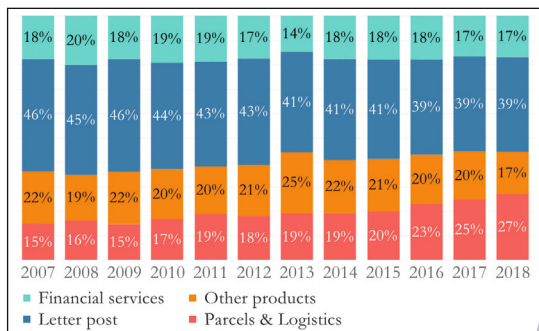


Časopis za ekonomiju i tržišne komunikacije

Economy and Market Communication Review



Evolucija strukture poštanskih usluga

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ΑΠΕΝΒΟΗ



PANEVROPSKI UNIVERZITET
APEIRON
УНІВЕРСИТЕТ
za multidisciplinarnu i virtualnu studiju
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Banja Luka



Fakultet poslovne ekonomije
The Excellence School of Management



Časopis za ekonomiju *i tržišne komunikacije*

Economy and Market *Communication Review*

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NAMJERA PONAVLJANJA ONLINE KUPOVINE STUDENTSKE POPULACIJE - NALAZI U REPUBLICI HRVATSKOJ

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Sažetak: Istraživanje je imalo za cilj identificirati povezanost ponovljene kupnje studenata s dosadašnjim kupovnim zadovoljstvom, procjenom korisnosti ponuda, praćenja preporuka i recenzija drugih kupaca te osjećajem sigurnosti i zaštićenosti studenata na internetu. U istraživanju je sudjelovao 101 student: studenti iz STEM područja, studenti društvenih i humanističkih znanosti. Kao metoda prikupljanja podataka korišteno je online anketiranje. Potvrđene su četiri polazne hipoteze: identificirana je statistički značajna povezanost između zadovoljstva online kupovinom i korištenja platformi za ponovljenu online kupovinu u budućnosti. Dokazana je statistički značajna povezanost između procjene korisnosti ponuda proizvoda putem online portala i budućih namjera korištenja platformi za online kupovinu. Potvrđena je statistički značajna povezanost između namjere korištenja platformi za online kupovinu u budućnosti i praćenja preporuka mišljenja drugih ljudi (dostupne recenzije). Potvrđena je i značajna povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjera ponavljanja online kupovine putem interneta u budućnosti. Ovi nalazi imaju praktičnu primjenu za tvrtke koje razvijaju online kupovinu u segmentu B2C.

Ključne riječi: hrvatski studenti, kupovno ponašanje, ponovljena online kupnja, sigurnost online kupovine

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UVOD

Nove generacije mladih potrošača sklone su korištenju društvenih mreža, virtualnom svijetu. Dodatan argument kao prilog istraživanju studenata i online kupovine jest činjenica da u ukupnoj svjetskoj populaciji raste udio generacija koje sasvim dobro funkcioniraju u virtualnom okruženju. Problem s kojim se susreću poduzetnici koji

posjeduju online portale za kupovanje jest porast međusobne konkurencije i važnosti privlačenja i zadržavanja kupaca u smislu ponovljene kupnje te s tim povezanih čimbenika koji pridonose poticajima za ponavljanje kupnje na određenoj online platformi u budućnosti.

Stoga osnovni motiv za provođenje istraživanja jest identificirati na koji način je ponovljena kupnja povezana sa kupovnim zadovoljstvom, procjenom korisnosti ponuda, preporukama i recenzijama drugih korisnika te sigurnošću i zaštićenosti korisnika na internetu. Nalazi istraživanja trebali bi poslužiti tvrtkama u segmentu B2C, u jačanju fokusa prema korisnicima, u stvaranju pozitivnog online kupovnog iskustva. Osim prijašnjih elemenata koji su vezani uz proizvod, cijenu, distribuciju i promociju, marketinški miks u svome digitalnom okruženju razlikuje se od marketinškog miksa koji je svojstven za tradicionalne oblike trgovine, kroz tri dodatne razine: ljudi, dokazi i procesi. U procesima fokus je stavljen na kupca, online potporu, a u dokazima fokus je na iskustvu koje kupac ima s pojedinom markom te online iskustvu (Kartajaya, Kotler, & Hooi, 2019).

Područje predmeta istraživanja definirano je temeljem praćenja dosadašnjih istraživanja. Kako je namjera ponovljene kupnje putem online portala u budućnosti korelirana sa zadovoljstvom ispitanika prethodnom online kupovinom, procjenom korisnosti ponuda proizvoda, korištenjem preporuka i recenzija korisnika te osjećajem sigurnosti i zaštićenosti prilikom obavljanja online kupovine.

U tom smislu postavljena su istraživačka pitanja, ciljevi istraživanja te hipoteze:

Tablica 1. Prikaz istraživačkih pitanja, ciljeva i hipoteza

Istraživačko pitanje 1. Postoji li povezanost između zadovoljstva online kupovinom i korištenja platformi za online kupovinu u budućnosti?	Istraživački cilj 1. Potrebno je utvrditi postojanje ili nepostojanje statistički značajne povezanosti između zadovoljstva online kupovinom te namjere korištenja platformi za ponovnu kupovinu u budućnosti.	Hipoteza 1: Identificirana je statistički značajna povezanost između zadovoljstva online kupovinom i korištenja platformi za ponovljenu online kupovinu u budućnosti.
Istraživačko pitanje 2. Postoji li povezanost između procjene korisnosti ponuda proizvoda putem online portala i budućih namjera korištenja platformi za online kupovinu.	Istraživački cilj 2. Potrebno je utvrditi postoji li ili ne statistički značajna povezanost između procjene korisnosti ispitanika ponudama koje se nude na online portalima i namjere ponavljanja online kupovine na istom online portalu.	Hipoteza 2: Identificirana je statistički značajna povezanost između procjene korisnosti ponuda proizvoda putem online portala i budućih namjera korištenja platformi za online kupovinu.
Istraživačko pitanje 3. Postoji li povezanost između namjere korištenja platformi za online kupovinu u budućnosti i praćenja mišljenja drugih ljudi (dostupne recenzije)	Istraživački cilj 3. Potrebno je utvrditi postoji li ili ne statistički značajna povezanost između namjere korištenja platformi za online kupovinu u budućnosti i praćenja mišljenja drugih ljudi (dostupne recenzije)	Hipoteza 3: Hipoteza 3: Identificirana je statistički značajna povezanost između namjere korištenja platformi za online kupovinu u budućnosti i praćenja mišljenja drugih ljudi (dostupne recenzije).

Istraživačko pitanje 4. Postoji li povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjera ponavljanja online kupovine putem interneta u budućnosti.	Istraživački cilj 4. Potrebno je utvrditi postoji li i ne statistički značajna povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjere ponavljanja online kupovine putem interneta u budućnosti.	Hipoteza 4: Identificirana je statistički značajna povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjera ponavljanja online kupovine putem interneta u budućnosti.
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Izvor: autorice istraživanja

Ovaj rad ima šest cjelina. U uvodu su, kao što je već prikazano, objašnjeni motivi za istraživanje, istraživački problem, područje istraživanja, pregled istraživačkih pitanja, ciljeva istraživanja te postavljenih hipoteza. Preostali dio rada strukturiran je na sljedeći način: u drugom dijelu rada prikazuju se nalazi dosadašnjih istraživanja. Treći dio odnosi se na metodologiju istraživanja. U metodologiji istraživanja opisana je metodologija istraživanja po fazama, uzorak i način prikupljanja odgovora anketom te metodologija obrade odgovora ispitanika. Treći dio se odnosi na empirijske podatke. Prikazani su podaci dobiveni statističkim procedurama. U četvrtom dijelu prikazuju se su rezultati istraživanja te uspoređuju sa dosadašnjim istraživanjima, uz pojašnjenje koje značenje i primjenu imaju rezultati te preporuke za daljnja istraživanja. Rad završava zaključkom s očitovanjima o polaznim istraživačkim pitanjima, ciljevima i polaznim hipotezama, ocjeni dobivenih rezultata istraživanja, implikacijama i značaju provedenog istraživanja, uz osvrt na identificirana ograničenja prilikom provođenja istraživanja koja su ugrađena u preporuke za buduća istraživanja.

PREGLED LITERATURE

Studentska populacija postaje sve značajniji potrošački segment na tržištu proizvoda i usluga. Stoga je poznavanje njihovih potrošačkih obilježja nužno za poduzeća koja nude proizvode i usluge (Horáková, 2015). Iako je online kupovanje danas najbrži rastući fenomen, ugovor s kupcem zaključuje se pristankom kupca na kupovinu, prihvaćanjem ponude, a web stranica prodavatelja jedan je od kanala pomoću kojega prodavatelj dolazi do kupca i obrnuto (Marks, 2006, str. 276). Poduzeća trebaju uvažavati virtualnu perspektivu odnosa sa svojim kupcima, te se orijentirati na aplikacije i socijalne mreže koje mladi ljudi koriste svakodnevno (Bezic, Gasparini, & Bagaric, 2009).

U zadnje vrijeme uočava se rastući značaj mobilnih aplikacija. Istraživanje korisnosti mobilnih aplikacija u svrhu impulsne kupnje studentske populacije istraženo je na uzorku studenata u Poljskoj (n=500) gdje je potvrđeno da studenti koji su manje osjetljivi na cijene, u manjoj mjeri reagiraju na poticaje za impulsnu kupnju i obrnuto (Stefańska & Śmigielska, 2020). Zadovoljstvo s online kupovinom povezano je s namjerom kupovanja u budućnosti (Teo, Lim, & Lai, 1999; Abdul-Muhmin, 2010; Chen, Shang, & Shu, 2014).

Korejsko istraživanje na uzorku od 1.278 ispitanika identificira povezanost zadovoljstva informacijama na web portalu sa lojalnošću web portalu u budućnosti prilikom online kupovine. Na zadovoljstvo web portalom za kupovinu utječe kvaliteta i korisnost informacija koja se tamo nudi. Stoga je procjena zadovoljstva informacijama i odnosima povezana s lojalnošću prema web portalu u budućnosti (Park & Kim,

2006). Važnost kvalitete i privlačnosti web portala za online kupovanje raste porastom broja i konkurencije među online portalima. Istraživanje Vojvodić i drugih ukazuje da je čista impulsna kupnja pozitivno korelirana s visokom kvalitetom i atraktivnošću web stranice (Vojvodić, Šošić, & Žugić, 2018)

Važno je pridodati i ulogu preporuka i recenzija koje kupci na online portalima prate. Ovim istraživanjem jedan od ciljeva jest utvrditi koliko su mladima pri odlučivanju o kupnji važne preporuke i iskustva drugih kupaca u obliku dostupnih recenzija. Chen i dr. istražuju utjecaj preporuka i recenzija na impulsnu kupnju i dokazuju pozitivnu vezu između recenzija korisnika i kupnje (Chen, Lu, Wang, & Pan, 2019).

Budući da živimo u vremenu virtualne stvarnosti, važan je osjećaj sigurnosti i zaštićenosti u virtualnom svijetu, a posebno se to odnosi na sferu kupovanja, novčanih transakcija, sigurnosti i zaštite podataka koje kupci ostavljaju u sklopu svog digitalnog traga. Kupci koji se osjećaju zaštićeno i sigurno prilikom online kupovine iskazuju namjeru ponavljanja online kupovine u budućnosti (Bart, Shankar, Sultan, & Urban, 2005; Liu, Guo, Lee, & C. H., 2011; Rita, Oliveira, & Farisa, 2019; Trivedi & Yadav, 2018).

Elektroničko plaćanje omogućilo je razvoj online kupovine, te uz mogućnosti plaćanja internet bankarstvom tu su još i m-bankarstvo ili mobilno bankarstvo (Čavar, Batoš, & Nemšić, 2009). Prema dostupnim podacima o istraživanju o perspektivama mobilnog bankarstva u Republici Srbiji uočava se da je 74 % ispitanika zadovoljno uslugama mobilnog bankarstva, iako njih 38 % ispitanika ne koristi usluge mobilnog bankarstva (Todić & Dajić, 2018, str. 32). Zaključeno je u spomenutom istraživanju da mobilnom bankarstvu tek predstoji razvoj.

METODOLOGIJA ISTRAŽIVANJA

Polazeći od istraživačkih pitanja i ciljeva analizirana su objavljena istraživanja, te je identificirana 21 varijabla koja je uvrštena u anketni upitnik.

Slika 1. Metodologija istraživanja



Izvor: autorice istraživanja

Tablica 1. KMO i Bartlett test

Kaiser-Meyer-Olkin mjera adekvatnosti uzorkovanja		,803
Bartlettov test sferičnosti	Approx. Chi-Square	838,901
	df	171
	Sig.	,000

Izvor: autorice istraživanja

Varijable u upitniku su mjerene intervalnom ljestvicom (Likertova skala od 1-u potpunosti se ne slažem do 5-u potpunosti se slažem). Nakon prikupljenih odgovora, provedena je faktorska analiza. Podaci o KMO i Bartlett testu prikazani su u donjoj tablici. Zadovoljen je kriterij $KMO > 0,6$, Bartlett test sferičnosti $\chi^2 (171) = 838,901, p < .05$.

Statistička procedura obrade podataka rađena je pomoću statističkog programa IBM SPSS Statistics 25 na slijedeći način:

1. U prvom dijelu obrade ispituje se normalitet distribucije odgovora ispitanika. Koriste se numeričke i vizualne metode. Od numeričkih pokazatelja uzimaju se u obzir podaci o mjerama asimetrije i zaobljenosti, Kolmogorov-Smirnov test ($p > .05$). Prikazati će se deskriptivna statistika varijabli u hipotezama, a vizualno su pregledani histogrami varijabli, dijagrami stabla i lista, te Q-Q grafikoni (Horvat & Mijoč, 2019). Normalitet distribucije određuje kasniju primjenu statističkih procedura za izračun korelacija. Sve promatrane varijable koje su sadržane u hipotezama testirati će se Kolmogorov-Smirnovim testom.

2. Nakon odabira parametrijskih ili neparametrijskih statističkih procedura slijedi izračun koeficijenta korelacija te prikaz i interpretacija rezultata uz prihvaćanje ili neprihvatanje postavljenih hipoteza iz istraživanja na statistički značajnom nivou $p < .05$.

EMPIRIJSKI PODACI

Istraživanje je provedeno među studentskom populacijom na Sveučilištu u Slavonskom Brodu, na studijskim programima Odsjeka za ekonomiju, Odsjeka za izobrazbu učitelja, Strojarskom fakultetu, Biotehničkom odjelu. Upitnik je distribuiran studentima u online obliku putem Google Forms obrasca. Ispitanicima je zajamčena anonimnost pri anketiranju i naglašena je dobrovoljna mogućnost odustajanja od daljnjeg istraživanja u bilo kojem trenutku, što je učinilo 17 ispitanika. Dobiven je 101 potpuni odgovor studenata od 1. do 5. godine studija, koji čine uzorak ispitanika.

Ispitanici nisu mogli utjecati jedni na druge, te je time osiguran i preduvjet neovisnosti opažanja. Anketiranje je provedeno od 1.04.2021. do 13.04.2021. godine. Svi ispitanici izjasnili su se da su imali prethodno iskustvo online kupovine putem interneta, što ih čini pogodnima za uzorak u istraživanju.

Empirijski podaci hipoteze H1

U nastavku se prikazuju empirijski podaci koji su vezani uz istraživačko pitanje, cilj i hipotezu H1. Cilj istraživanja je utvrditi postojanje ili nepostojanje statistički značajne povezanosti između zadovoljstva online kupovinom te namjere korištenja

platformi za ponovnu kupovinu u budućnosti. U prvom dijelu obrade podataka daje se pregled deskriptivne statistike odgovora ispitanika za dvije varijable koje sadrži hipoteza H1, a potom i rezultati Spearmanovog koeficijenta korelacije ranga promatranih varijabli.

Tablica 2. Deskriptivna statistika varijabli sadržanih u hipotezi H1

Deskriptivna statistika Statistic		Zadovoljan/na sam iskustvom online kupovine		U budućnosti ću koristiti i nadalje platforme za online kupovinu	
		Std. Error	Statistic	Std. Error	
Mean		4,03	0,074	4,20	0,094
95% Confidence Interval for Mean	Lower Bound	3,88		4,01	
	Upper Bound	4,18		4,39	
5% Trimmed Mean		4,08		4,30	
Median		4,00		4,00	
Variance		0,549		0,900	
Std. Deviation		0,741		0,949	
Minimum		1		1	
Maximum		5		5	
Range		4		4	
Interquartile Range		0		1	
Skewness		-0,950	0,240	-1,341	0,240
Kurtosis		2,374	0,476	1,696	0,476

Izvor: autorice istraživanja

Iako su vrijednosti sječene aritmetičke sredine i aritmetičke sredine odgovora približne, podaci o mjerama asimetrije i zaobljenosti upućuju na distribuciju različitu od normalne. K-S test za obje varijable je $<.05$. Vizualni pregledi Q-Q grafikona promatranih varijabli upućuju na nalaz da distribucije odgovora ne slijede normalnu distribuciju. Nadalje, Q-Q grafikoni detrendiranih normalnih podataka upućuju da se podaci u pojedinim varijablama nalaze izvan intervala ± 2 što upućuje na distribuciju različitu od normalne. Stoga će se koristiti Spearmanov koeficijent korelacije ranga (r_s).

Tablica 3. Spearmanov koeficijent korelacije ranga promatranih varijabli u hipotezi H1

Variable:		U budućnosti ću koristiti i nadalje platforme za online kupovinu	Zadovoljan/na sam iskustvom online kupovine
Spearman's rho	U budućnosti ću koristiti i nadalje platforme za online kupovinu	Correlation Coefficient	1,000
		Sig. (2-tailed)	,616**
		N	0,000
			101

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

Izvor: autorice istraživanja

Identificirana je statistički značajna povezanost između zadovoljstva online kupovinom i korištenja platformi za online kupovinu u budućnosti ($r_s = ,616$, $p < ,05$). Ispitanici koji su zadovoljni online kupovinom iskazuju namjeru da će u budućnosti i nadalje koristiti online platforme za kupovinu. Time je hipoteza H1 prihvaćena.

Empirijski podaci hipoteze H2

U nastavku se prikazuju empirijski podaci koji su vezani uz istraživačko pitanje, cilj i hipotezu H2. Cilj istraživanja je utvrditi postoji li ili ne statistički značajna povezanost između procjene korisnosti ispitanika ponudama koje se nude na online portalima i namjere ponavljanja online kupovine na istom online portalu. U prvom dijelu obrade podataka daju se podaci deskriptivne statistike za dvije varijable koje sadrži hipoteza H2, te rezultati Spearmanovog koeficijenta korelacija ranga promatranih varijabli.

