% of the value of exports, no size class was available.

Figure 11 Shares by size class for importing (goods) enterprises for total trade (intra+extra-EU trade), 2016



Source: Author's work according to data published by Eurostat

Figure 12 Shares by size class for exporting (goods) enterprises for total trade (intra+extra-EU trade), 2016

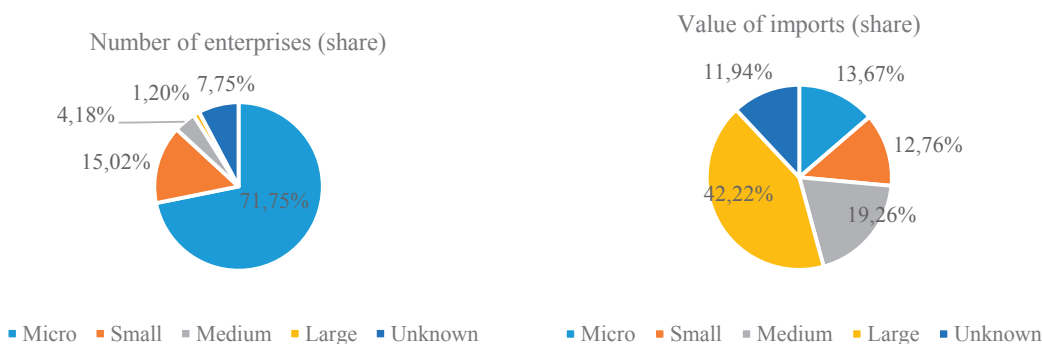


Source: Author's work according to data published by Eurostat

Figure 13 shows that, in 2016, large enterprises accounted only 1.2% of the number of enterprises in intra-EU imports. They had 42.2% of the value of imports which was slightly less than the trade in value of the SME's (45.7%). The vast majority of importers in intra-EU trade are also SMEs led by Micro enterprises, with 71.8% of the number of enterprises in intra-EU imports, contributed with only 13.7% of the value

of imports. Micro enterprises are followed by Medium enterprises which accounted for only 4.2% of the number of intra-EU importers, but contributed more, with 19.3% to the value of imports. Additionally, Small enterprises accounted for 12.8% of shares in value with 15% of the number of enterprises. For 7.8% of enterprises, accounting for 11.9% of the value of imports, no size class was available.

Figure 13 Shares by size class for importing (goods) enterprises within the EU-28 (Intra-EU imports), 2016

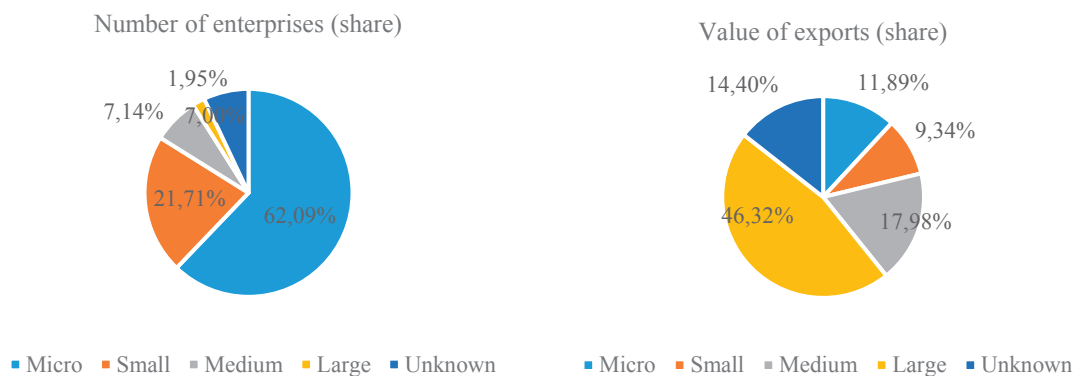


Source: Author's work according to data published by Eurostat

Furthermore, Figure 14 shows that in intra-EU exports, large enterprises contributed with 46.3% of the value of exports, although they represented only 2% of the exporting enterprises. Their contribution to exports is much higher than in imports. All three categories of SMEs

each had lower shares in value for exports than for imports, but the share in the number of enterprises, for each category was larger than in imports, except for Micro enterprises which had a 10 p.p. smaller share in exports than in imports.