Tablica 4. Deskriptivna statistika varijabli sadržanih u hipotezi H2

Deskriptivna statistika Statistic		Smatram da su ponude proizvoda putem online portala za kupovanje korisne		U budućnosti ću koristiti i nadalje platforme za online kupovinu	
		Std. Error	Statistic	Std. Error	
Mean		3,85	0,097	4,20	0,094
95% Confidence Interval for Mean	Lower Bound	3,66		4,01	
	Upper Bound	4,04		4,39	
5% Trimmed Mean		3,92		4,30	
Median		4,00		4,00	
Variance		0,948		0,900	
Std. Deviation		0,974		0,949	
Minimum		1		1	
Maximum		5		5	
Range		4		4	
Interquartile Range		2		1	
Skewness		-0,890	0,240	-1,341	0,240
Kurtosis		0,746	0,476	1,696	0,476

Izvor: autorice istraživanja

Podaci o vrijednostima aritmetičke sredine te sječene aritmetičke sredine upućuju da su one približne. No, podaci o mjerama asimetrije i zaobljenosti upućuju na distribuciju različitu od normalne. K-S test za obje varijable je $<.05$. Vizualni pregledi Q-Q grafikona promatranih varijabli upućuju na nalaz da distribucije odgovora ne slijeđe normalnu distribuciju. Nadalje, Q-Q grafikoni detrendiranih normalnih podataka upućuju da se podaci u pojedinim varijablama nalaze izvan intervala ± 2 što upućuje na distribuciju različitu od normalne.

Tablica 5. Spearmanov koeficijent korelacije ranga promatranih varijabli u hipotezi H2

Varijable:		Smatram da su ponude proizvoda putem online portala za kupovanje korisne	U budućnosti ću koristiti i nadalje platforme za online kupovinu
Spearman's rho	Smatram da su ponude proizvoda putem online portala za kupovanje korisne.	Correlation Coefficient	1,000
		Sig. (2-tailed)	,597**
		N	0,000
			101

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

Izvor: autorice istraživanja

Identificirana je statistički značajna povezanost između procjene korisnosti ponuda proizvoda putem online portala i budućih namjera korištenja platformi za online kupovinu ($r_s = ,597$, $p < ,05$). Ispitanici koji procjenjuju ponude proizvoda putem online portala korisnijima, iskazuju buduće namjere ponovnog korištenja platformi za online kupovinu. Time je hipoteza H2 prihvaćena.

Empirijski podaci hipoteze H3

U nastavku se prikazuju empirijski podaci koji su vezani uz istraživačko pitanje, cilj i hipotezu H3. Cilj istraživanja je utvrditi postoji li ili ne statistički značajna povezanost između odluke studenata o online kupovini u budućnosti i praćenja dostupnih recenzija i mišljenja drugih korisnika o online kupovini.

U prvom dijelu obrade podataka daje se pregled deskriptivne statistike odgovora ispitanika za varijable koje sadrži hipoteza H3, a potom i rezultati Spearmanovog koeficijenta korelacije ranga promatranih varijabli. Cilj je identificirati da li studenti koji iskazuju namjeru online kupovine u budućnosti prate mišljenja i dostupne recenzije drugih korisnika.

Tablica 6. Deskriptivna statistika varijabli sadržanih u hipotezi H3

Deskriptivna statistika Statistic		U budućnosti ću koristiti i nadalje platforme za online kupovinu		Mišljenja drugih ljudi (dostupne recenzije) na društvenim mrežama utječu na moju odluku o kupnji	
		Std. Error	Statistic	Std. Error	
Mean		4,20	0,094	3,71	0,104
95% Confidence Interval for Mean	Lower Bound	4,01		3,51	
	Upper Bound	4,39		3,92	
5% Trimmed Mean		4,30		3,78	
Median		4,00		4,00	
Variance		0,900		1,087	
Std. Deviation		0,949		1,042	
Minimum		1		1	
Maximum		5		5	
Range		4		4	
Interquartile Range		1		1	
Skewness		-1,341	0,240	-0,801	0,240
Kurtosis		1,696	0,476	0,220	0,476

Izvor: autorice istraživanja

Iako su vrijednosti sječene aritmetičke sredine i aritmetičke sredine za promatrane varijable približne, daljnjom analizom pokazatelja mjera asimetrije i zaobljenosti upućuju na distribuciju različitu od normalne. K-S test za obje varijable je $< .05$. Nadalje, vizualni pregledi Q-Q grafikona obje varijable upućuju na nalaz da distribucije odgovora ne slijede normalnu distribuciju. Potom, vizualni pregledi Q-Q grafikona detrendiranih normalnih podataka upućuju da se podaci u pojedinim varijablama nalaze izvan intervala ± 2 što upućuje na distribuciju različitu od normalne.

Tablica 7. Spearmanov koeficijent korelacije ranga promatranih varijabli u hipotezi H3

Variable:		U budućnosti ću koristiti i nadalje platforme za online kupovinu		Mišljenja drugih ljudi (dostupne recenzije) na društvenim mrežama utječu na moju odluku o kupnji
Spearman's rho	U budućnosti ću koristiti i nadalje platforme za online kupovinu	Correlation Coefficient	1,000	,228*
		Sig. (2-tailed)		,022
		N		101

*. Correlation is significant at the 0.05 level (2-tailed).

Izvor: autorice istraživanja

Identificirana je statistički značajna povezanost između ispitanikovih namjera online kupovine u budućnosti i praćenja mišljenja drugih ljudi (dostupne recenzije na društvenim mrežama i ($r_s = .288$, $p < .05$). Mladi koji iskazuju višu namjeru kupovine putem online platformi u budućnosti u višoj mjeri prate dostupne recenzije i mišljenja korisnika o online kupovini.

Empirijski podaci hipoteze H4

U nastavku se prikazuju empirijski podaci koji su vezani uz istraživačko pitanje, cilj i hipotezu H4. Cilj istraživanja je utvrditi postoji li i ne statistički značajna povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjere ponavljanja online kupovine putem interneta u budućnosti.

U prvom dijelu obrade podataka daje se pregled deskriptivne statistike odgovora ispitanika za varijable koje sadrži hipoteza H4, a potom i rezultati Spearmanovog koeficijenta korelacije ranga promatranih varijabli.

Tablica 8. Deskriptivna statistika varijabli sadržanih u hipotezi H4

Deskriptivna statistika	U budućnosti ću koristiti i nadalje platforme za online kupovinu		Osjećam se kao potrošač zaštićen putem online kupovine	
	Statistic	Std. Error	Statistic	Std. Error
Mean	4,20	,094	3,46	0,085
95% Confidence Interval for Mean	4,01		3,29	
	4,39		3,62	
5% Trimmed Mean	4,30		3,47	
Median	4,00		3,00	
Variance	,900		0,730	
Std. Deviation	,949		0,855	
Minimum	1		1	
Maximum	5		5	
Range	4		4	
Interquartile Range	1		1	
Skewness	-1,341	,240	-0,349	0,240
Kurtosis	1,696	,476	0,283	0,476

Izvor: autorice istraživanja

Nalazi o vrijednostima aritmetičke sredine te sječene aritmetičke sredine za obje promatrane varijable sadržane u hipotezi upućuju da su one približne. No, podaci o mjerama asimetrije i zaobljenosti upućuju na distribuciju različitu od normalne. Također, K-S test za obje varijable je $< .05$. Vizualni pregledi Q-Q grafikona promatranih varijabli upućuju na nalaz da distribucije odgovora ne slijede normalnu distribuciju. Nadalje, Q-Q grafikoni detrendiranih normalnih podataka promatrane dvije varijable upućuju da se podaci u pojedinim varijablama nalaze izvan intervala ± 2 što upućuje na distribuciju različitu od normalne.

Tablica 9. Spearmanov koeficijent korelacije ranga promatranih varijabli u hipotezi H4

		U budućnosti ću koristiti i nadalje platforme za online kupovinu	Osjećam se kao potrošač zaštićeno putem online kupovine
U budućnosti ću koristiti i nadalje platforme za online kupovinu	Correlation	1,000	,444**
	Coefficient		
	Sig. (2-tailed)		0,000
	N		101

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

Izvor: autorice istraživanja

Identificirana je statistički značajna povezanost između osjećaja zaštićenosti prilikom online kupovine i namjera ponavljanja online kupovine putem interneta u budućnosti ($r_s = .444$, $p < .05$). Mladi koji se osjećaju zaštićenije prilikom online kupovine iskazuju višu namjeru ponavljanja kupovine putem interneta u budućnosti. Time je hipoteza 4 prihvaćena.

REZULTATI I RASPRAVA

Na temelju provedenih obrada podataka uočava se da su dobiveni svi potrebni odgovori na istraživačka pitanja čime su ispunjeni ciljevi istraživanja te potvrđene postavljene hipoteze koje imaju praktičnu upotrebljivost za tvrtke koje imaju portale za online kupovinu i posluju u segmentu B2C. Nadalje, kada se uzmu u obzir rezultati dobiveni u ovom istraživanju te se usporede s rezultatima prijašnjih istraživanja uočava se sličnost u nalazima te praktična upotrebljivost rezultata istraživanja, posebno za spomenute tvrtke koje posluju u B2C segmentu. Sve navedeno ogleda se u slijedećem:

a) nalazi obrade hipoteze H1 ($r_s = .616$, $p < .05$) sugeriraju da je identificirana statistički značajna povezanost između zadovoljstva online kupovinom i korištenja platformi za ponovljenu online kupovinu u budućnosti. Ovi nalazi su u skladu s nalazima istraživanja Teo i drugi, 1999, Abdul-Muhmin, 2010, Chen i drugi, 2014.

b) nalazi obrade hipoteze H2 ($r_s = .597$, $p < .05$) identificiraju statistički značajnu povezanost između procjene korisnosti ponuda proizvoda putem online portala i budućih namjera korištenja platformi za online kupovinu. Ovi su nalazi koreliraju s nalazima Rita i Farisa, 2019.

c) nalazi obrade hipoteze H3 ($r_s = .228$, $p < .05$) identificiraju statistički značajnu povezanost između namjere korištenja platforme za online kupovinu u budućnosti i praćenja mišljenja drugih ljudi (dostupne recenzije na društvenim mrežama). Ovaj nalaz korelira s nalazima Chena i drugih, 2020. Zaključno, studenti koji iskazuju višu namjeru korištenja platformi za online kupovinu u budućnosti skloniji su pratiti preporuke i recenzije drugih o online kupovini.

d) nalazi obrade hipoteze H4 ($r_s = .388$, $p < .05$) identificiraju statistički značajnu povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjera ponavljanja online kupovine putem interneta u budućnosti. Ovaj nalaz korelira s nalazima Bart i drugi, 2005, Liu i drugi, 2011, Rita i Farisa, 2019, Trivedi i Yadav 2018. Ispitanici koji se osjećaju zaštićenije i sigurnije prilikom online kupovine iskazuju višu namjeru ponavljanja online kupovine u budućnosti. Tvrtke koje se bave

online prodajom trebaju ulagati u segment sigurnosti i zaštite podataka korisnika i to dodatno naglašavati korisnicima.

Tablica 10. Sumarni prikaz rezultata istraživanja

Broj hipoteze	Naziv hipoteze	Rezultat obrade	Poveznica s drugim istraživanjima
H1	Hipoteza 1: Identificirana je statistički značajna povezanost između zadovoljstva online kupovinom i korištenja platformi za ponovljenu online kupovinu u budućnosti.	Potvrđena ($r_s = .616$, $p < .05$)	Teo i drugi, 1999, Abdul-Muhmin, 2010, Chen i drugi, 2014
H2	Hipoteza 2: Identificirana je statistički značajna povezanost između procjene korisnosti ponuda proizvoda putem online portala i budućih namjera korištenja platformi za online kupovinu.	Potvrđena ($r_s = .597$, $p < .05$)	Rita i Farisa, 2019
H3	Hipoteza 3: Identificirana je statistički značajna povezanost između namjere korištenja platforme za online kupovinu u budućnosti i praćenja mišljenja drugih ljudi (dostupne recenzije)	Potvrđena ($r_s = .228$, $p < .05$)	Chen i drugi, 2020
H4	Hipoteza 4: Identificirana je statistički značajna povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjera ponavljanja online kupovine putem interneta u budućnosti.	Potvrđena ($r_s = .388$, $p < .05$)	Bart i drugi, 2005, Liu i drugi, 2011, Rita i Farisa, 2019, Trivedi i Yadav 2018

Izvor: autorice istraživanja

ZAKLJUČAK

U istraživanju je sudjelovao 101 student: studenti iz STEM područja, studenti društvenih i humanističkih znanosti na Sveučilištu u Slavonskom Brodu, Republika Hrvatska. Istraživanje je imalo za cilj identificirati na koji je način je namjera ponovljene online kupnje studenata povezana sa dosadašnjim kupovnim zadovoljstvom ispitanika, procjenom korisnosti ponuda, praćenja preporuka i recenzija drugih kupaca te osjećajem sigurnosti i zaštićenosti korisnika na internetu prilikom online kupovine. Ciljevi istraživanja su pretočeni u četiri postavljene hipoteze od kojih su sve četiri potvrđene. Identificirana je statistički značajna povezanost između zadovoljstva online kupovinom i korištenja platformi za ponovljenu online kupovinu u budućnosti, čime je potvrđena hipoteza H1. Dokazana je statistički značajna povezanost između procjene korisnosti ponuda proizvoda putem online portala i budućih namjera korištenja platformi za online kupovinu, čime je potvrđena hipoteza H2. Identificirana je statistički značajna povezanost između namjere korištenja platforme za online kupovinu u budućnosti i praćenja mišljenja drugih ljudi (dostupne recenzije) čime je potvrđena hipoteza H3. Rezultati su pokazali da studenti koji iskazuju namjeru online kupovanja u budućnosti iskazuju višu namjeru praćenja mišljenja i recenzija drugih korisnika o online kupovini. U sklopu obrade hipoteze H4 identificirana je statistički značajna povezanost između osjećaja zaštićenosti i sigurnosti prilikom online kupovine i namjere ponavljanja online kupovine u budućnosti. Ovi nalazi istraživanja imaju praktičnu korisnost jer mogu poslužiti tvrtkama koje se bave online prodajom u segmentu B2C, u jačanju fokusa prema korisnicima radi pružanja što boljeg online kupovnog iskustva.

Tvrtkama koje se bave online prodajom moraju biti u fokusu zadovoljstvo kupaca online kupovinom, korisne ponude, pozitivne recenzije i preporuke dosadašnjih korisnika te ulaganje sredstava u osiguravanje sigurnosti i zaštite kupaca prilikom online kupovine. Preporuke za daljnja istraživanja odnose se na potrebu za većim uzorkom ispitanika, geografski širim obuhvatom područja istraživanja, također uzorkom koji bi obuhvatio ispitanike različitih životnih dobi, a ne samo studente, kako bi se osigurala što veća raznolikost uzorka. Na taj način, zaključci bi se mogli odnositi na opću populaciju, budući da su studentska populacija i mladi samo jedan segment na tržištu krajnje potrošnje.

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ONLINE REPURCHASE INTENTION OF STUDENT POPULATION - FINDINGS IN THE REPUBLIC OF CROATIA

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Summary: *Increasing the share of young generations in the world's population increases the share of generations that function quite well in the virtual environment. There is growing competition among entrepreneurs developing the concept of online sales. The increasing competition also increases the importance of creating an excellent shopping experience to attract new customers and retain existing customers. The primary purpose of the research was to identify the connection between the online repurchase intention of students with previous shopping satisfaction, the assessment of the usefulness of offers, following the recommendations and reviews of other customers, and the sense of security and protection of students online. The research involved 101 students: students from the STEM field, students of social sciences and humanities. Four starting hypotheses were confirmed: a statistically significant association was identified between online shopping satisfaction and the use of repeat online shopping platforms in the future ($r_s = .616$, $p < .05$). Respondents who are satisfied with online shopping express their intention to continue to use online shopping platforms in the future. Furthermore, statistically significant correlation was identified between the assessment of the usefulness of product offerings through online portals and future intentions to use online shopping platforms ($r_s = .597$, $p < .05$). Respondents who find product offerings via the online portal useful express intentions to reuse online shopping platforms in the future. A statistically significant correlation was found between students' decisions to repeat online purchases and following recommendations from other users (available reviews, $r_s = .228$, $p < .05$). Young people who express a higher intention to buy through online platforms in the future are more likely to follow the available user reviews about online shopping. A statistically significant association between the feeling of protection when shopping online and the intention to repeat online shopping in*

the future was confirmed. Young people who feel more protected when shopping online express a higher intention to repeat online shopping in the future. These findings have practical applications for companies developing online shopping in the B2C segment. Companies that deal with online sales must focus on customer satisfaction with online shopping, useful offers, positive reviews and recommendations of current users, and investing in ensuring the safety and protection of customers when shopping online. It is recommended in further research to provide a larger sample of respondents, a geographically broader scope of the research area. It would be necessary to include in the sample respondents of different ages, not just students or young people, in order to ensure as much diversity of the sample as possible. In this way, the conclusions could apply to the general population. The student population and young people are only one segment of the final consumption market.

Keywords: *Croatian students, shopping behavior, repeated online shopping, security of online shopping*

JEL classification: *L81, D12, E21, M31*



EMOCIONALNA INTELIGENCIJA MENADŽERA U FUNKCIJI SAVREMENOG MENADŽMENTA

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Sažetak: U ovom radu je kroz istraživanje predstavljena veza emocionalne inteligencije i motivacionih faktora kao osnovnih elemenata potrebnih za kvalitetno upravljanje menadžera i lidera u okviru svojih djelatnosti, kao i definisanje njihovih sposobnosti u domenu edukacije i razvoja karijere, tj. stručnog usavršavanja. Problem istraživanja je da se na osnovu dosadašnjih rezultata istraživanja generisao problem kvalitetnog upravljanja lidera i menadžera kroz IQ i profesionalno iskustvo, zbog nedostatka bitnih faktora ličnosti što će se u ovom radu i dokazati. Na osnovu istraživanja o emocionalnoj inteligenciji i motivacionim faktorima u radu, nastojat će se prezentirati jasna povezanost i dominaciju faktora emocionalne inteligencije u rješavanju problema kvalitetnog upravljanja ljudskim resursima. Ljudski resursi su usmjereni da vide zaposlenika kao bitnog, dragocjenog za organizaciju, a s obzirom, tj. da mu se vrijednost iz dana u dan povećava razvojem, odjeli HR, ljudskih resursa se automatski fokusiraju na rast, razvijanje ljudskih potencijala i vještina. Upravljanje ljudskim resursima jasno se definiše kao strateški i vrlo koherentan, inovativan pristup upravljanju bitnim, najvrijednijim sredstvima preduzeća ili organizacije – ljudima koji rade u istoj organizaciji s jednim ciljem tj. ostvarenja jasnih ciljeva organizacije. Rješavanje problema poimanja i shvatanja značaja same emocionalne inteligencije koja ima veliki značaj za društvo u cjelini i društvenu svijest u odnosu na opštu inteligenciju koja diktira norme i pravila ponašanja pojedinih lidera i menadžera, a koje su prepoznate i objašnjene, a istovremeno odgovorne i definisane u zavisnosti od emocionalne inteligencije i motiva postignuća. Probleme društva možemo gledati sa jedne posebne dimenzije razvoja kroz ovaj rad, a na osnovu dobijenih tvrdnji i dokaza na osnovu kojih možemo i definisati društveni cilj. „Društvo u kojem čovjek djeluje i živi, stavlja pred njega brojne zahtjeve. Ukoliko ih ne uspije uspješno savladati, postoji mogućnost da postane neprilagođen. Neprilagođena ličnost je pojedinac koji nije sposoban rješavati situacije i probleme sa kojima se svakodnevno susreće.

Ključne riječi: savremeni menadžment, emocionalna inteligencija, ličnost, lideri i menadžeri.

JEL: D91, L21, M12, M51

UVOD

Ovaj rad pokazuje vezu emocionalne inteligencije sa opštom inteligencijom. Na koji način emocionalna inteligencija utiče na lidere i menadžere, koji su osnovni faktori koji motivišu uposlenike i koji djeluju na uspješnost uposlenika i cjelokupnog menadžmenta. U radu će se prikazati i osobine koje posjeduju lideri i menadžeri, osobine koje su potrebne za uspješno poslovanje. Radom se želi spoznati mogućnosti predviđanja boljih rezultata kroz razvoj emocionalne inteligencije. Sve više kompanija shvata važnost prisutnosti motivacije i emocionalne inteligencije, da je poticanje vještina emocionalne inteligencije ključna sastavnica svake filozofije razvoja menadžmenta u pozitivnom pravcu.

Kako se poslovni svijet mijenja, mijenjaju se i karakteristike potrebne za konkurentnost. Podaci dobijeni praćenjem sjajnih radnika tokom nekoliko desetljeća otkrivaju da su dvije sposobnosti koje su bile relativno nevažne za uspjeh sedamdesetih godina postale presudne u devedesetima: gradnja tima i prilagođavanje promjenama. Počele su se pojavljivati i posve nove sposobnosti kao svojstva sjajnih radnika, a to su kataliziranje promjene i primjena raznolikosti. Novi izazovi zahtijevaju nove talente.

Okvir djelovanja **čine** poslovni prioriteti i ciljevi koje moraju znati svi zaposleni. Menadžeri moraju predstavljati sponu između ljudi i preduzeća te obavljati svoje funkcije u sklopu odjela upravljanja ljudskim potencijalima kako bi se ostvarila cjelovitost sistema i postiglo zadovoljstvo ljudi i ciljevi preduzeća (Rupčić, 2018). Savremeni menadžment trebamo posmatrati kroz djelovanje menadžmenta ljudskih potencijala i treba ga shvatiti kao proces u kojem svaka pojedina aktivnost i funkcija imaju svoju važnu ulogu u izgradnji uspješnog i zdravog preduzeća **čiju** osnovu **čini** zadovoljan i efikasan zaposlenik. Upravljanje ljudskim potencijalima kao poslovna funkcija objedinjuje poslove i zadatke vezane uz ljude, njihovo nalaženje, izbor, obrazovanje i druge aktivnosti osiguravanja i razvoja zaposlenih. „Vođenje ljudi je naj-složenija funkcija menadžmenta, a njena je svrha utjecanje na ljude kako bi oni **što** više doprinijeli zajedničkom cilju.“ (Kurtić A, Kulović DŽ, 2011) U savremenom menadžmentu, menadžeri su najvažniji kapital i resurs svake organizacije, no istodobno zbog **činjenice** da su za izgradnju dobrog menadžerskog tima potrebna velika ulaganja kao i mnogo vremena, uvrštavaju se i najoskudniji resursi. Pri otkrivanju menadžerskih potencijala i njihovom razvoju treba imati na umu njihove lične, profesionalne i poslovne osobine kao **što** su preduzimljivost, komunikativnost, kreativnost, učinkovitost, poznavanje metoda rukovođenja, pouzdanost, predanost poslu i preduzeću kao i emocionalnu inteligenciju. Za ocjenu ličnosti važna je sposobnost vođenja ljudi i razvijanje pozitivnih osobina, delegiranje zadataka, komunikativnost, poznavanje posla, prosuđivanje sposobnosti planiranja, organizacije, ocjena osobnih karakteristika saradnika i slično. Menadžment kao proces ima podrazumijeva jednu od funkcija koja se sastoji u planiranju. Ta funkcija je osnova upravljanja i najvažnija je pretpostavka za uspješnost svakog preduzeća. Funkcija planiranja se sastoji od sljedećih aktivnosti : aktivnost koja podrazumijeva definisanje cilja, predviđanje, programiranje, stvaranje systemske strategije i određivanje procedura. (Mahmutović H, Kulović DŽ, 2010) “

Ljudski resursi su osnovica na kojoj se gradi strategija preduzeća, a sirovine i kapital, ciljevi kao proizvodnost i zadovoljavanje potrošača - dolaze od ljudi i na temelju njihovog djelovanja. Izbor strategije nije posebno bitan ukoliko se ne pretvori u strategiju, odnosno u streteški plan koji se nakon toga može primijeniti u praksi I na

taj način sprovede kontrola istog. Menadžer mora voditi brigu o optimalnoj upotrebi resursa i o radu delegiranjem zadaća. Menadžer u savremenom poslovanju treba da posjeduje znanja o savremenom menadžmentu, o funkcijama menadžmenta, da bi na taj način znao planirati, organizirati, kontrolisati i voditi uposlenike.

Njegova jako bitna funkcija jeste briga o feedback-u koji daje osnovne informacije o zadovoljstvu uposlenih, o ulozi svakog uposlenog individualno, o vrsti posla koji obavljaju. "Dokumentovanjem vrijednosti rada, proizvodnosti i uspješnosti svakog **čovjeka** ili odjeljenja, on zapravo kontroliše ostvarivanje ciljeva i u slučaju potrebe poduzima korektivne akcije kako u planovima, tako i u taktikama i strategiji preduzeća." (Kotler, 2006)

Savremeni menadžeri sve su svjesniji važnosti umijeća rada sa ljudima te od presudne važnosti postaju njihove slijedeće sposobnosti:

- da izaberu, treniraju i osposobljavaju zaposlene,
- da oblikuju i vode sastanke grupa svih vrsta,
- da upravljaju svim vrstama konflikata između jakih pojedinaca i grupa,
- da utiču i pregovaraju na ravnopravnoj osnovi i
- da integiraju napor osoba različitih stručnih specijalnosti.

Biti emocionalno inteligentan znači razumjeti osjećanja, znati kako nastaju i čemu služe, a to znači prihvatiti osjećanja kao znak ljudskosti, a ne doživljavati ih kao znak slabosti. Biti svjestan svojih osjećanja, ali znati kada i kome je bolje ne pokazati ih, zastati, preispitati se, a zatim korigovati mišljenje i ponašanje. Goleman ističe da emocionalna inteligencija ne jamči sama po sebi uspjeh u životu. „Ona je tek platforma za razvijanje emocionalnih kompetencija, ovladavanje kojima omogućuje ostvarivanje izvanrednih rezultata u poslu.“ (Goleman, 2001) Tek će emocionalne kompetencije pokazati koliko je potencijala sadržanog u emocionalnoj inteligenciji i ostvareno i koliko je emocionalna inteligencija pridonijela razvijaju kompetencija na radnom mjestu.

SAVREMENI MENADŽMENT

U savremenoj literaturi pojam menadžment (management) se pojavljuje u tri različita značenja, i to kao: organizacija, upravljanje i rukovođenje. Menadžment se uglavnom definiše i proučava kao aktivnost usmjerena ka postizanju unaprijed postavljenih ciljeva, sa osnovnim funkcijama: planiranje, organizovanje, usmjeravanje (motivisanje), vođenje i kontrola. Navedene faze predstavljaju faze ili podsisteme menadžmenta. Menadžment (upravljanje) je proces planiranja, organizovanja, motivisanja i kontrole u pravcu postizanja određenih kompanijskih ciljeva. Menadžment obuhvata veći broj međusobno povezanih funkcija koje su prisutne u svim organizacijama i na svim organizacionim nivoima. Kao proces, menadžment je u preduzeću usmjeren na postavljanje i realizaciju postavljenih ciljeva. Kao ključne odrednice procesa menadžmenta javljaju se: odlučivanje, uticanje, komuniciranje, koordiniranje i povezivanje. Osnovni, pak, ciljevi menadžerskog procesa vezani su za efikasnost i efektivnost organizacije. Menadžment se danas bavi uglavnom ljudima i njihovim odnosima u organizaciji. Jedan od glavnih problema sa kojima se suočava savremeni menadžment jeste kako najbolje upotrijebiti resurse preduzeća u promjenjivom i turbulentnom okruženju. Poslovanje preduzeća obuhvata veći ili manji broj srodnih poslova koji su grupisani u odgovarajuće funkcije, odnosno poslovna područja. U cilju povećanja efektivnosti poslovanja i efikasnosti korištenja raspoloživih komponenti, u preduzeću

se formiraju posebne grupe srodnih poslova, koje obuhvataju oblasti planiranja, istraživanja i razvoja, kadrova, informacionog sistema, pravnog zastupanja, normativne aktivnosti, zaštite ljudi i sredstava i slično. Ove grupe srodnih poslova konstituišu se kao posebne funkcije, odnosno poslovna područja u okviru preduzeća.

S obzirom na značaj pojedinih funkcija za uspješno poslovanje preduzeća, neophodno je utvrditi njihove posebne strateške ciljeve i operativno ih razraditi. Preko poslovnih funkcija, preduzeće ostvaruje uvid u:

- Kretanje na tržištu i u širem poslovnom okruženju,
- Nova tehničko-tehnološka rješenja i tehnike poslovanja,
- Izvore pribavljanja kapitala.

Ove funkcije imaju značajnu ulogu i u pripremi i sprovođenju poslovnih odluka top menadžmenta preduzeća. Svaka od njih donosi svoj operativni plan rada i budžet, zapošljava odgovarajuće kadrove i vrši raspodjelu potrebnih sredstava. U zavisnosti od veličine, složenosti i vrste djelatnosti preduzeća, kao i od primjenjenog sistema upravljanja, utvrđuju se posebni zadaci svake osnovne funkcije.

Za svaku menadžersku odrednicu u savremenom poslovanju trebamo postaviti pitanje da li možemo drugačije. (Rupčić, 2018).

Osobe koje imaju razvijene socijalne vještine obično imaju i visoki stepen emocionalne inteligencije, poput sposobnosti prepoznavanja, razumijevanja i usmjeravanja osjećaja prilikom interakcije s drugim ljudima (Goleman D, 1995)

Kada govorimo o menadžmentu, pojam koji vezujemo za menadžment, upravljanje i vođenje jeste pojam organizacija. Organizacija se definiše kao jedna grupa koju veže zajednička uloga i u kojoj svaki član grupe individualno ima svoje zadatke i svoju ulogu. Zaključujemo da je organizacija grupa ljudi koji imaju različite profile, ali zajednički im je jedno, imaju isti cilj ili skupinu ciljeva. Svaka organizacijska struktura kompanije posjeduje zatvoreni i otvoreni sistem koji svoju svrhu i ciljeve ostavljuje na temelju svih aktivnosti koje obavljaju članovi iste. Kompanije na temelju vlastitih ljudskih i materijalnih resursa, resursa koje nabavlja u okruženju i td. stvara vrijednosti u obliku proizvoda, usluga za ciljanu potrošačku grupu, korisnika. „Rast je čisti kisik. Stvara vitalnu kompaniju punu entuzijazma u kojoj ljudi vide svoju priliku. Više riskiraju. Napornije i pametnije rade.“ (Kotler, 2006) „Društvo u kojem čovjek djeluje i živi, stavlja pred njega brojne zahtjeve. Ukoliko ih ne uspije uspješno savladati, postoji mogućnost da postane neprilagođen. Neprilagođena ličnost je pojedinac koji nije sposoban rješavati situacije i probleme sa kojima se svakodnevno susreće. Njegova je tolerancija na frustraciju izuzetno niska i mehanizmi prilagođavanja neprikladni. Takve osobe su neprestano u sukobu sa svojom okolinom. Nikako ne mogu uspostaviti istinsku komunikaciju s drugim ljudima.“ (Bajraktarević J, 2014) (Ne)uspjeh podređenih je indikator (ne)uspjeha menadžera. Pošto se od menadžera očekuje da učine više od drugih preduzeća, oni imaju nadležnost alociranja resursa.“ (Kulović DŽ, Đogić R, Kuzman S, Milunović D, 2012)

Analizirajući poslove koje obavljaju rukovodioci, Fayol je zaključio da svi rukovodioci, vrše sljedeće funkcije: predviđanje i planiranje; organizovanje; komandovanje; koordiniranje; kontrolisanje.“ (Fayol A, 2006)

„Lider koji je predaleko od svojih podanika lako može biti istisnut sa svoje pozicije, jer su njegove spone s podanicima postale suviše slabe. U tom smislu mudro je biti visoko ali ne suviše daleko od svoje baze. Ako se lider pozicionira u nivou svojih

podanika, postoji rizik poznat u popularnoj literaturi „da niko nije mogao biti veliki čovjek u očima svog sobara“. Takav vođa gubi liderski autoritet. Postaje suviše običan za one koji ga prate.

Psihološki posmatrano, liderska pozicija mora biti u izvjesnoj mjeri mistična. Demistikovana, ona nema sadržinu.“ (Slović D, 2011)

Kada se govori o upravljanju cjelovitom kvalitetom ili TQM upoznajemo se sa činjenicom da ovaj proces nije donio očekivane rezultate. Upravljanje cjelokupnom kvalitetom (engl. total quality management, TQM) podrazumijeva posvećenost cjelokupnog preduzeća kvaliteti i njenom kontinuiranom unaprjeđivanju. Riječ je o svojevrsnoj filozofiji poslovanja prema kojoj se izražava dugoročna namjera usmjeravanja napora svih organizacijskih članova prema unaprjeđenju kvalitete na svim razinama. Može se definisati kao koncept kojem je cilj stalnim unaprjeđenjem svih procesa stvaranja vrijednosti uz sudjelovanje zaposlenika razvijati sistem kontinuiranog upravljanja cjelokupnom kvalitetom radi isporuke kvalitete kupcu. Stoga se ovakva namjera izražava u viziji i misiji preduzeća te predstavlja temelj njegovog vrijednosnog sistema izraženog organizacijskom kulturom. Upravljanje cjelokupnom kvalitetom najviše pati zbog velike papirologije i birokratije koja usporava sam proces. Najvažnije je da organizacija oblikuje, a zatim i kreira i implementira, odnosno upotrijebi sistem motivacije koja će za cilj imati kako individualno, tako i grupno postignuće uposlenika u cilju postizanja organizacijskih ciljeva. Za sve ovo je potreban dobro osmišljena strategija motivacije. (Kulović DŽ, 2012)

Poslovana pravila se svakim danom mijenjaju i nadopunjuju. Kontrola i ocjenjivanje se obavljaju po novim mjerama, međutim nije važno imati samo dobro razvijenu opštu inteligenciju, u radu je bitno imati i razvijene vještine koje se ogledaju kroz razvoj emocionalne kompetentnosti koja je ključna za uspješnost u poslovanju. Doprinosi jednostavnijem odlučivanju. (Goleman D, 2017)

LIČNOST I STAVOVI

Postavljanje definicije za nešto tako složeno kao što je ljudska ličnost vrlo je teško. Autori prvih udžbenika o ličnosti – Gordon Allport (1937) i Henry Murray (1938) – također su se mučili definirajući ličnosti. Problem je kako postaviti definiciju koja će biti dovoljno sveobuhvatna da uključi unutrašnje karakteristike, socijalne efekte, kvalitete uma, tjelesne karakteristike, odnose s drugima i unutrašnje ciljeve. Zbog te kompleksnosti, neki udžbenici psihologije ličnosti potpuno preskaču formalnu definiciju ličnosti. Ipak, sljedeća definicija obuhvata bitne elemente ličnosti:

Ličnost je skup psihičkih osobina i mehanizama unutar pojedinca koji su organizirani i relativno trajni, te utječu na interakcije i adaptacije pojedinca na intrapsihičku, fizičku i socijalnu okolinu. Ispitajmo detaljnije elemente ove definicije. Ispitajmo detaljnije elemente ove definicije. „Ličnost se formira i pod uticajem vlastite aktivnosti čovjeka i pod uticajem njegove prirodne i društvene sredine, a na osnovi bioloških osobina koje je naslijedio. Glavni biološki faktori su: nervni sistem, endokrini sistem (žlijezde sa unutrašnjim lučenjem) i tjelesna konstrukcija.“ (Dunderović R, 2005)

Ličnost se može opisati sa pet velikih crta ili bazičnih dimenzija, a to su: neuroticizam, ekstraverzija, otvorenost, saradljivost i savjesnost. Tri razine ličnosti koje su predstavili Kluckhohn i Murray u knjizi o kulturi i ličnosti navode da je svako ljudsko biće u određenim aspektima:

1. Jednako svima drugima (razina ljudske prirode).
2. Jednako nekima drugima (razina individualnih i grupnih razlika).
3. Različito od svih drugih (razina individualne jedinstvenosti).

„Vrum je tvrdio da su performanse pojedinca bazirane na faktorima kao što su: ličnost, vještine, znanje, iskustvo i sposobnosti. Ljudi ulažu napor prilikom obavljanja posla kako bi dostigli performanse koje vode izlazima koji za njih imaju određenu vrijednost. Zaposleni se ponaša na način koji će mu donijeti zadovoljstvo i obogučiti da izbjegne bol odnosno anksioznost.“ (Bajraktarević J, Bajraktarević F, Solaković Š, 2013)

Teoretičari ličnosti uglavnom priznaju postojanje tzv. «velikih pet» dimenzija ličnosti. To su neuroticizam (koji obuhvata anksioznost, neprijateljstvo i depresivnost), ekstraverzija (toplina, društvenost, sklonost pozitivnim emocijama), otvorenost (prema mašti, estetici, osjećajima), ugodnost (povjerenje, iskrenost, popustljivost) i savjesnost (težnja ka postignuću, samodisciplina, osjećaj dužnosti).

U mjeri u kojoj su dimeznije ličnosti stabilne, možemo očekivati i njihovu nasljednost. Ekstraverzija i neuroticizam su u značajnoj mjeri nasljedni.

Postoji pretpostavka o strukturama koje prenose naš stil emocionalnosti: to su emocionalne sheme. One su sigurno pod uticajem emocionalnih sklonosti kojima započinjemo život, odnosno obilježja našeg temperamenta, ali se one također značajno mijenjaju pod uticajem naših bliskih veza.

U intelektualnim relacijama na ovaj način otvara se pitanje koje je postavio Emanuel Kant, koje ukazuje na nesposobnost čovjeka da se služi vlastitim razumom bez vođstva drugoga.“ (Slović D, 2011) „Kad menadžer upoređuje saradnike iz svoje ekipe i kad pokušava da ustanovi u čemu se njihove ličnosti razlikuju, logično je što on skreće pažnju na one crte koje su opšteg (generalnog) karaktera, a to su one koje se manifestuju u najvećem broju postupaka pojedinca: emocionalna stabilnost, otvorenost prema drugima, anksioznost dominantnost i slično“. (Dunđerović R, 2005)

Salovey i Mayer su prvi definisali emocionalnu inteligenciju tvrdeći da su emocije (vlastite i tuđe) važan aspekt realnosti. Salovey je definisao 5 „vještina“ emocionalne inteligencije. Emocionalna inteligencija koja je istražena dugi niz godina pruža jasnu sliku i ključ koji služi za procjenu emocionalne inteligencije u nama i drugima, istražuje regulaciju emocija, imenovanje emocija i postupaka, svi ti procesi doprinose uspjehu na poslu, jer se na taj način uspješno organizuje posao. (Simmson S, Simmson J.C, 2000). Velika važnost u savremenom poslovanju kompanija je usmjerena na poticaj vještine emocionalne inteligencije. (Goleman D, 2017).