Figure 14 Shares by size class for exporting (goods) enterprises within the EU-28 (Intra-EU exports), 2016



Source: Author's work according to data published by Eurostat

4. Concluding remarks

The purpose of this paper was to provide a better grasp of the link between the internationalisation of SMEs and the benefits internationally active SMEs can have. According to the gathered data, among SMEs, micro enterprises are the leading trading enterprises with almost two thirds of the total number of exporting companies in total trade and within the EU. In addition, two thirds of SMEs' exports are intra-EU exports, meaning that SMEs are still focused on intra-EU trade. This highlights the relative importance of free trade on the European Single Market and the internal market for SMEs internationally active within the EU, given the fact that intra-EU trade in goods was higher than extra-EU trade for each EU Member State.

An important part of exports and imports is still driven by large companies in terms of the value of exports and imports for both intra- and extra-EU

trade in goods, exporting nearly as much to the rest of the world as to intra-EU destinations.

Although overall SMEs make a substantial contribution to the European Union GDP with their exports and imports of goods and services, due to the micro and macro barriers they are faced with, there is still a huge share of SMEs which are not involved in any form of international trade.

The importance of analysis provided in this paper is to alert policy makers, stakeholders and authorities, especially at the regional level, striving to inspire them to take practical measures in order to help European SMEs to expand internationally and improve their economic performance.

Recommendations for future research are arising from the limitations of the research and include conducting broad and more comprehensive data research on this topic with the aim of determining more precisely the impact of internationalisation on economic performance of SMEs.

REFERENCES

1. Falk, M., Hagsten, E. (2015), "Exporter Productivity Premium for European SMEs", *Applied Economic Letters*, Vol. 22, No. 12, pp. 930-933.
2. Matiusinaite, A., Sekliuckiene, J. (2015), "Factors determining early internationalization of entrepreneurial SMEs: Theoretical approach," *International Journal of Business and Economic Sciences Applied Research (IJBESAR)*, Vol. 8, No. 3, pp. 21-32.
3. Moen, O., Servais P. (2002), "Born Global or Gradual Global? Examining the Export Behavior of Small and Medium-Sized Enterprises", *Journal of International Marketing* Vol. 10, No. 3, pp. 49-72.
4. Paul, J., Parthasarathy, S., Gupta, P. (2017), "Exporting challenges of SMEs: A review and future research agenda", *Journal of World Business*, Vol 52, No. 3, pp. 327-342.
5. Pickernell D., Jones, P., Thompson, P., Packham, G. (2016), "Determinants of SME exporting", *Entrepreneurship and Innovation*, Vol. 17, No. 1, pp. 31-42.
6. UNCTAD (2017), *World Investment Report*, available at: <https://unctad.org/en/pages/publication-webflyer.aspx?publicationid=1782> (Accessed on: January 28, 2019)