Iako je model kompetencija logičan nastavak u razviku teorija o emocionalnoj inteligenciji i predstavlja aplikaciju tog konstrukta u poslovnoj praksi, među naučnicima priklonjenima Saloveyevu i Mayerovu modelu sposobnosti (Caruso D.R, Mayer J.D, Salovey P, 2002.) i Golemanovu modelu kompetencija (McClelland D.C, 1998) vodi se snažna polemika o obuhvatnosti, ali i o uticaju tog konstrukta na uspješnost pojedinca.

ULOGA EMOCIJA U PSIHOPATOLOGIJI ODRASLIH

U životu mnogih ljudi postoje razdoblja izazito jakih emocija: beznačajne depresije ili onesposobljujuće tjeskobe i takva stanja nazivamo psihopatologijom.

Psihijatrijska epidemiologija je statističko proučavanje učestalosti pojave poremećaja.

Tabela 1. Prevalencija psihijatrijskih poremećaja tokom života kod žena i muškaraca

Poremećaj	Muškarci	Žene	Ukupno
Emocionalni poremećaji (povezani s depresijom)			
Epizoda velike depresije	12,7	21,3	17,1
Manična epizoda	14,7	1,7	1,6
Bilo koji emocionalni poremećaj	1,6	23,9	19,3
Anksiozni poremećaji			
Panični poremećaj	2,0	5,0	3,5
Agorafobija bez panike	3,5	7,0	5,3
Bilo koji anksiozni poremećaj	11,1	15,5	13,3
Socijalna fobija	19,2	30,5	24,9
Drugi poremećaji			
Zloupotreba alkohola ili droga	35,4	17,9	26,6
Neemocionalna psihoza	5,8	1,2	3,5
Antisocijalni poremećaj linosti	0,6	0,8	0,7
Bilo koji psihijatrijski poremećaj	48,7	47,3	48,0

Izvor: Bajraktarević J, 2014:55

Kao što vidimo u tabeli, u istraživanju Kesslera se pokazalo da je 21% odraslih žena u nekom trenutku svog života imalo epizode velike depresije, u usporedbi sa 13% muškaraca. Slično tome, žene su mnogo češće od muškaraca (3,05% prema 19%) imale jedan od pet vrsta anksioznih poremećaja.

Organizacije imaju ogromnu sposobnost određivanja uspjeha za svoje članove. Uspjeh pojedinca treba biti javno priznat, te na taj način poslužiti kao motivator tom pojedincu, ali i ostalima u organizaciji. (Collins E, Devana M.A, 2022)

Tabela 2. Okvir emocionalnih kompetencija:

	Usmjerenost na sebe osobne kompetencije	Usmjerenost na druge društvene kompetencije
Priznanje	Samosvijest	Društvena spoznaja
	Emocionalna samosvjesnost	Empatija (razumijevanje emocija drugih)
	Tačna samoprocjena	Orijentacija prema uslužnosti
	Samopouzdanje	Organizacijska svjesnost
Regulacija	Samoregulacija	Upravljanje odnosima
	Samokontrola	Razvijanje drugih
	Pouzdanost	Utjecaj
	Savjesnost	Komunikacija
	Prilagodljivost	Upravljanje konfliktima
	Želja za postignućem	Vodstvo
	Inicijativa	Poticanje promjena Stvaranje veza Timski rad i saradnja

Izvor: Goleman, 2001.: 28

ISTRAŽIVANJA

Istraživanje je provedeno na uzorku od 158 lidera i menadžera iz dvadeset i dvije kompanije u Bosni i Hercegovini. Većina menadžera su muškog spola (61.4%). Oko 90% ispitanih menadžera i lidera je u dobi od 34 godine i manje. Oko 95% menadžera u uzorku ima završeno univerzitetsko obrazovanje.

Tabela 3. Stručna sprema ispitanika

Sprema		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	srednja škola	2	1,3	1,3	1,3
	bachelor	6	3,8	3,8	5,1
	VSS	116	73,4	73,4	78,5
	Master	32	20,3	20,3	98,7
	Phd	2	1,3	1,3	100,0
	Total	158	100,0	100,0	

Izvor: autori rada

Distribucija rezultata na faktoru neuroticizam je blago potivino asimetrična sa vrijednostima centralne tendencije (aritmetička sredina, medijana, 5% sužena aritmetička sredina) koje ne odstupaju značajno jedna od druge (nalaze se unutar 95% intervala pouzdanosti aritmetičke sredine) ukazujući na to da ekstremnije vrijednosti nemaju značajan uticaj na distorziju parametara distribucije.

Tabela 4. Distribucija rezultata na faktoru neuroticizam

NEUROTICIZAM	Aritmetička sredina		120,06	,660
	95% interval pouzdanosti aritmetičke sredine	gornja granica	118,76	
		donja granica	121,37	
	5% sužena aritmetička sredina		119,83	
	Median		120,00	
	Variance		68,748	
	Std. Deviation		8,291	
	Minimum		96	
	Maximum		154	
	Range		58	
	Interquartile Range		12	
	Skewness		,594	,193
	Kurtosis		1,601	,384

Izvor: autori rada

Distribucija rezultata na faktoru ekstraverzije je izraženo negativno asimetrična sa vrijednostima centralne tendencije (aritmetička sredina, medijana, 5% sužena

aritmetička sredina) koje ne odstupaju značajno jedna od druge ukazujući na to da ekstremnije vrijednosti ipak nemaju značajan uticaj na distorziju parametara distribucije.

Tabela 5. Distribucija rezultata na faktoru neuroticizam

EKSTRAVERZIJA	Aritmetička sredina		168,20	,723
	95% interval pouzdanosti aritmetičke sredine	gornja granica	166,77	
		donja granica	169,63	
	5% sužena aritmetička sredina		168,47	
	Median		168,00	
	Variance		82,570	
	Std. Deviation		9,087	
	Minimum		124	
	Maximum		186	
	Range		62	
	Interquartile Range		11	
	Skewness		-1,002	,193
	Kurtosis		4,275	,384

Izvor: autori rada

Distribucija rezultata na faktoru otvorenosti je simetrična sa vrijednostima centralne tendencije (aritmetička sredina, medijana, 5% sužena aritmetička sredina) koje ne odstupaju značajno jedna od druge ukazujući na to da ekstremnije vrijednosti nemaju značajan uticaj na distorziju parametara distribucije.

Tabela 6. Distribucija rezultata na faktoru neuroticizam

OTVORENOST	Aritmetička sredina		158,83	,835
	95% interval pouzdanosti aritmetičke sredine	gornja granica	157,18	
		donja granica	160,48	
	5% sužena aritmetička sredina		158,85	
	Median		159,00	
	Variance		110,041	
	Std. Deviation		10,490	
	Minimum		138	
	Maximum		183	
	Range		45	
	Interquartile Range		14	
	Skewness		,024	,193
	Kurtosis		-,688	,384

Izvor: autori rada

Distribucija rezultata na faktoru dobrodušnosti je izraženo negativno asimetrična i leptokurtična sa vrijednostima centralne tendencije (aritmetička sredina, medijana, 5% sužena aritmetička sredina) koje odstupaju jedna od druge značajnije u odnosu na ostale faktore ukazujući na to da ekstremnije vrijednosti ipak imaju uticaj na distorziju parametara distribucije.

Tabela 7. Distribucija rezultata na faktoru neuroticizam

DOBRODUŠNOST	Aritmetička sredina		157,23	,623
	95% interval pouzdanosti aritmetičke sredine	gornja granica	156,00	
		donja granica	158,47	
	5% sužena aritmetička sredina		157,60	
	Median		158,00	
	Variance		61,378	
	Std. Deviation		7,834	
	Minimum		115	
	Maximum		171	
	Range		56	
	Interquartile Range		10	
	Skewness		-1,852	,193
	Kurtosis		8,574	,384

Izvor: autori rada

Distribucija rezultata na faktoru savjest je blago pozitivno asimetrična sa vrijednostima centralne tendencije (aritmetička sredina, medijana, 5% sužena aritmetička sredina) koje odstupaju jedna od druge značajnije u odnosu na ostale faktore ukazujući na to da ekstremnije vrijednosti ipak imaju uticaj na distorziju parametara distribucije.

Tabela 8. Distribucija rezultata na faktoru neuroticizam

SAVJEST	Aritmetička sredina		186,77	1,298
	95% interval pouzdanosti aritmetičke sredine	gornja granica	184,21	
		donja granica	189,34	
	5% sužena aritmetička sredina		186,52	
	Median		185,00	
	Variance		266,101	
	Std. Deviation		16,313	
	Minimum		159	
	Maximum		220	
	Range		61	
	Interquartile Range		25	
	Skewness		,211	,193
	Kurtosis		-,672	,384

Izvor: autori rada

U istraživanju je kroz dimenziju ličnosti ekstraverzija u svim nivoima menadžmenta najviše izražena faceta toplina, a najmanje traženje uzbuđenja. Fleksibilni menadžeri i lideri su pokazali najvišu razvijenost stepena razumijevanja emocija. Dimenzija ličnosti ekstraverzija je prisutna kod funkcionalnog i operativnog nivoa menadžmenta, što je jedan od nezadovoljavajućih kriterija rada. Top menadžment bi trebao da posjeduje ekstraverziju. Funkcionalni nivo menadžmenta je imao razvijenu ekstraverziju, otvorenost i savjest. Funkcionalni nivo menadžmenta je kroz dimenziju ličnosti otvorenost najviše pažnje posvetio estetici, osjećanju, a najmanje fantaziji i akciji. Što se tiče dimenzije savjesnosti u funkcionalnom dijelu menadžmenta najviše je izražena kompetentnost i samodisciplina, a najmanje promišljenost.

ZAKLJUČAK

Za dobar menadžment neophodno je obostrano postovanje, razvijanje povjerenja zaposlenik / nadređeni. Menadžeri trebaju da budu ljudi kojima će uposleni vjerovati i ta vjerovanja se grade na uzajamnom povjerenju i poštovanju. Kvocijent emocionalne inteligencije direktno određuje i odvaja sposobnost menadžera i njihovu karijeru. U istraživanju se jasno izdvajaju menadžeri i lideri sa maksimalnim kvocijentom emocionalne inteligencije koji su bili uspješni u svim poslovima i zadacima. Samo emocionalna inteligencija nije dovoljna za kvalitetno vođenje organizacije, lideri i menadžeri moraju posjedovati i zadovoljavajući kvocijent opšte inteligencije koja će u velikoj mjeri da doprinese u radu i vođenju organizacije. Sastani dio opšte inteligencije se ogleda u osobinama ličnosti. Uspješan menadžer u zavisnosti od motivacionih faktora i emocionalne inteligencije predstavlja uspješan menadžerski nivo kroz definiciju inteligencije koja ubuhvata kompletnu ličnost. Ono što je bitno istaći da je emocionalna inteligencija i motivacija u direktnoj povezanosti sa opštom inteligencijom i kao takve daju potpunost liderima i menadžerima u ključnim funkcijama istih, a to je vođenje i rukovođenje. Ovaj rad svojim naučnim istraživanjem došao do stvarnog zaključka, a to je da su se izdvojile određene vrste lidera i menadžera koje možemo nazvati: top menadžeri i lideri; isključivi menadžeri i lideri; operativni menadžeri i lideri; zatvoreni lider i menadžeri; fleksibilni menadžeri i lideri

Svi navedeni menadžeri i lideri imaju jasne karakteristike i crte ličnosti u zavisnosti od motivacionih faktora koji nam mogu dati sliku svih menadžera i lidera u okviru malih i srednjih preduzeća i poslužiti kao alat za njihovu edukaciju, razvoj vještina i dalji napredak u smislu karijere kao i način i model ponašanja nadređenih i podređenih u okviru samo preduzeća. Na osnovu svega mogu se definisati timovi u kojima se mogu razvijati, educirati i usavršavati svi menadžeri i lideri sa gore navedenim karakteristikama. Jasno i precizno su određene crte ličnosti lidera i menadžera ovisno o grupi u kojoj su svrstani. Rad nam daje jasnu predodžbu o tome kako i koje osobine ličnosti treba da posjeduje lider i menadžer, neko ko upravlja i vodi organizaciju. Novi pristup u vođenju, koji se pojavio u osamdesetim godinama 20. vijeka da bi odgovorio na zahtjeve promijenjenog - dinamičnijeg i inovativnog poslovnog okruženja i da bi otklonio ograničenja dotadašnjih pristupa u vođenju, predložio je u osnovi dva stila vođenja: transakcijski i transformacijski stil (Bass B.M, 1990) ti se stilovi razlikuju po različitim pristupima u odnosima prema ljudima, pa zato i prema rezultatima koje ostvaruju u vremenskom horizontu. Kroz istraživanje se pokazalo da su lideri i menadžeri sa većim kvocijentom emocionalne inteligencije uspješniji i imaju

jasniju i fleksibilniju upravljačku ulogu kao i odnos sa uposlenim. Statistički značajni prediktori operativnosti menadžera i lidera su ekstraverzija, Sposobnost uočavanja i razumijevanja emocija (UEK.SSURE) i Sposobnost izražavanja i imenovanja emocija (UEK.SSIIE). Prisutnije crte operativnog menadžera i lidera imaju menadžeri i lideri sa manje izraženom ekstraverzijom, sa ispod prosječnom Sposobnost uočavanja i razumijevanja emocija i iznad prosječnom Sposobnosti izražavanja i imenovanja emocija.

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EMOTIONAL INTELLIGENCE OF MANAGERS IN FUNCTION MODERN MANAGEMENT

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Summary: *In this paper, the research presents the connection between emotional intelligence and motivational factors as basic elements necessary for quality management of managers and leaders within their activities, as well as defining their abilities in the field of education and career development, ie. professional training. The problem of the research is that based on the results of the research so far, the problem of quality management of leaders and managers through IQ and professional experience has been generated, due to the lack of important personality factors that will be proven in this paper. Based on research on emotional intelligence and motivational factors in the work, we will try to present a clear connection and dominance of emotional intelligence factors in solving the problem of quality human resource management. Human resources are focused on seeing the employee as important, valuable for the organization, and given, ie. that its value increases day by day development, HR departments, human resources are automatically focused on growth, development of human resources and skills. Human resource management is clearly defined as a strategic and very coherent, innovative approach to managing the essential, most valuable assets of a company or organization - people who work in the same organization with one goal, ie. achieving clear goals of the organization. Solving the problem of understanding the importance of emotional intelligence itself, which is of great importance for society as a whole and social awareness in relation to general intelligence, which dictates the norms and rules of conduct of individual leaders and managers, which are recognized and explained, and responsible and defined depending from emotional intelligence and achievement motives. We can look at the problems of society from a special dimension of development through this paper, and on the basis of the obtained claims and evidence on the basis of which we can define the social goal. "A society in which a person works and lives puts many demands on him. If he fails to master them successfully, there is a possibility that he may become maladapted. An maladapted person is an individual who is not able to solve situations and problems that he encounters on a daily basis. His tolerance for frustration is extremely low and his adjustment mechanisms are inadequate. Such people are constantly in conflict with their surroundings. There is no way I can establish true communication with other people. "Leadership is therefore the privilege of conscious beings, not technical systems or unconscious biological*

organisms. It therefore does not appear in the organism or in the mechanism, but in the organization, and that is because the organization is a social relationship. It is immanent to relations in organized social groups, regardless of the goals for which they are organized and the duration of such an organization. The practical contribution of the paper is reflected in the ability of the surveyed organizations to, depending on the approaches they apply, the characteristics of the process of human resource management and defined indicators to determine the degree and development of emotional intelligence.

Keywords: *modern management, emotional intelligence, personality traits, leaders and managers*

JEL: *D91, L21, M12, M51*



THE ANALYSIS OF DIRECT MARKETING MEDIA USAGE AND EFFECTIVENESS

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Abstract: *In the current business environment organizations are forced to find the most effective marketing technique in order to improve the results of their business. Since each company's goal is to achieve effective and efficient business, one of the most important decisions is the choice of direct marketing media actions that are most suitable for contacting existing and potential consumers. In order to obtain information regarding the effectiveness of direct marketing media, market research provides an overview of market factors. Research presented in this paper intends to reveal consumer habits and preferences in order to determine the usage and effectiveness of direct marketing media. Presented results and models show that, in terms of communication and sales effects, Internet is the most prominent as a direct marketing medium for all age groups that are surveyed. Also, leaflets are a very effective medium of direct marketing for respondents of all age categories, and newspapers have been proved to be a very effective medium for consumers who frequently buy them.*

Keywords: *direct marketing media; social media; usage; effectiveness; consumers.*

The JEL Classification: *M31; M37.*

INTRODUCTION

Commercial and non-commercial organizations use various forms of marketing communication to promote their offer and achieve their goals. Marketing communications are a means by which companies inform, persuade and remind consumers about the products they sell (Kotler & Keller, 2006: 536), and every company is responsible for assessing which promotional media will use to deliver an adequate and positive message to consumers (Projović & Popović Šević, 2013). The idea of mass marketing is believed to be outdated for the majority of marketing situations. The shift from mass marketing towards niche marketing has initially occurred, then towards individual marketing and today we have post-modern marketing which creates differences

rather than identifying similarities (Cluley & Brown, 2015: 115). Direct marketing provides tangible forms of targeting and competitive advantage which enables more precise and more accurate measurement of its effects (Kocić & Senić, 2010: 87). The most important targeting decisions regarding successful direct marketing campaigns is related to the assessment of most attractive, both active and inactive, consumers in order to segregate the best prospects which would direct promotional messages with the expectation of maximum results (Guido, Prete, Miraglia, & De Mare, 2011: 997). Direct marketing uses custom-made methods, and is guided by the fact that customers prefer personalized addressing in order to feel respect (Mesaroš, Đokić, & Fabijan, 2009: 157). The key of direct marketing is to have the right offer for the right person, resulting in the outcomes of sales that are enviable due to this way of promotion. In the era of social media, the number of entrepreneurial businesses is increased as well as the number of small businesses that recognize the benefits of “eliminating” the actions, i.e. agents in sales (Alsever, 2014: 27-31). Similar to this concept, effectiveness of direct marketing media should be used by sales and advertisers to choose the most effective media among different direct marketing media. When it comes to expressing the effectiveness of the media, both communication and sales effects are taken into account.

Since term effective means successful in producing a desired or intended result, it is important to choose the right direct marketing media to delivery promotional messages to a specific audience. It is necessary to have this information for media plan, since no advertiser has an unlimited budget, just as it would be irrational to use the budget for random advertising through certain direct marketing media or advertising in all available media. Therefore, it is crucial to know preferences of target groups toward different direct marketing media and how to use particular media to effectively deliver the advertising message is a task for advertising management (Gunina, Bina, & Kincl, 2018: 189).

The subject of the research is usage and effectiveness of direct marketing media which implies measuring customer/consumer reactions to promotional activities that could help in planning an effective marketing communication strategy. The problem is analyzed with special attention on changes in consumer behaviour considering different media usage (Internet and social media vs. traditional media). The aim of the research is to learn which direct marketing media are the most effective in order to get guidelines what media is the most cost-effective to invest and also to give a model that could be usefull for companies and reseachers. Republic of Serbia was selected as the central country of Balkan region because of constant increase of foreign investments in current decade. This is followed by strong increase of advertisement expenditure and percentages are especially high in digital advertisement that is annually 15-20% of which mobile advertisement went up to 327% high in 2017 compared to 2016 (IAB_Europe, 2017; IAB_Europe, 2018).