ENDNOTES

- 1 European Commission (2018), "Annual Report on European SMEs 2017/2018" SMEs growing beyond borders, Brussels.
- 2 European Commission, *SME Internationalisation beyond the EU*, available at: https://ec.europa.eu/growth/smes/access-to-markets/internationalisation_en (Accessed on: January, 20, 2019)
- 3 European Commission (2018), "Annual Report on European SMEs 2017/2018" SMEs growing beyond borders, Brussels.
- 4 European Commission (2018), "Annual Report on European SMEs 2017/2018" SMEs growing beyond borders, Brussels.
- 5 OECD (2009), "Top Barriers and Drivers to SME Internationalisation, Report by the OECD Working Party on SMEs and Entrepreneurship".
- 6 European Commission (2011), "Communication from the Commission to the European parliament, the council, the European economic and social committee and the committee of the regions "Small Business, Big World— a new partnership to help SMEs seize global opportunities", COM(2011) 702, final, Brussels.
- 7 European Commission (2010), "Communication from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions," "An Integrated Industrial Policy for the Globalisation Era Putting Competitiveness and Sustainability at Centre Stage", COM(2010) 614 final, Brussels.
- 8 European Commission (2011), "Communication from the commission to the European parliament, the council, economic and social committee and the committee of the regions" Review of the "Small Business Act" for Europe, COM (2011) 78 final, Brussels.
- 9 European Commission (2011), "Communication from the Commission to the European parliament, the council, the European economic and social committee and the committee of the regions "Small Business, Big World— a new partnership to help SMEs seize global opportunities", COM(2011) 702, final, Brussels.
- 10 European Commission (2011), "Communication from the Commission to the European parliament, the council, the European economic and social committee and the committee of the regions "Small Business, Big World— a new partnership to help SMEs seize global opportunities", COM(2011) 702, final, Brussels.
- 11 European Commission (2011), "Communication from the Commission to the European parliament, the council, the European economic and social committee and the committee of the regions "Small Business, Big World— a new partnership to help SMEs seize global opportunities", COM(2011) 702, final, Brussels.
- 12 European Commission (2010), "Internationalisation of European SMEs", Brussels.
- 13 European Commission (2015), *Flash Eurobarometer 421*, "Internationalisation of small and medium-sized enterprises", Brussels.
- 14 European Commission (2018), "Annual Report on European SMEs 2017/2018" SMEs growing beyond borders, Brussels.
- 15 Bpifrance (2018), "Internationalisation of European SMEs", Maisons-Alfort Cedex, France.
- 16 European Commission (2018), "Annual Report on European SMEs 2017/2018" SMEs growing beyond borders, Brussels.
- 17 European Commission (2015), *Flash Eurobarometer 421*, "Internationalisation of small and medium-sized enterprises", Brussels.
- 18 Bpifrance (2018), "Internationalisation of European SMEs", Maisons-Alfort Cedex, France.
- 19 European Commission (2010), "Internationalisation of European SMEs", Brussels.

- 20 European Commission (2015), Flash Eurobarometer 421, "Internationalisation of small and medium-sized enterprises", Brussels.
- 21 Bpifrance (2018), "Internationalisation of European SMEs", Maisons-Alfort Cedex, France.
- 22 Eurostat (2018), "World trade in goods and services", Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/World_trade_in_goods_and_services_an_overview#World_exports_of_goods_and_services (Accessed on: January 25, 2019)
- 23 If instead the EU were considered as a single entity and the exchange of goods and services between its Member States as internal demand rather than external trade, its actual commercial performance vis-à-vis the rest of the world would look different.
- 24 Bpifrance (2018), "Internationalisation of European SMEs", Maisons-Alfort Cedex, France.
- 25 World Bank (2018), World development indicators, Available at: <https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS?end=2017&start=1996&view=chart> (Accessed on: January, 25, 2019)
- 26 Bpifrance (2018), "Internationalisation of European SMEs", Maisons-Alfort Cedex, France.
- 27 Eurostat (2018), "Intra-EU trade in goods", Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Intra-EU_trade_in_goods_-_recent_trends (Accessed on: January 23, 2019)
- 28 Eurostat (2018), "Intra-EU trade in goods", Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Intra-EU_trade_in_goods_-_recent_trends (Accessed on: January 22, 2019)

Martina Harc

INTERNACIONALIZACIJA MALIH I SREDNJIH PODUZEĆA U EU-28

SAŽETAK

Međunarodne trgovinske aktivnosti zemalja članica Europske unije ne utječu samo na svjetsku trgovinu, već i značajno doprinose europskom gospodarstvu. Slobodna trgovina između zemalja članica Europske unije jedno je od temeljnih načela EU-a. Mala i srednja poduzeća, koja sudjeluju u međunarodnim aktivnostima, ne razvijaju samo nove poslovne prilike, već postaju inovativnija, produktivnija te stoga brže rastu.

Svrha je ovoga rada pružiti bolji uvid u internacionalizaciju MSP-a te istaknuti prednosti međunarodne trgovine. Koristeći najnovije podatke Eurostat baze podataka i podatke iz Svjetske banke, u ovom je radu stavljen naglasak na mala i srednja poduzeća koja se aktivno bave uvozom i izvozom unutar i izvan EU-a.

Analiza je pokazala da unatoč značajnim izravnim i neizravnim koristima koje internacionalizacija može imati za mala i srednja poduzeća, većina malih i srednjih poduzeća nije uključena u međunarodnu trgovinu. Iako, sveukupno gledano, MSP znatno doprinosi izvozu i uvozu Europske unije, još uvijek postoji veliki udio malih i srednjih poduzeća koja zbog prepreka i izazova s kojima se susreću, uopće nisu uključena u međunarodne aktivnosti. Iako velika poduzeća pridonose samo malim udjelom u broju poduzeća koja uvoze i izvoze unutar i izvan Europske unije, ipak pridonose najvećim udjelom u vrijednosti trgovinske razmjene u mnogim državama članicama.

Ključne riječi: internacionalizacija, mala i srednja poduzeća, međunarodna trgovina, unutarnja i vanjska trgovina u Europskoj uniji

BOOK REVIEW

PRIKAZ KNJIGE

Mirna Leko Šimić:
Book review "Pricing. The new frontier"



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BOOK REVIEW

"PRICING. THE NEW FRONTIER"

TITLE: Pricing. The New Frontier

AUTHORS: Gabor Rekettye, Jonathan Liu

PUBLISHER: Transnational Press London; Management Series

YEAR OF PUBLISHING: 2018

Number of pages: 304

ISBN 978-910781-33-3

The book *Pricing. The New Frontier*, authored by Gabor Rekettye, Hungarian marketing expert, Professor Emeritus at University of Pecs, Hungary and Honorary Professor at University of Szeged, Hungary and Johnathan Liu, a professor of global management at Regent's University, London, Great Britain was published by Transnational Press London, Great Britain in late 2018.

This book provides a comprehensive overview of historical and recent issues around pricing, and at the same time it is one of the rare ones that deals specifically with pricing as one of the core elements of both microeconomics and marketing. What makes this book unique is that it takes an interesting approach to issues and challenges of pricing from the perspective of different stakeholders.

The book is composed of three interrelated parts: Pricing basics, Strategies and tactics of pricing and Intermediary pricing. The first part stresses the importance of pricing in the global environment characterized by globalization processes, global crisis and power shifts in the global economy, giving a number of illustrative examples. It gives an

overview of major economic phenomena – demand curve, demand elasticities, different market structures and explains its relation to pricing. Delving into a deeper analysis of the demand side of pricing, it explains customers' price perception and evaluation of perceived prices. Furthermore, it provides an analysis of relations between prices, cost and profit from a company viewpoint and explains reasoning behind pricing decisions. The first part ends with an overview and analysis of different methods of price setting, again illustrated with interesting examples.

The second part of the book aims at identifying critical issues of pricing strategies and tactics in various business situations – in case of new products or product lines, in relation to product life cycle phase, at different levels of distribution and in the creation of price - quality ratio. It also looks at the strategic decisions regarding pricing: price setting, price discrimination, price adaptation and pricing dynamics.

The last part of the book, Intermediary pricing, deals with issues of manufacturer's price control across distribution channels, pricing policies, strategies and tactics applied by different intermediaries and relations between manufacturers and intermediaries in the development of efficient pricing strategies and tactics. Two separate chapters appear in this part of the book: one is devoted to pricing in the international market, focusing on differences in domestic and international pricing factors and elements that influence international pricing. The other chapter covers the area of price negotiations, emphasizing their importance and analyzing the process of price negotiations.

The book provides a reference list of almost 200 sources ranging from classic (Kotler, Stiglitz, Dolan and others) to the most recent (21st century) studies on pricing and related areas. Furthermore, the index at the end of the book enables easy navigation through the text.

Such an organization of the book has enabled the authors to provide deep analysis and understanding of complex issues of pricing at different levels (economy and company) and from the perspective

of different stakeholders - manufacturers, customers and intermediaries as well as in different scopes (domestic and international market). The whole text is interwoven with numerous recent examples from business practice. As such, this book makes a value-integrated read that could be recommended both as a student textbook, i.e. for academic purposes, and a managerial toolkit for better implementation of classic and new, systematically presented insights into pricing theory and managerial practices.