LITERATURE REVIEW

Reinold and Tropp (2012) dealt with the measurement of the effectiveness of integrated marketing communications (mass media and direct marketing) from the perspective of organizations. Strategic factors determining the nature of the operation of direct marketing are: product selection, goal definition, media selection, formulation

of the offer, the use of customer databases, definition of sales systems, organization and realization of the planned actions (Đokić, Panić, & Kolev, 2012: 51).

Testing the effectiveness of the media is of great importance because the share of the total costs of the media in marketing communications is very high. As for the media, initially the decision is made regarding the choice of media (traditional or new media, or a combination), and then the decision about the specific media within each of the above categories (for example, within printed media a decision is made on certain magazines, newspapers, catalogues) is made. After that, it is necessary to decide at what time the message will be sent, the frequency, the length of the ad, the duration of the campaign and the amount of the budget that will be spent on each medium (Kesić, 2003: 508).

The choice of media mix is one of the most complicated decisions in the marketing communication strategy. The choice of media is one of the factors which determines the effectiveness of the communication goals and it is influenced by the characteristics of the media, the scope and characteristics of the target group which it attains, the customization of the media to the product/service, the costs that different types of advertising media require. The scope and characteristics of the target group, reached by a particular medium are considered to be the most important factors in a group of important ones, from the point of view of effectiveness which directly depends on the target group. Kotler and Keller point out the characteristics of the target market as one of the factors influencing the choice of media (Kotler & Keller, 2006: 556-557) and the authors share the opinion with Kesić who says that “the most important factor in media selection is the identification of the target segment and his features”, (Kesić, 2003: 326). “The success of advertising depends largely on media research and consumers because it is predetermined by the right choice of media”, (Perić, 2008: 140). A significant factor affecting effectiveness is the effect of different media on the same audience, since people perceive a same message differently depending on the media it was sent and consumers have their favourite media to which they are exposed and which they follow.

The use of traditional media (newspapers, magazines, television and radio) declines from 2010, primarily due to the growth of Internet. Newspapers are the ones that suffered the most, followed by journals (Zenith, 2015). The effects of traditional marketing are also declining, which has been confirmed by Srinivasan, Ruts and Pauwels, who have investigated the impact of traditional marketing and online marketing on consumers' activity. They have reached the conclusion that online marketing (clicks on paid ads, website visits, Facebook likes) affect consumers significantly more than advertising on TV, for which it was found that only 5% of consumer activity originates from this form of promotion (Srinivasan, Rutz, & Pauwels, 2016: 440-453). The time spent on consuming online media is increasing continuously, while the time dedicated to consuming traditional media is continuously decreasing (Web_Strategies, 2016). According to Risselada, Verhoef and Bijmolt (2014: 52); Van den Bulte and Wuyts (2007), the effectiveness of traditional direct marketing media has declined in many markets and consumers are avoiding these types of media. “In the past, media monitoring covered mainly printed media and TV, while today the Internet and social media are gaining added value for organizations. Newspapers, TV, radio and magazines are still used for communication. However, interaction via social media is an important factor in the practice of monitoring social media”, (Strauß & Jonkman, 2017: 34-50).

With the introduction of new media, and especially social media such as Facebook, Instagram, LinkedIn and Twitter, marketers are increasingly interested in the effects of their impact on consumer behaviour. Dao, Le, Cheng and Chen (2014) tested the effectiveness of advertising on social media on student's sample (Facebook, YouTube) and concluded that they positively effect on online purchase. Canhoto, Clark and Fennemore (2013) interviewed the organizations about the degree of usage of social media as a means of reaching consumers and they concluded that the interviewers saw great potential in using social media to decide which segments to focus on, because social media can provide real time data (Canhoto, Clark, & Fennemore, 2013: 426-420). Today, a much larger number of consumers are being reached via Facebook ads, banners or display ads, paid or organic search ads (Batra & Keller, 2016: 122). „Not only does an internet marketing channel represent the state-of-the-art trend and a distribution method with growing consumer number, but also an opportunity to get to know own consumers, observe their environment, wishes and behaviour. The advantage of internet channel is that products may be ordered round the clock and delivered rather fast. Also, one might positively evaluate the experience which is very important to the company, direct feedback from consumers: it is easy to find out what consumers wish, what they expect and which products they are not satisfied with; it is easy to offer new products, carry out campaigns and it is not difficult to update information“, (Banyte, Gudonavičienė, & Grubys, 2011: 326). „The Internet has become a competing virtual “real world for advertising”, (Jian & Yazdanifard, 2015: 597-598). Social media can be simply explained as a group of free, online tools and platforms (blogs, online videos, photo sharing, social networking) used by people to publish, share online content (Reed, 2011: 7). “Just as the rapid growth of mobile phone acceptance has opened up new marketing communications and targeting opportunities, the ubiquity of social media has changed the way in which customers now share information and interact with brands“, (Lamberton & Stephen, 2016: 146). Social media had become really important gradient in today's marketing mix in general and in promotion mix in particular (Bashar, Ahmad, & Wasiq, 2012).

The essence of social networks lies in the people's interconnection and the exchange of information. Nowadays, social networks allow marketers to encourage consumers (followers) to show their reaction regarding an event, a post, and they have their expectations for the required answers to the questions asked. Social media and mobile devices create enormous possibilities for responding, i.e. establishing proactive contact with consumers in real time (Hazlett, 2013: 464-465). Digital media allow real-time advert adaptation. Personalization of an advert in real time can be described as dynamic adapting of advertising messages via digital media in real time frame based on information originating from targeted consumers or a situation caused by consumer and bidders' interaction, i.e. advertising system (Bauer & Lasinger, 2014: 64). Thanks to new media, companies can update their customer databases and create an offer that is in line with their needs and desires. According to research results, more than 90% of all consumers read online reviews before they actually buy a product – most commonly the company home pages are used, then e-mail and social media (Leeftang, Verhoef, Dahlström, & Freundt, 2014: 2). Appropriate social media content will generate positive effects on online users' participation and interaction with a brand (Zaglia, 2013). Managers invest in social media to create fans of their brands in order to achieve pos-

itive effects for their company through *worth of mouth* and loyalty (Leeflang, Verhoef, Dahlström, & Freundt, 2014: 1-2). Rishika, Kumar, Janakiraman and Bezawada (2013) suggested that customer participation in a company's social media efforts leads to an increase in the frequency of customer visits. The trend is rather obvious – marketers continuously invest more in digital media (Web_Strategies, 2016). The effectiveness via mobile phones is considerably higher compared to some other traditional media, in terms of the speed of reading a text message. According to a survey conducted by Danaher, Smith, Ranasinghe & Danahe (2015), only two minutes are needed in order to read the message via a mobile phone.

As direct marketing has been rapidly developing, companies face advertising problems due to information overload when it comes to any of the direct marketing media. For every e-mail newsletter that the consumer should be delighted to receive, he probably has dozens of unread or unwanted e-mails in the inbox. Then, when one pays for an advert to be seen on Facebook, it has to go through various other posts (Samuel, 2016). Potential consumers are exposed to various advertising messages, and in the sea of ads they barely see the one they are interested in because they are used to ignore ads. Therefore, millions of people refuse to let their devices impose intrusive ads. In the case of printed promo materials, they may end up in the waste bin without being looked at, while for online there are ad blockers. In the 2015, in Digital News Report, Reuters Institute for the Study of Journalism reported that 47% of respondents in the United States regularly use ad blocking software (Reuters Institute, 2015: 4). According to PageFair and Adobe's 2015 Ad Blocking Report, the number of people around the world who stop ads from reaching their computers exceeded 200 million in May 2015 (PageFair, 2015: 4). The reason for avoiding ads is the fact that people have noticed that companies were collecting and sharing their personal information with other companies (Searls, 2015) leading to major scandal compromising Facebook. So, the practice has showed that marketers combine online and offline communication activities (media) to achieve synergy (Batra & Keller, 2016: 127-128).

According to the research conducted by ZenithOptimedia Group, the use of the Internet in Serbia, was twice as high in 2015 compared to 2010, according to which people spend 109.5 minutes a day on average on the Internet. The time dedicated to traditional media declined, especially newspapers, due to the increase in the use of the Internet (from 402 to 376 minutes). Printed media were read four times less in 2015 compared to 2010 (Newsweek_Serbia, 2015). According to the forecasts of this agency, the use of the Internet will grow at a rate of 9.8% per year (Zenith, Internet use to drive 1.4% increase in media consumption in 2015, 2015). Also, according to research by ZenithOptimedia in 2016, 71% of Internet use was made via mobile phones (Zenith, 2016). According to the results of the research by the Statistical Office of the Republic of Serbia in 2016, when it comes to the time frame in which internet users purchased/ordered goods or services via the Internet, 26.3% of users made purchases/orders in the last three months, 12% more than three months ago, and 7.1% more than a year ago, while 54.6% of internet users have never bought/ordered goods/services via the Internet (Statistical Office of the Republic of Serbia, 2016: 27). Following the results of this study, 76.5% of households access the Internet by using a mobile phone, 72% by using computers, and 49.3% via the laptop. More than 90% of text messages are read within 15 minutes from the time a message is received on a mobile

phone, compared to an average e-mail campaign that generates less than 5% of clicks on e-mail (Ghadialy, 2016: 4-6).

Internet penetration in Serbia is growing – for example in 2016, 3 out of 4 citizens aged between 18 and 64 were using the Internet, mostly on a daily basis. Internet users were mostly younger persons, with a higher level of education and income than the average (MASMI, 2016). About 40% of those who do not use the Internet are potential Internet users (11% of Serbian citizens). The key obstacle for them, in addition to having no immediate need for doing so, is the lack of technical knowledge. The Internet is mostly rejected by older citizens, who will probably not be using it in the future (retired and aged 55+), as they do not feel the need at all. With the increasing use of the Internet, online shopping is increasing year by year (MASMI, 2016).

METHODOLOGY

The research was conducted in the period from second half of 2017, while the statistics was carried out during 2018 and 2019. The target group were the citizens of the Republic of Serbia – consumers aged 15 to 64 who belong to the category of labour-efficient population in order to examine their habits and preferences regarding the use of direct marketing media with the purpose of obtaining information about products/services, companies and ordering/online shopping. The questionnaire was used in two forms: an Internet questionnaire (a link was sent to the respondents) and a questionnaire of the same content in printed form (which was given to the respondents).

The sample was stratified – the members of the basic assembly, based on the selected criteria, were previously divided into stratum (homogeneous classes in relation to the criterion – age). The strata were created in proportion to the age groups of the population and then for each stratum independent random samples were formed. The random sample implies that each member of the basic assembly (in this case, the stratum) will be provided with the same probability of being included in the sample, with the mutual independence of drawing members of the basic set/stratum, in order to ensure the impartiality and representativeness of the sample. The structure of the sample also took into account criteria of the age of respondents ensuring that the sample is very similar to the structure of the actual demographics of Republic of Serbia: age 15-24 (sample: 20%, demographics: 17%), 25-34 (20%, 20%), 35-44 (20%, 20%), 45-54 (19%, 20%), 55-64 (21%, 23%).

The filed questionnaires were controlled, so the validity of the answers, the structure of the respondents and their number were taken into account. The sample consisted of 1,532 respondents and the sample error is 2.5%, with a confidence interval of 95% (the significance level of 0.95 is common, which means that the differences in the groups of respondents have 95% probability that they really exist – with the error risk of 5%, so it is believed that they reflect real differences in the population). Average response rate accounted both printed and online questionnaires is 43%. A five-step Likert scale was used to measure the frequency of consumer's habits and preferences regarding the usage of direct marketing media, ranging from: almost always, often, sometimes, rarely, never (the numerical values of these responses are 5, 4, 3, 2 and 1, respectively).

Systemic and comparable analysis of scientific literature and methods of questioning by a questionnaire are used research methods. In data processing and inter-

pretation of results, the SPSS software was used and quantitative statistical methods – descriptive statistics and comparative statistics (Kruskal-Wallis H test, regression and correlation) within it.

The research hypotheses were formulated on the basis of literature review, available research of media usage in Serbia and author's assumptions:

H₁: The most effective direct marketing medium is the Internet, in terms of communication and sales effects – the most frequency of reading promotional ads and ordering products/services is over the Internet. New media based on the Internet are more effective than traditional direct marketing media.

H₂: There is a statistically significant difference in the answers of respondents of different age groups in relation to the variables regarding the frequency of reading promotional content placed through the medium of direct marketing and the frequency of ordering through them.

RESEARCH RESULTS

By observing the answers *almost always* and *often* as positive ones (respondents who generally respond positively to promotional messages-offers), we found that:

- While reading newspapers/magazines, 16.9% of respondents pay attention to the parts where products/services are promoted. The percentage of the respondents who collect parts of newspapers/magazines with an interesting offer of products/services with an intention to buy a product from newspapers/magazines one day (when needed or when a favourable opportunity is available) or become a user of a service accounts for 10.7%. Only 5.3% of respondents send coupons from newspapers/magazines hoping to receive a reward or to obtain a discount. A large number of respondents read what is written on the leaflet when they find it in their hands (45.3%).
- When it comes to direct mail, 14.9% of the respondents read the received letters which offer a product, of which only 1.7% respond positively to the post, i.e., order the product offered.
- When it comes to catalogue sales, 10.7% of respondents buy products from the catalogue.
- Very few respondents (3.6%) order products and/or become a user of the offered service when contacted by phone. About 10.6% of respondents respond positively to the promo message which they receive on the mobile phone.
- While performing some kind of activity, 39.5% of the respondents listened to radio at the same time and 10.2% listen carefully to promotional jingles on the radio.
- A small percentage of respondents (9.8%) buy products via TV shop.
- A large percentage (66.7% of respondents) use web sites on the Internet in order to obtain information about products/services. About 14.5% of the respondents read absolutely every promotional message which they receive on e-mails, and only 5.4% of the respondents buy products/use the services promoted via e-mail, while 35.6% of respondents buy products/services available on the Internet, 48.3% of respondents follow Facebook pages they like, and 10.9% of respondents order products/services via

Facebook; 33.3% of the respondents follow the pages on Instagram, and only 7% of them buy via Instagram.

Table 1. Descriptive statistics

Questions in the form of statements	N	Mean	SD	Median	Min.	Max.
I buy newspapers.	1526	2.19	1.31	2	1	5
I buy magazines.	1529	2.22	1.19	2	1	5
I pay attention to parts in newspapers/magazines where products/services are promoted.	1526	2.29	1.17	2	1	5
If I come across an interesting offer of products/services in the newspapers or magazines, I put aside that part of the newspaper and put it in a special place.	1526	1.79	1.13	1	1	5
I cut the coupons from the newspapers/magazines and send them hoping to get a reward, i.e. I use them for a discount.	1532	1.43*	0.89	1	1	5
When a flyer is found in my hand, I read what it says.	1524	3.34	1.26	3	1	5
When a flyer is found in my hand, I do not read what it says but rather immediately throw it in a trash bin.	1522	2.48	1.35	2	1	5
I am interested in envelope letters which offer products and I read them.	1517	2.22	1.16	2	1	5
I respond positively to the received letters (I order the offered product).	1526	1.42*	0.70	1	1	5
I buy catalogue products.	1526	2.10	1.04	2	1	5
I buy "proven" products (those that my acquaintances use and praise).	1526	3.26	1.14	3	1	5
I listen to what is offered to me and I buy some of the offered products, i.e. I become a user of the offered service by phone.	1526	1.54*	1.25	1	1	5
I have time to co-operate when I am contacted by phone.	1532	2.20	1.18	2	1	5
I use call centre services to get answers to questions about services and other technical issues.	1530	2.47	1.33	2	1	5
I read the SMS that arrives on my mobile phone within 15 minutes.	1531	3.38	1.42	4	1	5
I positively react to the promo message that arrives on my mobile phone (I am interested in more details).	1524	2.02	1.07	2	1	5
I use a mobile phone while shopping in order to get additional information (search for offers, prices, and locations).	1530	2.57	1.45	2	1	5
While doing something, I listen to the radio at the same time.	1531	3.02	1.39	3	1	5
I listen carefully to promotional jingles on the radio.	1522	1.95	1.10	2	1	5
I watch TV shop.	1527	1.49*	0.82	1	1	5
I order products offered via TV shop.	1522	1.59*	1.15	1	1	5
I use a computer.	1528	4.64	0.87	5	1	5
I use e-mail.	1531	4.44	1.06	5	1	5

I visit websites on the Internet in order to obtain information about products/services.	1526	3.83*	1.37	4	1	5
I click on banners on websites.	1521	2.14	1.15	2	1	5
I order products/services via the Internet.	1526	2.85*	1.36	3	1	5
Before buying something, I get informed on the Internet.	1527	3.83*	1.23	4	1	5
I only use the Internet to obtain information, and then I go to the store.	1521	3.68	1.14	4	1	5
For me, going to shopping is a real pleasure.	1526	3.28	1.26	3	1	5
I read absolutely every promotional message that I receive via e-mail.	1526	2.21	1.18	2	1	5
I like receiving and reading e-mails from preferred brands.	1523	2.39	1.27	2	1	5
I am happy to try new products/services of preferred brands that I am offered.	1528	2.47	1.19	2	1	5
I buy products/services promoted via e-mail.	1523	1.82	0.94	2	1	5
I agree to buy a product without having to see it, feel it, try it out or consult a salesperson regarding product features.	1530	1.92	1.19	1	1	5
I have a profile on Facebook and I visit this social network.	1530	3.58	1.68	4	1	5
I follow Facebook pages that I like.	1524	3.14	1.67	3	1	5
I order products/services via Facebook.	1524	1.72	1.15	1	1	5
I have a profile on Instagram and I visit it.	1528	2.67	1.80	1	1	5
I follow Instagram pages that I like.	1518	2.43	1.70	1	1	5
I order products/services via Instagram.	1518	1.46*	0.96	1	1	5
I access social networks from my smartphone.	1518	3.66	1.69	4	1	5

* In the Likert scale, never has a value of 1 (minimal value), rarely 2, sometimes 3, often 4 and almost always 5 (maximum value), thus based on these values the mean values have been calculated.

Source: Authors

Only 11.2% of respondents never visit websites in order to find information about products/services, 22.1% of them do not order products online, 46.8% never buy products promoted via e-mail. About 64.2% of the respondents never order products/services via Facebook (34.1% of the respondents have ordered a product via Facebook at least once in the last year) while 77.9% of respondents never order via Instagram (20.4% of respondents have ordered a product via Instagram at least once in the last year).

It can be concluded that direct mail, telemarketing and television (in the form of TV shop) are the direct marketing media with the lowest effectiveness as only 1.7% of respondents positively respond to the received letter and 3.6% order products by phone, and 9.8% of respondents buy products via TV shop, while online sales are the most effective way of selling (35.6% of respondents buy products/services that are available on the Internet). As has been assumed, online sales have proven to be one of the most effective direct marketing media today.