CONFERENCE REVIEW

PRIKAZ KONFERENCIJE

Lucija Mršo:
Obljetnička Kreativna riznica zaokružila sektore kreativne industrije



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OBLJETNIČKA KREATIVNA RIZNICA ZAOKRUŽILA SEKTORE KREATIVNE INDUSTRIJE

Dionici kreativne industrije okupili su se na jubilarnoj Kreativnoj riznici popularizacijskom simpoziju kreativne industrije. Petu godinu za redom Ekonomski fakultet u Osijeku te Institut Andizet organizatorima su velikog događanja, uz podršku partnera, Akademije za umjetnost i kulturu, Trgovačke i komercijalne škole Davor Milas iz Osijeka i Filozofskog fakulteta u Osijeku.

Kreativna industrija doprinosi razvoju gospodarstva u cijelosti, izvoznog je potencijala, a temeljena je na znanju, znanstvenoj, tehnološkoj i umjetničkoj inovativnosti, razvoju talenata te očuvanju nacionalne kulturne baštine kroz njezinu implementaciju u suvremene proizvode i usluge (Horvat, Mijoč, Zrnić, 2018: 16). Iako je kreativna industrija Republike Hrvatske i nadalje u procesu formaliziranja, Kreativna riznica čini veliki korak u njenom populariziranju kao mjestu za spajanje teoretičara i praktičara, te udruživanjem znanstvenih, stručnih i kreativnih snaga, a sve kroz akumulaciju ideja i iskustava, radionica i multimedijalnih sadržaja (Tomašević, 2015; Zrnić, 2016; Turjak, 2018; Jobst, 2018; Mijoč i dr., 2016; Horvat i dr., 2018). Riječ je o jedinom simpoziju usmjerenom populariziranju kreativne industrije na nacionalnoj razini čime se Ekonomski fakultet u Osijeku ističe kao jedinstvena znanstveno-nastavna institucija koja otvara prostor novim razmišljanjima o kreativnoj industriji. Vrijednost Kreativne riznice na novu je razinu uzdignula i Državna nagrada za znanost u kategoriji populariziranja znanosti koja je njezinim začetnicima dodijeljena u Hrvatskom saboru 2017. godine. Cilj Kreativne riznice

umrežavanje je znanstvenika i praktičara okupljenih oko milenijske uloge kreativne industrije¹. Svojim multidisciplinarnim karakterom Kreativna riznica ostvaruje besplatno razmjenjivanje znanja, ideja i praktičnih iskustava, a ostavlja djelatnan trag u znanstvenom, kulturnom i gospodarskom životu na nacionalnoj razini (Horvat i dr., 2018: 21).

Kreativnoj riznici 2019. povjerenje ukazuju visoki pokrovitelji: Predsjednica Republike Hrvatske gospođa Kolinda Grabar-Kitarović, Sabor Republike Hrvatske, Ministarstvo kulture, Ministarstvo turizma, Ministarstvo znanosti i obrazovanja, Ministarstvo gospodarstva, poduzetništva i obrta, Osječko-baranjska županija, Grad Osijek, Sveučilište Josipa Jurja Strossmayera u Osijeku te Studentski zbor Sveučilišta Josipa Jurja Strossmayera u Osijeku.

Peta Kreativna riznica krovne teme Kružna kreativnost održana je od 10. do 13. travnja 2019. godine. Kružna kreativnost tematski je zaokružila protekle četiri Riznice kroz 60 događaja kojima se i nadalje ustrajava na umrežavanju 12 sektora kreativne industrije. Na svečanom otvorenju dodijeljena je nagrada Vodik najboljim izlagačima prošlogodišnje Riznice. Nagradu Vodik osvojile su Dora Radl Čučić i Ivana Jobst za interaktivnu radionicu RADIOaktivna kreativna bilježnica. Također, dodijeljena je nagrada Dunji Degmečić kao najboljem izlagaču iz 2015. godine kako bi se nagradili i izlagači iz rizničarske godine u kojoj nagrada Vodik još nije bila usustavljena.

Slika 1. Film Što je kreativna industrija?



Kreativnu riznicu 2019. posjetilo je više od 2 000 posjetitelja na 60 događanja koji su po vrsti i broju prikazani u Tablici 1.

Izvor: <https://www.youtube.com/watch?v=4xk3iKBq-Aw>
(pristupljeno: 10. svibnja 2019.)

Tablica 1. Vrsta i broj događanja Kružne kreativnosti

Vrsta događanja	Broj događanja
Radionica	28
Multimedijska događanja (izložbe, izlaganja, vođenje, performansi)	8
Događanja kreativnih sektora (predstava, revija, monodrama, književna predstavljanja, dizajn interijera, izložbe)	7
Predavanja	7
Predstavljanje projekta	4
Milenijsko natjecanje	5
Okrugli stol, panel, tribina	3
Interaktivna igra	1
Ukupno	63

Izvor: www.kreativna-riznica.com

Organizaciju Kreativne riznice 2019. potpomoglo je 72 volontera koji su svojim radom, trudom i zalaganjem odradili više od 6 000 volonterskih sati. Time je projekt Kreativna riznica još jednom potvrđen kao društveno koristan simpozij.

Koristeći platformu Eventbrite, posjetiteljima su na raspolaganju besplatne ulaznice za sve događaje

Kreativne riznice. Putem sustava olakšana je statistička analiza Riznice koja služi kao povratna informacija za poboljšanje organizacije (Tablica 2.). Društvene mreže Kreativne riznice omogućile su bolju komunikaciju s ciljanom publikom, ali i učinkovitu komunikaciju s prijašnjim posjetiteljima.

Tablica 2. Analiza posjećenosti Kreativne riznice 2019.

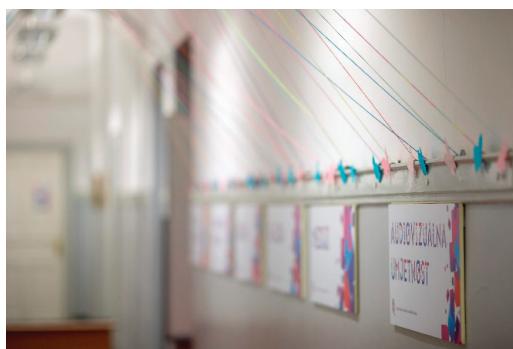
Datum	Dan	Broj posjetitelja
10. 4. 2019.	Prvi dan Kreativne riznice	96
11. 4. 2019.	Drugi dan Kreativne riznice	1121
12. 4. 2019.	Treći dan Kreativne riznice	944
13. 4. 2019.	Četvrti dan Kreativne riznice	190
Ukupno	Četiri dana Kreativne riznice	2351

Izvor: Autor

Izvedba programa Kreativne riznice 2019. godine u cijelosti se odvijala u prostoru Ekonomskog fakulteta u Osijeku gdje je 130 izlagača predstavljalo svoje kreativne i inovativne priče u 5 dvorana te dvije aule Fakulteta. Program Kreativne riznice uspješno je povezo izlagače, stručnjake kreativne industrije i publiku različitih dobnih skupina.

Prostorno uređenje Kreativne riznice prepoznato je među posjetiteljima kao jedinstveno, a s obzirom na ovogodišnju temu Kružne kreativnosti mentorice Josipa Mijoč i Dora Radl Čučić zajedno sa studentima Ivanom Jobst, Lucijom Mršo, Željkom Rontom i Aleom Terzićem kreirale su prostornu instalaciju kojom je prikazana povezanost svih pet dosadašnjih tema.

Slika 2. Prostorna instalacija - QR kockice i sektori kreativne industrije



Izvor: Mario Miloloža

Slika 2. prikazuje kruženje svim sektorima kreativne industrije koje je posjetiteljima omogućeno putem interaktivnih kockica koje su učitavanjem

QR kodova posjetitelje vodile na jednoglasne filmove gdje su pojašnjeni sektori kreativne industrije.

Slika 3. QR kod sektora Vizualne umjetnosti



Napomena: Pametnim telefonom skenirajte sliku²

Izvor: Autor

Posljednji dan Kreativne riznice okupio je natjecatelje na prvom Milenijskom natjecanju iz kreativne industrije. Natjecanje je bilo podijeljeno u četiri kategorije: *kreativni kalendar*, *kreativna zajednica*, *kreativni sat* i *kreativni krug*, a zadatci svake kategorije prilagođeni su dobnom uzrastu natjecatelja. Natjecatelji su rješenja problemskih zadataka pripremali u svojim obrazovnim ustanovama pri čemu su ih mentorski vodili nastavnici/profesori. Srednjoškolci i studenti rješavali su poslovne slučajeve u tri kategorije:

1. Kreativni kalendar (tema: Razvoj publike na primjeru Kreativne riznice).
2. Kreativna zajednica (tema: Razvoj neprofitne organizacije, poslovni slučaj CroCul-Tour, Tri točke).
3. Kreativni sat (Tema: Kreativna industrija grada Osijeka).