Taking answers to questions in Table 1 into account, it can be concluded that the most effective direct marketing medium from the consumers' point of view is the In-

ternet since the highest mean value is 3.83 which refers to communication effects, i.e. visits to websites on the Internet in order to obtain information about products/services, and that is the average value for informing on the Internet before buying, while 2.85 is the average value that relates to ordering of the product/services via the Internet and is the highest one in terms of media effectiveness of sales effects. The table confirms that the media with the weakest effectiveness (where the key ones, the sales effects were observed) are direct mail, telemarketing and television (in the form of TV shop), since their mean values are the 1.42; 1.54 and 1.59 respectively (where the maximum value is 5). There is a significantly low mean value for printed media – newspapers/magazines (1.43) which are used for reward or discount. This indicates that direct mail has the weakest effect.

Table 2. Usage and effectiveness of direct marketing media

Direct marketing media	Percentages
Newspapers	
• the percentage of those who frequently buy newspapers	19.58 %
• of those who frequently buy newspapers, frequently read promotional ads in them	42.67 %
Magazines	
• the percentage of those who frequently buy magazines	17.75 %
• of those who frequently buy magazines, frequently read promotional ads in them	38.60 %
Direct mail	
• the percentage of those who frequently receive an envelope with a letter in which a product is offered	14.23 %
• of those who frequently receive direct mail, frequently read the content of it	36.70 %
• of those who frequently receive direct mail, frequently give positive answer on it	4.58 %
Telemarketing	
• the percentage of those who are frequently contacted by phone about the offer of a product/service	42.95 %
• of those who are frequently contacted by phone, frequently give positive answer on the offer by phone	7.29 %
• of those who are frequently contacted by phone, frequently have time to cooperate in survey by phone	22.19 %
• the percentage of those who frequently receive promotional messages on their mobile phone	41.45 %
• of those who frequently receive promotional message on the mobile phone, frequently positively react on that message	18.90 %
Radio	
• the percentage of those who frequently listen to the radio while doing something else	39.49 %
• of those who frequently listen the radio, frequently carefully listen promotional jingles	18.84 %
TV shop	
• the percentage of those who frequently watch TV shop	3.19 %

• of those who frequently watch TV shop, frequently order via it	20.41 %
Internet	
• the percentage of those who frequently visit web for information about products/services	66.71 %
• of those who frequently use internet for information, frequently order via internet	43.44 %
• the percentage of those who frequently read every e-mail with promotional messages they receive	14.49 %
• of those who frequently read every e-mail, frequently order products via e-mail	17.12 %
• the percentage of those who frequently visit Facebook	62.01 %
• of those who frequently visit Facebook, frequently follow pages they like	74.95 %
• of those who frequently visit Facebook, frequently order via this social network	15.68 %
• the percentage of those who frequently visit Instagram	39.82 %
• of those who frequently visit Instagram, frequently follow pages they like	82.30 %
• of those who frequently visit Instagram, frequently order via this social network	15.57 %

Source: Authors

The effectiveness of direct marketing media in terms of the frequency of positive reactions to promotional ads by those who frequently use a particular medium can be expressed by calculating the percentage of those who frequently use a direct marketing medium (response values: 5 – almost always, and 4 – often), and then frequency of the positive response can be calculated to a particular promotional ad through a direct marketing medium, and by those who frequently use this medium (to calculate the percentage of fairly active consumers who respond to promotional messages). Relative values for each tested direct marketing medium are given in the Table 2.

Results show that social networks have the greatest communication effect, that 82.30% of the respondents who frequently visit Instagram, frequently follow the pages they are interested in, and that 74.95% of the respondents who frequently visit Facebook, frequently follow pages on this social network. Of those who frequently search via the Internet for information about products/services, 43.44% frequently order via the Internet. Newspapers surprised by their effectiveness – of those who frequently buy newspapers, 43.67% of them frequently read promotional ads in newspapers. Of those who frequently access to social networks, the frequency of following the pages on Instagram is relative to Facebook, while the percentages of orders via these networks is fairly even.

Table 3. Testing the age groups of the respondents and the following questions

Questions	Kruskal-Wallis H	df	p
I buy newspapers.	225.10	4	0.000*
I buy magazines.	201.09	4	0.000*
I pay attention to parts in newspapers/magazines where products/services are promoted.	61.84	4	0.000*
If I come across an interesting offer of products/services in the newspapers or magazines, I put aside that part of the newspaper and put it in a special place.	66.14	4	0.000*
I cut the coupons from the newspapers/magazines and send them hoping to get a reward, i.e. I use them for a discount.	9.25	4	0.055
When a flyer is found in my hand, I read what it says.	16.17	4	0.003*
I am interested in envelope letters which offer products and I read them.	45.26	4	0.000*
I respond positively to the received letters (I order the offered product).	12.62	4	0.013*
I buy catalogue products.	12.82	4	0.012*
I buy "proven" products (those that my acquaintances use and praise).	66.87	4	0.000*
I listen to what is offered to me and I buy some of the offered products, i.e. I become a user of the offered service by phone.	37.82	4	0.000*
I have time to co-operate when I am contacted by phone.	5.36	4	0.252
I use call centre services to get answers to questions about services and other technical issues.	83.38	4	0.000*
I read the SMS that arrives on my mobile phone within 15 minutes.	80.58	4	0.000*
I positively react to the promo message that arrives on my mobile phone (I am interested in more details).	58.98	4	0.000*
I use a mobile phone while shopping in order to get additional information (search for offers, prices, and locations).	37.86	4	0.000*
While doing something, I listen to the radio at the same time.	11.45	4	0.022*
I listen carefully to promotional jingles on the radio.	4.99	4	0.288
I watch TV shop.	26.02	4	0.000*
I order products offered via TV shop.	155.67	4	0.000*
I use a computer.	143.74	4	0.000*
I use e-mail.	262.82	4	0.000*

I visit websites on the Internet in order to obtain information about products/services.	193.24	4	0.000*
I click on banners on websites.	74.16	4	0.000*
I order products/services via the Internet.	112.95	4	0.000*
Before buying something, I get informed on the Internet.	107.32	4	0.000*
I only use the Internet to obtain information, and then I go to the store.	22.83	4	0.000*
For me, going to shopping is a real pleasure.	58.59	4	0.000*
I read absolutely every promotional message that I receive via e-mail.	104.09	4	0.000*
I like receiving and reading e-mails from preferred brands.	31.66	4	0.000*
I am happy to try new products/services of preferred brands that I am offered.	77.95	4	0.000*
I buy products/services promoted via e-mail.	59.58	4	0.000*
I agree to buy a product without having to see it, feel it, try it out or consult a salesperson regarding product features.	47.39	4	0.000*
I have a profile on Facebook and I visit this social network.	322.54	4	0.000*
I follow Facebook pages that I like.	332.92	4	0.000*
I order products/services via Facebook.	117.79	4	0.000*
I have a profile on Instagram and I visit it.	373.03	4	0.000*
I follow Instagram pages that I like.	397.56	4	0.000*
I order products/services via Instagram.	150.98	4	0.000*
I access social networks from my smartphone.	315.05	4	0.000*

Statistically significant differences between the age groups of the respondents (15-24, 25-34, 35-44, 45-54 and 55-64) are marked with the asterisk ()

Source: Authors

Table 3 shows that the statistically significant differences between the age groups according to almost all tested questions except cutting the coupons from the newspapers/magazines and sending them with hope to get a reward ($\chi^2(2) = 9.25$, $p = 0.055 > 0.05$); having time to co-operate when he/her is contacted by phone ($\chi^2(2) = 5.36$, $p = 0.252 > 0.05$); and listening carefully promotional jingles on the radio ($\chi^2(2) = 4.99$, $p = 0.288 > 0.05$).

There is an influence of age of respondents to the frequency of buying newspapers ($R^2 = 0.150$, $F(1,1526) = 267.29$, B coefficient = 0.034, Beta coefficient = 0.387, $p = 0.00 < 0.05$; 15.3% of variability of the frequency of buying a newspaper is explained by the influence of ages of respondents), and to the frequency of buying magazines ($R^2 = 0.133$, $F(1,1529) = 232.16$, B coefficient = 0.029, Beta coefficient = 0.364, $p = 0.00$

< 0.05 ; 13.3% of variability of the frequency of buying a magazine is explained by the impact of ages of respondents). There is a statistically significant correlation between the mentioned variables (Spearman's rank correlation coefficient = 0.373; 0.365, respectively, $p = 0.00 < 0.05$, risk of error = 0.01), and these are moderate positive linear relationships which indicates that the frequency of purchases of newspapers and magazines increase as the respondents are older, but there is no statistically significant correlation between the age of respondents and the frequency of paying attention to promotional ads in printed media (Spearman's rank correlation coefficient = 0.176, $p = 0.00 < 0.05$, risk of error = 0.01), because the relationship between these variables is negligible. Older respondents have the habit of buying print media and they are not more focused on reading content from printed media than younger respondents.

There is insignificant influence of age of respondents to the frequency of on-line ordering ($R^2 = 0.018$, $F(1,1526) = 27.09$, B coefficient = -0.012, Beta coefficient = -0.133, $p = 0.00$), then, to the frequency of ordering via Facebook ($R^2 = 0.038$, $F(1,1524) = 59.93$, B coefficient = -0.015, Beta coefficient = -0.196, $p = 0.00$), to the frequency of ordering by phone ($R^2 = 0.011$, $F(1,1526) = 17.18$, B coefficient = 0.006, Beta coefficient = 0.106, $p = 0.00$) and to the frequency of ordering via TV shop ($R^2 = 0.089$, $F(1,1522) = 148.34$, B coefficient = 0.022, Beta coefficient = 0.298, $p = 0.00$). There are no statistically significant correlations between these variables (Spearman's rank correlation coefficient = -0.120; -0.204; 0.128; 0.273, respectively, $p = 0.00 < 0.05$, risk of error = 0.01), where the relationships between variables is negligible. The only statistically significant correlation is between the age of respondents and the frequency of ordering via Instagram (Spearman's rank correlation coefficient = -0.301; $p = 0.00 < 0.05$, risk of error = 0.01, $R^2 = 0.080$). The younger the respondents are, the higher is the frequency of ordering via Instagram.

However, it is important to point out that the results show that there is an influence of the age of the respondents on the frequency of using social networks to follow likable pages on Facebook and Instagram. 17.9% of the variability in the frequency of following pages on Facebook explains the influence of the respondents' age ($R^2 = 0.179$, $F(1,1524) = 328.41$, B coefficient = -0.046, Beta coefficient = -0.423, $p = 0.00$). There is also a statistically significant correlation between these variables (Spearman's rank correlation coefficient = -0.409, $p = 0.00 < 0.05$, for a confidence interval of 99% and a risk of error of 1%). The correlation is negative and medium by strength, which means that the frequency of following Facebook pages increases, the younger are the respondents. And in case of Instagram, 26% of the variability in frequency of following pages on Instagram explains the influence of respondents' age ($R^2 = 0.260$, $F(1,1518) = 528.35$, B coefficient = -0.057, Beta coefficient = -0.510, $p = 0.00$). There is a statistically significant correlation between these variables (Spearman's rank correlation coefficient = -0.517, $p = 0.00 < 0.05$, for a confidence interval of 99% (and a risk of error of 1%) which is negative and medium by strength – the frequency of following pages on Instagram increases as the age of the respondents decreases.

TESTING THE RESEARCH HYPOTHESES

Analysis of the results presented in Table 2 clearly indicates that the most effective direct marketing medium is Internet, in terms of communication and sales effects, and thus the hypothesis H_1 has been confirmed.

The hypothesis H_2 has also been confirmed – there is a statistically significant difference in the answers of respondents of different age groups in relation to the variables regarding the frequency of reading promotional content placed through the medium of direct marketing and the frequency of ordering (Table 3).

MODELS

Table 4 was compiled based on the mean values.

Table 4. Communication and sales effects of direct marketing media in relation to the age groups

Communication and sales effects of direct marketing media	Age groups of consumers in Serbia				
	15-24	25-34	35-44	45-54	55-64
<i>Communication effects of printed direct marketing media</i>					
Reading promotional contents in newspapers/magazines	-	-	-	2.65	-
Reading promotional contents on flyers	3.19	3.50	3.46	3.35	3.28
<i>Communication effects of Internet-based direct marketing media</i>					
Obtain information about products/services on the Internet (websites)	3.55	4.32	4.40	4.13	2.96
Obtain information on the Internet and then going to the store	3.44	3.72	3.74	3.89	3.76
Reading promotional messages received via e-mail	-	-	-	2.85	-
Following promotional contents via Facebook pages	3.64	3.90	3.56	2.50	-
Following promotional contents via Instagram pages	3.63	2.89	-	-	-
<i>Sales effects of the Internet</i>					
Ordering products/services via the Internet	2.68	3.23	3.31	2.59	2.50

Source: Authors

All age categories use Internet to a large extent for obtaining informations about products and services within the purchasing decision-making process, as well as to order products/services. The oldest age group (55-64) uses these advantages of the Internet the least, and the respondents of the age group 35-44 the most and they mostly order via Internet. Based on the possibility of achieving good communication effects within promotional campaigns, Facebook can be very useful and cost-effective for placing promotional content for age groups 15 to 54 years. The benefits of Instagram can be well used to place promotional content for age categories 15-34 years. Regarding the investment of money and other resources in traditional printed forms of direct marketing media, it can be seen in Table 4 that good communication effects can be achieved in the age group 45-54, who carefully read promotional content placed through newspapers and magazines in print form. This age group also pays the most attention to the content of e-mails with promotional content and advertisements. Also, very good communication effects can be achieved through flyers, since all surveyed age categories read their content, which is proof that traditional direct marketing media do not disappear, but often serve as a supplement to some new forms of media.

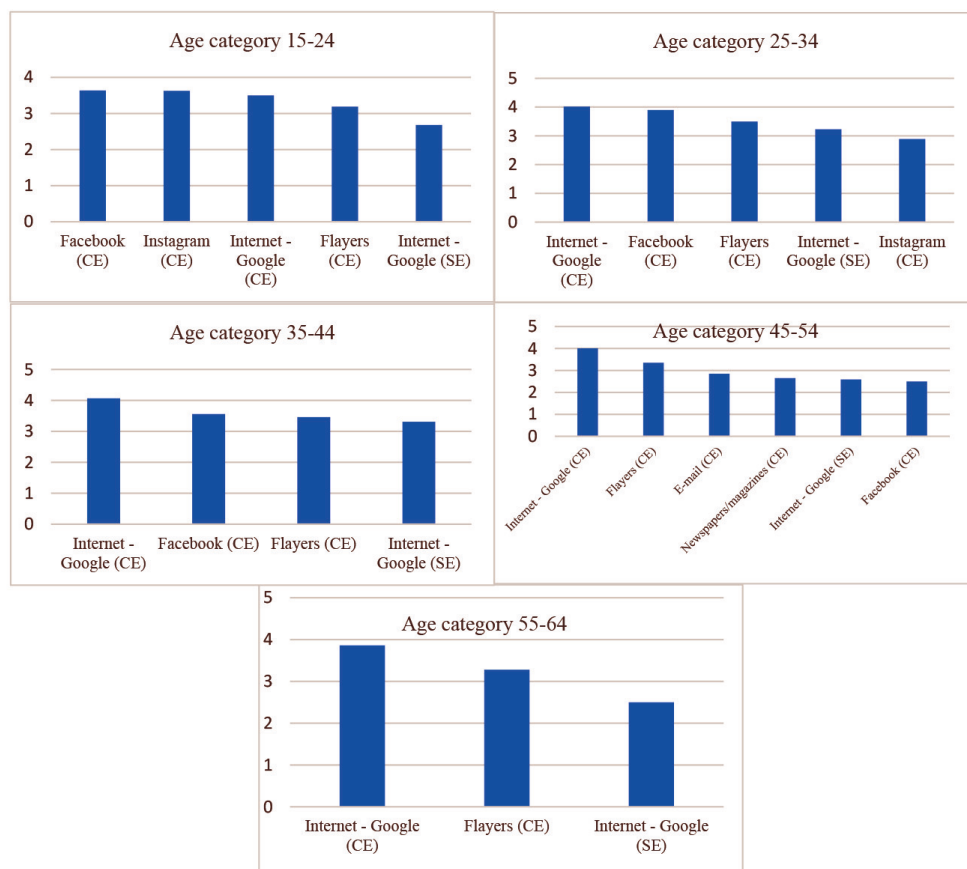


Chart 1. Models for age groups of consumers (CE – Communication effects; SE – Sales effects)

Source: Authors

Based on Table 4, charts are derived that show which are the most effective direct marketing media for each age category. The chart shows model according to the age category, and it can be seen that the most effective media of direct marketing for age 15-24 are: Facebook (with communication effects – CE), Instagram (with CE), internet search (CE and sales effects – SE) and flayers (CE). The most effective media of direct marketing for the age group 25-34 are: internet search (CE and SE), Facebook (CE), flayers and Instagram (CE). Conclusion is that the best investment in promotional content is on Google ads, Facebook and leaflets, for the age category 35-44, because it is shown that age category most often pays attention to the content that is placed through the mentioned media of direct marketing. For age group 45-54, it would be the most profitable to invest in like the mentioned media for the age category 35-44, with possible promotional content in printed newspapers and magazines and e-mails. Respondents of the oldest category (55-64) the most often read promotional content on leaflets and the Internet.

CONCLUSION

Direct marketing enables sales improvement, better contact with consumers, lower costs of promotional campaign as well as many other positive effects. Getting in touch with consumers without intermediaries allows lowering the contact costs, while the obtained information is better and safer due to the immediacy. Savings created in this way allow lower prices and thus providing competitive advantage. Direct marketing addresses a closely segmented auditorium, personalizes the communication process, it is easily controlled and it is simple to perform an evaluation of activities. Nowadays, consumers spend a lot of time using their mobile phones and they prefer to interact with a brand outside the “real world”, which means that it is a must to have an integrated digital marketing strategy. Using smartphones and applications is merely one way to achieve digital interaction. Firms’ digital marketing engagement can be categorized according to perceived benefits and digital marketing usage (Tiago & Verrisimo, 2014: 703). These digital strategies place consumers in the centre and are created to be reached on the basis of their habits, preferences and behaviour. Although there is no universal formula on how to create digital communication for reaching consumers, and certainly it cannot be achieved overnight, focusing on digital marketing efforts should not lag behind (Armitage, 2015: 22-23). Based on the research results, it is concluded that, in terms of communication and sales effects, Internet (including social networks) is the most prominent as a direct marketing medium. The results show that the Internet is a very effective direct marketing medium (in terms of communication and sales effects) for all respondents’ categories according to age. Social networks – Facebook and Instagram are most common among respondents aged 15-35, and Facebook is still frequently present among consumers under the age of 55, and via these social networks it is possible to achieve good communication effects for mentioned age categories. Also, the leaflet has remarkable communication effects for all respondents’ groups. Considering the percentage of attention and reading to promotional ads in them, printed newspapers have been proved to be a very effective medium, by consumers who frequently buy newspapers. These results may be used to model optimal for different target groups of consumers, not only in Serbia, but also in neighbouring countries that have similar aspect of social, cultural and economic development. This study examined general consumer usage and effectiveness of direct marketing media in Serbia with big and representative sample. Authors are aware of the limitations that the study did not include an examination of the effectiveness of a given media considering a specific advertisement as a part of a promotional campaign. A deeper study would include an examination of the usage of a specific direct marketing medium in terms of the form, content and promotional appeals of the ad.