Četvrta kategorija namijenjena je djeci predškolskog i osnovnoškolskog uzrasta s ciljem poticanja kreativnosti:

4. Kreativni krug (Tema: Mentalna aritmetika).

Organizatori su Milenijskim natjecanjem iz kreativne industrije potaknuli rješavanje poslovnih slučajeva čime su učenici i studeni sudjelovali u izvannastavnim aktivnostima kojima su doprinijeli razvoju vlastitih vještina, kritičkog razmišljanja, kreativnosti i inovativnosti. Natjecanje je uz navedeni učinak ostvarilo multidisciplinarnu suradnju članova u timovima kao i sinergiju znanja i praktičnih vještina u području kreativne industrije.

Svake godine vidljiv je sve veći napredak Kreativne riznice. Organizatori takav uspjeh postižu ustrajnošću i uvođenjem inovativnih sadržaja koji su privlačni prošlogodišnjim, ali i budućim posjetiteljima. U pet godina Kreativnu je riznicu posjetilo više od 14.000 posjetitelja, što potvrđuje jedinstvenost ovog događaja. Ovo veliko događanje može se vidjeti kao platforma za umrežavanje sudionika sektora, čime oblikuju budućnost vlastitih aktivnosti, a zaposlenici fakulteta imaju priliku čuti iskustva realnog sektora (Mijoč i dr., 2016). Kreativna zajednica i dionici kreativne industrije odavno su prepoznali Riznicu i Ekonomski fakultet kao mjesto za umrežavanje s kolegama i publikom.

LITERATURA

1. Horvat, J., Mijoč, J., Zrnić, A. (2018). *Ars Andizetum*. Osijek: Andizet – Institut za znanstvena i umjetnička istraživanja u kreativnoj industriji.
2. Institut Andizet, Što je kreativna industrija?, dostupno na: <https://www.youtube.com/watch?v=4xk3iKBq-Aw> (pristupljeno: 10. svibnja 2019.)
3. Jobst, I. (2018), „Kreativna riznica umrežila sektore kreativne industrije“, *Ekonomski vjesnik: Review of Contemporary Entrepreneurship, Business, and Economic Issues*, Vol. 31, No. 2, pp. 451-455.
4. Kreativna riznica, dostupno na: <https://kreativna-riznica.com/> (pristupljeno: 9. svibnja 2019.)
5. Mijoč, J., Horvat, J., Zrnić, A. (2016). Popularization symposia as a new organizational platform for major events – The case of Creative treasury, pp. 255-266. In 5th International Scientific Symposium *ECONOMY OF EASTERN CROATIA-VISION AND GROWTH*, pp. 255-266.
6. Tomašević, N. (2015), “Kreativna riznica: popularizacijski simpozij kulturne i kreativne industrije Ekonomskog fakulteta u Osijeku”, *Ekonomski Vjesnik*, Vol. 28, No. 1, pp. 273-275.
7. Turjak, S. (2018), “Prikaz popularizacijskoga simpozija: Kreativna riznica 2017. – Kemija kreativne industrije”, *Ekonomski vjesnik/Econviews-Review of Contemporary Business, Entrepreneurship and Economic Issues*, Vol. 30, No. 2, pp. 505-507.
8. Zrnić, A. (2016), “Kreativna riznica 2016 – popularizacijski simpozij Ekonomskoga fakulteta u Osijeku: Društveno odgovorna kreativnost”, *Ekonomski Vjesnik*, Vol. 29, No. 1, pp. 279-283.

ENDNOTES

- 1 www.kreativna-riznica.com
- 2 Učitavanje sadržaja koji se nalazi u QR kodu Slike 3 moguće je napraviti prikladnim programom, ali i fotoaparatom ugrađenim u pametni telefon.

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