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PERFORMANCE MEASUREMENT IN LOCAL GOVERNMENT UNITS IN THE FUNCTION OF PUBLIC SERVICE IMPROVEMENT

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Abstract: *In today's turbulent environment, local self-government administrations are under pressure of various, often conflicting needs, demands and interests that affect their effective operations. Accordingly, an innovative model of local self-government effectiveness measurement has been applied in this research which effectively includes a broad spectrum of organizational goals. Measuring effectiveness of local self-government and municipal management structures provides a clearer insight in to how well developed is local self-government in order to identify key factors affecting its (non) efficiency and business (non)effectiveness. Interdependence of the balanced scorecard model (BSC) development and effectiveness of local self-government is the subject of this paper. Effectiveness of local self-government has been observed on the basis of five segments or five perspectives of the balanced scorecard model. BSC modeling allows for successful development and implementation of a strategy that is causally linked to effectiveness of local self-government and improving public services. The results of the research have confirmed that a greater degree of development of the balanced scorecard model has the potential to increase effectiveness of municipal management structures, and with that development and competitiveness of the local community and improving public services, as shown in this paper.*

Key words: *Local self-government, balanced scorecard model, improvement of effectiveness, public services*

JEL Classification: *D73, M1*

INTRODUCTION

Traditional business performance measurement systems focused primarily on financial indicators have become insufficient today to get a complete picture of the functioning of the organization. In the past twenty years, significant reform activities have been carried out in the public sector of many countries in order to improve business performance and efficient service delivery. The reforms are an expression of the government's efforts to continuously improve public sector organizations to work better and more transparently. At that time, in a large number of countries, there was a problem of measuring the effectiveness of the work of the organizations themselves.

The modern environment, in which the intangible resources of the organization have the greatest value, and the most intellectual capital, has caused the emergence of modern management concepts such as the concept of knowledge management (KM), total quality management (TQM), customer relationship management (CRM), the concept economic value added (EVA), Balanced scorecard (BSC), etc.

Many local governments around the world have turned to efficiency management methodology to help quantify results, improve services, and communicate more effectively with the community and stakeholders.

Given that in Bosnia and Herzegovina there is no single method or generally accepted concept for measuring the efficiency and effectiveness of local government management, the application of this concept (BSC) in the research part presents an analysis of the effectiveness of local governments in Bosnia and Herzegovina through economic indicators of local economic development. public revenues, physical and other resources.

Strategic planning and strategic management give public organizations and institutions a specific purpose and direction that contributes to the creation and implementation of an effective development policy of government officials. Unlike strategy formulation, strategy implementation is often seen as a craft rather than a science. Significant difficulties usually arise during the later processes of strategy implementation where one of the causes is also found in unrealistic planning when formulating the strategy itself. There are many factors that affect the success of the implementation of the strategy and that the implementation is a key challenge for the improvement of public services and thus the effectiveness of local self-government. Some of these factors are inadequate system for monitoring the implementation of the strategy, underdeveloped e-government system, mismatch of competencies of employees and business processes, insufficient communication and anticipation of the needs of service users, etc.

It is the Balanced scorecard that helps organizations formulate and implement strategies more efficiently in the context of improving public services. In today's dynamic environment, the application of the Balanced scorecard is necessary because it has been recognized by many cities in the world (Charlotte, San Diego, Brisbane, Rijeka, etc.). The application of the Balanced scorecard concept aims to establish a balanced set of measures that provides municipal management with information to achieve goals and monitor the satisfaction of service users. The Balanced Scorecard provides a framework for translating vision and strategy into operational sizes and measures to more easily track the quality and quantity of customer service.

LITERATURE PREVIEW

The performance measurement system in the field of public administration has received increasing attention for both the academic community and practitioners in the last two decades. The system of measuring performance, improving the efficiency of local self-government and applying the Balanced scorecard concept is the subject of many researches in the world Boyine, 1988, Lovell, 1994, Kloot L. and Martin J., 2000, Niven Paul R. 2003, Mik Wisniewski 2004, Tommaso Agasisti, Deborah Agostino & Mara Soncin 2019 (Šašić, 2020, p. 33).

In addition to the importance of application for companies, Norton and Kaplan emphasize the importance of BSC for the public sector in their works. These papers emphasize the importance of the existence of cause-and-effect relationships between the four perspectives in a way that learning and growth lead to improved internal business processes, which in turn leads to improved customer satisfaction and ultimately affects the financial performance of the organization (Kaplan, Robert S., & Norton, David P., 2006, p. 75).

Pollalis and other authors presenting the application of the BSC methodology in the U.S. Department of Defense, suggested that the customer perspective be placed at the top of the BSC causal link (Pollalis, Y.A., Gartenberg, M., & Edmunds, B., 2004, p. 37). Niven Paul R., (2003) researched the effectiveness of BSC implementation in the local community and also stressed that the client / citizen perspective should be at the top due to the mission of local self-government. Niven points out that the application of BSC in the local community demonstrates responsibility and generates results, enables efficient use of limited resources and emphasizes the efficiency of strategy implementation. There is a large body of research on the effectiveness of local community management (Niven, 2006, p. 124). Charnes I. (1989) investigated the efficiency of 28 cities in China between 1983 and 1994 and stressed the importance of rationalizing local government costs and relieving citizens. (Guo Tengyun, 2011, p. 750) Umashev & Willett (2008) highlight a multidimensional approach to the BSC model that is also considered an excellent tool for measuring the efficiency of local government systems based on performance indicators identified through four BSC perspectives (Umashev, C. and Willett, R., 2008, p. 380). Chow (2010) and Rautiainen (2014) point out that based on institutional pressure, public sector organizations are forced to mimic different private sector models and theories within their organizations. Customer (citizen) orientation is common for the implementation of BSC in public organizations. Research to date has shown that the use of BSC has risen sharply in recent years, especially in local governments in Sweden, Denmark, Canada, Australia, Spain, the Czech Republic and other countries. In addition to local governments, BSC is also used in hospitals, colleges, courts, and schools (Hellström, M., Jönsson, P. & Ramberg, U., 2009, p. 19).

Tommaso Agasisti, Deborah Agostino & Mara Soncin conducted a survey in 2019 to identify three samples (formal compliance, shared vision and technical oligarchy) of the implementation of the Performance Measure System (PMS) in local governments (Tommaso Agasisti, Deborah Agostino, Mara Soncin, 2020, p. 1125).

In Bosnia and Herzegovina, the performance measurement system is still not sufficiently developed, which is the recommendation of the European Commission in the context of public administration reforms and EU accession (Šašić Đ., 2019, p. 11).

For example, local governments in BiH often do not have a clearly defined strategy, but the BSC relies on a mission, to focus on efficiency within available resources.

ANALYSIS OF THE IMPACT OF THE BSC MODEL ON THE IMPROVEMENT OF LOCAL GOVERNMENT SERVICES

Based on the above, the following hypotheses are set:

H1. Continuous education and training contribute to increasing the competencies of managers and employees in local self-government

H2. Improving internal processes in local self-government units is related to the competencies of managers and all employees

H3. The quality of internal processes causes better service delivery

The interdependence of the development of the BSC concept and the improvement of local government services is the core of the research of this paper.

The effectiveness of local self-government was observed through five perspectives of the BSC model. The basic perspectives, as the theoretical basis of the BSC managerial concept, can be presented as follows:

1. Perspective of learning and growth of the organization,
2. Perspective of business processes of the organization,
3. Perspective of the organization's clients,
4. Financial perspective of the organization
5. Perspective of strategic integral operation of BSC concept.

The results of the research show that those local governments that have developed perspectives of this model are more effective than those local governments that have partially developed individual perspectives or do not have any of the perspectives developed at all. Business on the principle of the BSC model enables the successful development and implementation of the strategy. The effectiveness of local self-government is analyzed through the introduction of new and improvement of existing services, promotion of innovations, shortening of processes and procedures, quality improvement, sensitivity to customer / citizen requirements, and other relevant indicators. The research was conducted in 53 local self-government units in Bosnia and Herzegovina. For the purposes of this paper, the focus of the interpretation of research results will be the perspectives of internal processes and the perspectives of citizens (clients).

Development of the perspective of internal processes

The development of the perspective of internal processes in local self-government units was measured through the analysis of responses to claims about strategy implementation, development and implementation of e-government, efficiency of procedures and processes, implementation of ISO standards, scope and quality of services, service innovation (system 24, One-Stop-Shop Counter, monitoring the implementation of the document online via etc.), the possibilities of introducing the New Public Management, the efficiency of time management (time management) by the municipal leadership and the effectiveness of the existing internal organization and job systematization.

The knowledge and competencies of management and employees directly affect the quality of internal processes of each organization. Improving internal processes

is important for several reasons. By continuously improving internal processes, it is possible to reduce business costs through the efficiency and productivity of employees, because the quality of internal processes can have a positive impact on the perception of clients (citizens) and strengthen the key values of the organization.

The next table shows the results of average values and deviations from the above statements related to the analysis of the development of the perspective of internal processes in local government units. When asked or stated that the improvement of internal processes in local self-government units is related to the competencies of managers and all employees, 79.22% of respondents strongly agree, 11.28% agree to some extent, while 10% have no opinion. There is no statistically significant difference in responses at the level of 0.05 (Chi-Square = 1.639, $df = 4$, $p = .651$) between local governments according to the division into micro, small, medium and large.

Table 1. Results of the analysis of average values of the perspective of internal processes

Perspective of internal processes	N	Min	Max	Average	St. Dev.
B1. Improving internal processes in local self-government units is related to the competencies of managers and all employees	50	3	5	4.44	.541
B2. The existing internal organization and systematization of jobs in your municipality is effective	50	1	5	3.22	1.055
B3. Are there capacities in local self-government units to apply modern management concepts? (New Public Management)	50	2	5	3.40	.857
B4. The ability to introduce new human resource management practices in local self-government and their development affects the improvement of internal processes	49	2	5	4.04	.735
B5. Improving internal processes implies the quality of delivered services	50	1	5	4.24	.843
B6. Implementation of quality management system (according to ISO 9001: 2015) contributes to more efficient achievement of goals in terms of improving the quality of services provided	50	1	5	3.76	.981
B7. Improving the favorable business environment in local self-government units also depends on the competencies of the municipal management	49	2	5	4.41	.762
B8. The promotion of local economic development is effective	50	1	5	3.38	.967

Source: Author's research

The research results show in the next table that there is a significant positive correlation between the effectiveness of the existing internal organization and systematization of jobs and the improvement of internal processes in local self-government units is ($r_s = 0.483$, $sig. = 0.000$).

Also, local governments in which the municipal management dedicates its activities to monitoring operational activities in the organization have a medium-strong connection with the improvement of internal processes ($r_s = 0.535$, $sig. = .000$). Based on the test results, we came to the conclusion that refers to the second hypothesis, ie that the improvement of internal processes in local self-government units is related to the competencies of managers and all employees ($Z = -0.771$, $p < 0.05$)

Table 2. Results of research on the correlation of internal process perspective variables

	Development of learning and growth perspective	N	Mean Rank	Sum of Ranks
Perspective of internal processes	Underdeveloped	33	21.26	701.58
	Developed	20	67.25	1345.00

Source: Author's research

Table 3. Effectiveness of municipal management in the perspective of internal processes in relation to development / underdevelopment in the perspectives of learning and growth

	Perspective of internal processes
Mann-Whitney U	168.000
Wilcoxon W	234.000
Z	-3.576
Asymp. Sig. (2-tailed)	.000

Source: Author's research

The results of the Man-Whitney test show how effective the municipal leadership is (LGU) in the perspective of internal processes is statistically significantly higher when it comes to local governments that have a developed perspective of learning and growth compared to those local governments that have an underdeveloped perspective of learning and growth ($Z = -3,576$, sig. = 0,000). Based on the previously calculated correlation coefficients and presented analyzes that indicate the degree of quantitative agreement that the improvement of internal processes in local self-government units is related to the competencies of managers and all employees, it can be concluded that a valid confirmation of the second auxiliary hypothesis.

Development of citizens' perspective

The analysis of the development of the perspective of relations with service users (citizens' perspective) was measured through the analysis of the quality of existing services and compliance with user requirements, participation of external stakeholders in decision-making, possibility of outsourcing, development of public-private partnerships, ownership system for monitoring the level of realized proposals / complaints of citizens, participation of citizens, non-governmental organizations and employers in public hearings, and whether the local self-government is continuously conducting a survey on the satisfaction of users of municipal services.

Table 4. Results of the analysis of average values of citizens' perspective

Citizens' perspective	N	Min	Max	Average	St. Dev.
C1. The quality of existing services is in line with customer requirements	51	2	5	3.67	.739
C2. The constitutional organization and normative framework prevent more effective action of local self-government	51	1	5	3.39	1.115

C3. Service users are regularly involved in decision-making processes	51	1	5	2.96	.916
C4. Transfer of competencies in performing certain activities through the concept of outsourcing and PPP is represented in our municipality	51	1	5	2.80	1.000

Source: Author's research

In Table 4 the results of average values and deviations from the stated statements related to the analysis of the development of citizens' perspectives are presented. When asked whether the quality of existing services is in line with customer requirements, 9.04% of respondents strongly agree, 50.09% agree to some extent, while 30.20% neither agree nor disagree, while 5, 7% disagree. There is no statistically significant difference in responses at the level of 0.05 (Chi-Square = 7.635, $df = 4$, $p = .651$) between local governments according to the previous division into micro, small, medium and large. Regarding the answers by category of constitutional-territorial organization from which local governments come, there is also no significant statistical difference. The average rating of the response to this statement is 3.67 with a standard deviation of 0.739, which indicates that the quality of certain services is not in line with user requirements. Through the results of the research so far, we conclude that there are several factors that affect this assessment (insufficiently developed e-government system, existing internal organization and systematization of jobs, non-evaluation of innovation and creativity in the work of employees, etc.).

One of the principles of the quality management system according to ISO 9001 implies the inclusion and fulfillment of customer requirements. Consequently, the question was raised as to whether service users were regularly involved in decision-making processes. Only 3.8% of respondents strongly agree that service users are regularly involved in decision-making processes, while 24.5% somewhat agree.

The low participation of service users in decision-making processes aimed at improving existing and introducing new services indicates the inefficiency of the organization on the one hand, and the lethargy of service users due to lack of initiative and activism on the other hand. The obtained results clearly show that municipalities do not have detailed strategies for monitoring customer satisfaction and consideration of their proposals, especially in relation to local communities and their communication with municipalities.

The average rating of responses to this statement is 2.96 with a standard deviation of 0.916, which indicates that in most municipalities (71.8%) service users are not involved in decision-making processes.

In order to analyze why some municipalities are more effective in their work than others, it was also analyzed whether the constitutional organization and normative framework prevent more effective action. The average mean value of the answers to this question is 3.39, where 17% of municipalities believe that the existing constitutional organization does not prevent effective action. Many municipalities neither agree nor disagree with this statement because, for example, when starting a business and the ease of doing business criteria prescribed by the World Bank, the effectiveness of municipalities depends on the solution of higher levels of government and the work of certain public companies and institutions. (connection of electricity and other

utilities, tax and court decisions). By introducing One-Stop-shop counter operations and assigning “mentors” to investors, developed local governments have successfully improved the effectiveness of business ease. The trend in the world is to transfer certain tasks of local self-government to other legal entities in order to rationalize business costs and improve efficiency in work. According to the Law on the Principles of Local Self-Government, municipalities and cities have a large number of competencies that affect their development differently. Due to limited tax autonomy and the existing fiscal federalism in BiH, small local governments face a deficit of public revenues necessary to cover public expenditures defined in the law of the same name. Consequently, one of the solutions is certainly the strengthening of partnerships between public and private entities by assigning certain tasks and activities of local self-government to legal entities from the private sector (the so-called “outsourcing” concept). Also, by strengthening the public-private partnership, it is possible to achieve the desired effects in the form of business rationalization and meeting the needs of citizens.

Tabela 5. Is there a developed system for monitoring the satisfaction of service users in your local self-government (percentage of realized proposals / complaints of citizens)

	Frequency	Percent	Cumulative Percent
Valid	Yes	28	52.8
	No	13	24.5
	Planned to introduce	10	18.9
	Total	51	96.2
	Missing System	2	3.8
	Total	53	100.0

Source: Author's research

In order to analyze and improve the efficiency and accountability of local authorities, it is necessary to continuously monitor the satisfaction of citizens with local services. In this regard, the table above shows the results on the development of a system for monitoring the satisfaction of service users. The results show that in 54.9% of municipalities there is a developed system for monitoring the satisfaction of service users (percentage of realized proposals / complaints of citizens) while in 45.1% of local governments it is not developed.

Using Spearman's correlation coefficient, the correlations between the statements related to the auxiliary hypotheses H1 and H2 were calculated. The research results show that there is a strong correlation ($r_s = 0.723$, sig. = 0.000) between the claim of continuous education and training contribute to increasing the competencies of managers and employees in LGUs as an independent variable (A8), and claims of improving internal processes in LGUs related to managers' competencies. all employees as dependent variables (B1).

Table 6. Analysis of the interdependence of education, competencies of managers and employees with by improving internal processes

		Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Interval by Interval	Pearson's R	.707	.087	6.925	.000
Ordinal by Ordinal	Spearman Correlation	.723	.088	7.241	.000

Source: Author's research

To assess the development of the perspective of internal processes in local self-government units, average values and Spearman's correlation coefficient between questions from questionnaires B1-B7 were calculated. Questions for the analysis of the development of perspectives of the BSC model in the paper are defined in accordance with the objectives of the research and the set hypotheses.

Table 7. Development of the perspective of internal processes in the LGUs on the observed sample

	Development of perspective	N	Mean Rank	Sum of Ranks
Improving internal processes in local self-government units is related to the competencies of managers and all employees	1.00	37	22.73	841.00
	2.00	14	34.64	485.00

Source: Author's research

Table 8. The results of the correlation between the development of the perspective of internal processes and the perspective of citizens

B5-C1		Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Interval by Interval	Pearson's R	.760	.069	8.109	.000
Ordinal by Ordinal	Spearman Correlation	.736	.070	7.532	.000
N of Valid Cases		50			

Source: Author's research

The third auxiliary hypothesis (H3) assumed that the improvement of internal processes implies the quality of delivered services. In order to determine the impact of under development and development of internal processes on the quality of local services, is gaining knowledge of whether there is a quantitative agreement of variations between the observed variables and, if so, the degree of such agreement, a correlation analysis was performed. The analysis of the correlation between the development of the perspective of internal processes and the perspective of citizens measured through the quality of delivered services and their participation in decision-making, found that there is a positive relationship between variables, which is statistically significant at a significance level of 5% ($r_s = 0.736$, $\text{sig.} = 0.000$). This finding indicates a causal link between the development of the perspective of internal processes and the perspective of citizens (Table 9).

Using the Mann-Whitney test, we tested the auxiliary hypothesis H3 based on the factors of local self-government development and the perspective of citizens (perspective of the BSC model) and came to the conclusion that the null hypothesis was rejected (sig. = .001).

Table 9: Effectiveness of municipal management in the perspective of citizens in relation to development / underdevelopment in the perspective of internal processes

	Development of the perspective of internal processes	N	Mean Rank	Sum of Ranks
The quality of internal processes implies better service delivery	Undeveloped	33	52.84	1743.42
	Developed	19	101.78	1933.82
	Total	52		
A				
The quality of internal processes implies better service delivery				
Mann-Whitney U	904.500			
Wilcoxon W	1743.420			
Z	-1.583			
Asymp. Sig. (2-tailed)	.013			

a. Grouping Variable: Perspective of internal processes

Source: Author's research

Namely, there is a significant difference for the answers to the question / claim that the quality of internal processes causes better service delivery, based on the above criteria for the development of the BSC management concept ($Z = -1.583$, sig. <0.05). More developed local governments have a higher degree of agreement than underdeveloped ones, and the effectiveness of municipal leadership measured through the perspective of citizens is statistically significantly higher. The average mean value of the response to this statement in developed LGUs is 4.75, while in underdeveloped 3.44.

CONCLUSION

Modern business, both private and public, brings new demands and challenges to public administration organizations, as well as local self-government, which are not always easy to achieve. In such a time, the application of modern management concepts, ie the New Public Management, has a key role in the efficiency and effectiveness of the operations of public administration organizations. In transition countries, and especially those that are candidates for accession to the European Union, such as Bosnia and Herzegovina, the most demanding criterion is public administration reform. These reforms include improving organizational and functional efficiency and effectiveness, reorganization of public administration from the state level to local self-government.

Local governments are under pressure from numerous, often conflicting needs, requirements and interests that determine their actions, so this research applied an innovative model for measuring the effectiveness of local government that includes a wide range of organizational goals. Measuring the effectiveness of top management

(municipal leadership) in the context of improving public services, was analyzed using the Balanced scorecard model.

In the last three decades, the Balanced Scorecard has achieved great success and has been used in both the private and public sector in terms of measuring the effectiveness of top management and improvement of service delivery. Translating vision and strategy into a set of goals using the Balanced scorecard model forces top management to create clear, measurable and achievable goals. Precisely in this there is an additional reason for the application of the new proposed BSC model in the research of the impact of the development of the BSC model on the improvement of public services of local self-government. It follows that the top management of local self-government as a social and economic system must continuously monitor and reconcile different interests in order to fulfill the mission and achieve business efficiency.

In Bosnia and Herzegovina, today municipalities are in the process of transition, ie at a turning point from a bureaucratic to user approach where the primary goal must be to implement the reform process, reorganize local government and more efficiently measure the effectiveness of municipal leadership and all employees to meet the needs of its users. .

The results show that the improvement of internal processes in local self-government units is related to the competencies of managers and all employees, as stated in the second auxiliary hypothesis. The correlation between these variables is very strong, which suggests that through learning and training of employees can significantly improve the improvement of internal processes of local government. The research found that local governments, in which the municipal leadership dedicates its activities to creating new ideas and redefining business strategy, have a strong positive correlation and greater effects on the improvement of internal processes. Also, local governments in which the municipal leadership dedicates its activities to monitoring the operational activities of the organization have a medium-strong connection with the improvement of internal processes. We can conclude that the effectiveness of municipal leadership in the perspective of internal processes is statistically significantly higher when it comes to local governments that have a developed perspective of learning and growth compared to those local governments that have an underdeveloped perspective of learning and growth.

The effectiveness of municipal management (LGU) in the perspective of citizens (customer relations) is statistically significantly higher when it comes to local governments that have a developed perspective of internal processes compared to those local governments that have an underdeveloped perspective of internal processes. When it comes to the size of local self-government, the effectiveness of municipal management is most pronounced in local self-government units that have over 100 employees. In general, looking at all the results according to the perspectives of the BSC model, the perspective of citizens is the least developed, which was emphasized in the Report of the European Commission for the last year and in the report of the World Bank (Doing Bussines).

There are differences between local governments with developed and underdeveloped BSC management concept. These differences indicate that the development of perspectives of the BSC concept is a significant predictor of the effectiveness of municipal leadership in terms of implementing the strategy and the effectiveness of local

government operations. More developed local governments, ie those with developed perspectives of learning and growth, internal processes and relations with citizens, have a higher degree of strategy implementation, so the effectiveness of municipal leadership, measured through the perspective of strategic integral action of BSC concept, is statistically significantly higher. Local governments with less than 50 employees have the lowest level of strategy implementation and effectiveness where one of the main reasons is the lack of financial resources and the existing distribution of revenues from indirect taxes. The results of the statistical analysis showed that the proposed measure of the degree of development of the BSC model determines the level of effectiveness of municipal management (top management), ie the effectiveness of local self-government makes sense. Thus, a higher degree of development of the BSC management model implies a higher degree of effectiveness of local self-government, ie better provision of public services, which confirms the third hypothesis.

When considering the overall results of the research, it should be borne in mind that the effectiveness of top management, ie local self-government, is influenced by numerous factors and that the application of modern management concepts in local self-government in Bosnia and Herzegovina (New Public Management) is still insufficiently researched. Based on the obtained research results and conclusions, the position was confirmed that the application of these concepts depends on improving the effectiveness of local governments in performing all processes in terms of learning and growth perspectives, innovation, internal processes, relations with citizens, strategy implementation, financial operations and local economic development.

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EXPERIENCES OF STUDENTS AND PROFESSORS IN ONLINE TEACHING DURING PANDEMICS

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Abstract: *The time of the pandemic forced educational institutions to take full advantage of IT technologies, using all their advantages in order to ensure the educational process. A completely different approach to the educational process, online instead of the current traditional one, posed significant challenges to both students and professors. The aim of this research is to show that with the many advantages that “online education” has brought, it has given students and professors more obligations, and thus greater stress during the teaching process. The subject of the research is qualitative proof that online teaching during the COVID-19 pandemic enabled the unhindered maintenance of the educational process, but that neither students nor professors consider this way of teaching the best solution. From the data collection method, it was used the survey method with the survey technique. Of the general scientific methods, it was used the method of statistical data processing, that is processing of collected numerical data using the statistical package SPSS and their tabular and graphical presentation. Data gathering was conducted in combination: one part online, due to the rules of physical distances and other restrictions imposed during COVID- 19. In the other part of data collecting students were given opportunity to fill out the questionnaire during their time spent on the faculty. Self-created questionnaires were posted on platforms generally used for teaching, MS Teams and Moodle, during spring semester 2021, when combined teaching was conducted. Research has shown that students and professors have adapted well to online teaching, which they claim is of better quality than traditional, but they do not consider it the best way of teaching. It also showed that online teaching increased the level of engagement and stress among professors, in contrast to students who stated that they spent less time on online teaching and obligations than during work in the traditional way. This relevant research focuses on the advantages and disadvantages that the online way of working has brought in the educational process. The results and recommendations can be used to eliminate all shortcomings in time, so that in the following periods, if another lock down hap-*

pens due to unfavorable epidemiological situation, the educational process can be performed better.

Key words: *higher education, COVID- 19 pandemic, online teaching, traditional teaching, combined teaching.*

JEL classification: *I21.*

INTRODUCTION

The COVID 19 pandemic has forced the entire world to change its routine and habits, that is, to continue living by fighting an invisible enemy. One of the most important social areas - education and higher education institutions as key institutions of higher education, managed to adapt to the requirements of the “new normality” imposed by the fight against the virus. What was most important, the educational process was not stopped, regardless of the fact that the educational process took place in completely different conditions, online, unlike the traditional way of teaching in classrooms. Communication between professors and students took place only through online platforms, without face-to-face communication. The COVID-19 virus pandemic has tested the extent to which academic professors and students are willing to adopt and use these technologies during online learning (Allam, Hassan, Mohideen, Ramlan, & Kamal, 2020). The only way to reduce contact, during the prohibition measures prescribed by those responsible for the protection of the health of the population, which had to be respected by all public and private higher education institutions, was online learning. The most responsible in educational institutions had to take into account many preconditions such as internet speed, coverage, insufficient experience in dealing with online platforms, lack of procedures for assessing learning outcomes and assessment, and converting curriculum from offline learning to online. Some research shows that students and academic staff discover unexpected facts about each other during physical and social distance, such as their lecturers’ own limits and limitations, as well as their inability to use technology and their inability to use online time properly (Philippe, Schiavio, & Biasutti, 2020). This paper will begin by recalling the circumstances during the outbreak and duration of the COVID-19 pandemic, focusing on a private higher education institution that had all the technical and technological prerequisites for online teaching and examining the opinions and experiences of its students and academic staff. The subject of the research is qualitative proof that online teaching during the COVID-19 pandemic enabled the unhindered maintenance of the educational process, but that neither students nor professors consider this way of teaching the best solution. The aim of the research is to prove through current research that with the many advantages that “online education” has brought, it has allowed students and professors to increase their obligations, and thus greater stress during classes. The limited number of studies done so far on this topic reinforces its importance. The social goal of the research is to try to focus attention on the advantages and disadvantages that the online way of working has brought in the educational process. The results could be used in order to eliminate all the shortcomings that may arise in the future periods, in case of eventual necessity for lock down due to unfavourable epidemiological situations and provide conducting of better educational process.

The general hypothesis that this paper proves is: students and professors have adapted well to online teaching, which they claim is of better quality than traditional, but they do not consider it the best way to teach. The paper also contains four special hypotheses:

1. Online teaching is of better quality than teaching conducted in the traditional way before the pandemic.
2. Students and professors have adapted well to all the challenges of online teaching.
3. Online teaching has increased the level of stress and engagement of professors and students.
4. According to students and professors, the best way to teach is a combined way.

Through a review of the literature and methodology, to the results and discussion of them, in conclusion, this paper will show all the advantages and disadvantages of online learning according to the surveyed students and professors, as well as suggestions for possible future research.

LITERATURE REVIEW

The World Health Organization (WHO) declared the election a global pandemic of COVID-19 on March 11, 2020. The term “pandemic” is defined as “an epidemic that occurs worldwide or over a very wide area, crossing international borders and usually affecting large numbers of people” (Doshi, 2011). The virus was first discovered in December 2019 in Wuhan, China, and caused a lasting pandemic (Hui, Azhar, & et al., 2020). The first case was discovered on November 17, 2019 in Hubei, China (Ma, Zhang, & et al., 2020). The crisis caused by the corona virus has quickly changed some established patterns, habits and procedures in our lives, and at the same time there are new and different needs of the general public in terms of information in crisis situations (Matijević & Mandarić, 2021).

In Bosnia and Herzegovina, the first case of coronavirus was recorded in the entity of Republic of Srpska, March 5, 2020. As early as March 10, the Government of the Republic of Srpska issued a proclamation that all schools and higher education institutions were to be closed for twenty-one days. As of March 30, a ban and restriction on movement and work, as well as all types of public gatherings, will be introduced, and this measure will remain in force until April 13. The Republic Headquarters for Emergency Situations only extends the adopted measures, until November 2, when it returns elementary and high school students to school, without restricting the manner of teaching at higher education institutions. Most of the faculties and colleges have opted for combined teaching, that is a combination of traditional and online teaching. Online teaching was the solution and the new “normality” of the educational process. New communicative models emerge and become a new normal state of mind (Babić, Muhić, & Tica, 2021). The quality of teachers and their knowledge of the subject remained the same, the quality of students and their interest in the teaching content of a particular subject also remained the same, the interest of the educational authorities remained the same because there is no record of rapid curriculum change. The only thing that has changed is the communication channel and it has suddenly become clear how enormous and significant a factor this is (Halilović, 2020). The information soci-

ety is a force that has changed many aspects of the way we live today (Oliver, 2002). Thanks to it, our culture has become technological and it requires the use of technology at home, at work and at school (Alexander, 1999). Through the Internet, and especially the application of WEB 2.0, access to new forms of communication and knowledge formation is provided outside formal educational institutions (Goldie, 2016). Online teaching tools played a crucial role during this pandemic, helping schools and colleges facilitate access to the teaching process during the period of closure of educational institutions (Subedi, Nayaju, Shah, & Shah, 2020). All this influenced the sudden transition to online teaching, after the proclamation of the COVID-19 pandemic, to be as painless as possible. However, this transition opened a number of questions about the advantages and disadvantages of this way of learning and teaching, about the problems and successes of students that they achieved by following online classes. The results of research conducted in the world show that there is no statistically significant difference between the success of students who attended traditional and online classes (Said, 2021). However, some research shows that students are not interested in online learning (e-learning) because it is less enjoyable than traditional learning (Hasan & Bao, 2020).

Assessment and comparison of the performance of students who attended traditional classes before the pandemic, and online and combined during the pandemic, which was the main goal of the research conducted at a private higher education institution in Banja Luka, showed that students achieved the best success in traditional classes. This is shown by the results of the research, where it is noticeable that the performance of students is better in traditional teaching compared to online and combined teaching, and this can certainly be explained by the fact that students are accustomed to this way and method of work (Išaretović, Đurović, & Agić, Impact of the Covid-19 pandemic on higher education: The case of Republic of Srpska, 2021).

The research of Norwegian scientists is one of the first studies that investigated the attitudes and opinions of professors about online teaching during the lockdown period, in a study conducted on 303 students and 56 teachers. Short time and lack of learning resources stand out as key obstacles to the transition to online teaching. Students and teachers pointed out the lack of sufficient practice in online teaching, but both quickly adapted and showed a positive attitude towards change (Hjelsvold, Bahmani, & Loras, 2020).

This research was conducted in a private higher education institution that had all the technical and technological prerequisites for online teaching established even before the pandemic. The educational process during the pandemic, its advantages and disadvantages from the point of view of professors and students is the main subject of the research.

METHODOLOGY

Research methods, techniques and instruments

From the data collection method, it was used the test method with the survey technique. Out of the general scientific methods, it was used the method of statistical data processing, i.e., processing of collected numerical data using the statistical package SPSS and their tabular and graphical presentation. From the research techniques, it was used a survey, factual, according to the type of data collected by this technique

and focused on the attitudes and opinions of respondents. Data collection was conducted in combination, one part online, due to the rules on physical distance and other restrictions imposed during the COVID-19 pandemic, while the others were given the chance to fill out a questionnaire during their stay at the faculty. Self-created surveys were posted on platforms that were normally used to conduct online classes of MS Teams, Moodle, during the summer semester of 2021, when classes were conducted in combination. A questionnaire for students and professors was created and offered 12 closed-ended questions using the Likert assessment scale¹. Respondents included in the research were guaranteed anonymity, which contributed to obtaining honest data that were analysed in the paper. The questionnaire consisted of two parts: the first part with which were collected demographic information about the respondents and the second part which referred to the information about the subject of the research. The entry and processing of the obtained data was done in *IBM SPSS Statistics Version 26*. (Statistical package for social sciences used for data processing and analysis). Speaking of the sample, a total of 226 students and 26 professors from Banja Luka College participated in the survey. All students used online learning platforms and were able to make a comparison with traditional classroom learning, and a combined way of working (online and face to face). After the survey, the obtained data were coded and entered into the database for students and professors in the SPSS program. A descriptive analysis, frequency analysis and crosstabs of the obtained answers were performed, with the determination of dependent and independent variables, set through the subject and goal of this research.

EMPIRICAL DATA

Sample of respondents

The demographic information collected by this research, when it comes to the student population, is quite uniform when it comes to gender, of which 226 total respondents, 47% are men, while 52.7% are women. The highest number of second-year students is 38.9%, and the lowest number of graduates is 12.8%. There are slightly more female professor respondents, 54.2%, as opposed to 45.8% of male professor respondents. When it comes to age, the highest percentage is of professors between the ages of 40 and 60, 54.2%, the number of those between the ages of 30 and 40 is significantly lower, 25%, and the lowest number of professors is over 60, 20.8%.

Survey questions

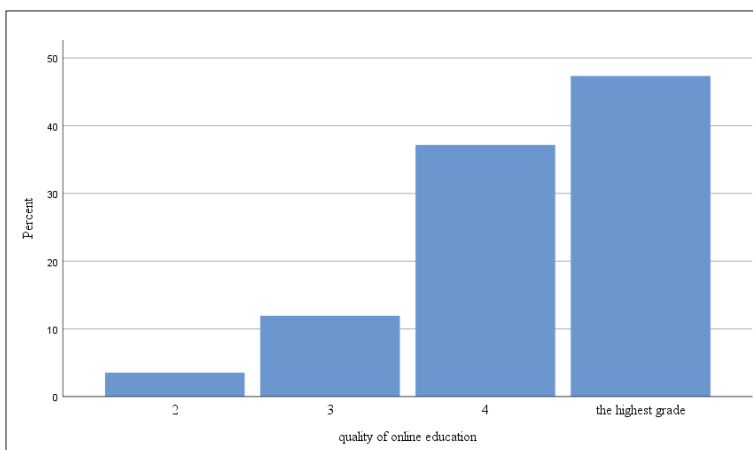
The answers of the professors and the students to the question with which they taught / listened to distance learning do not differ too much; both used laptops the most, with professors that percentage is close to 80%, and with students 58%. What is interesting and can be attributed to the media habits and media literacy of professors and their students, is the fact that this research shows that none of the professors mentions a mobile phone as a means of teaching, while 15% of students said that in this way followed classes. Another piece of evidence in support of the claim that the younger generations use

¹ Likert scale consist of series of statements that express positive or negative attitude towards certain phenomenon. The respondent expresses his/her degree of agreement or disagreement, satisfaction or dissatisfaction with the given statement on an odd scale from 1 to 5.

new media without problems and that they are “digital natives” unlike professors, most of whom are in their 40s and 60s, who are “digital newcomers” who do not have these skills (Išaretović, 2017). As Prensky explains, “today’s students represent the first generations to grow up with the new technology. They have spent their entire lives surrounded and using computers, video games, digital music players, video cameras, mobile phones and all other digital age toys and tools. Today’s average college students have spent less than 5,000 hours of their lives reading but over 10,000 hours playing video games (not to mention 20,000 hours of watching television). Computer games, e-mail, the Internet, mobile phones, and instant messaging are an integral part of their lives” (Prensky, 2001).

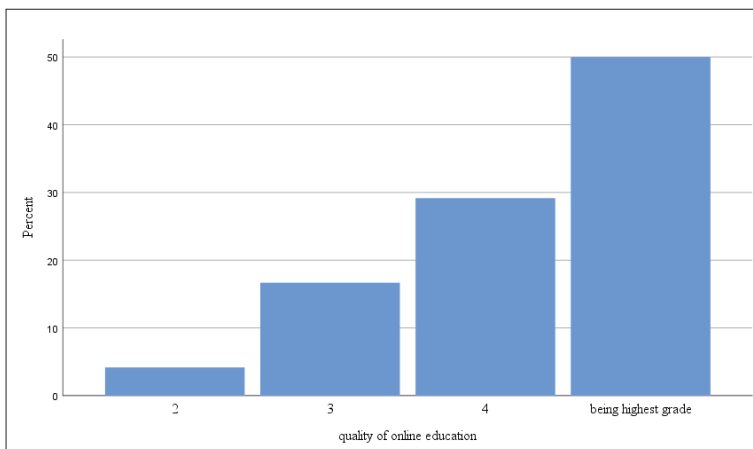
Evaluating the quality of online teaching during the pandemic, students, as well as professors, in the highest percentage decided for the offered option under number five, high quality, in the percentages of 47.3% and 50%. (Charts 1 and 2).

Chart 1. Quality of online education (Students)



Source: Author's work

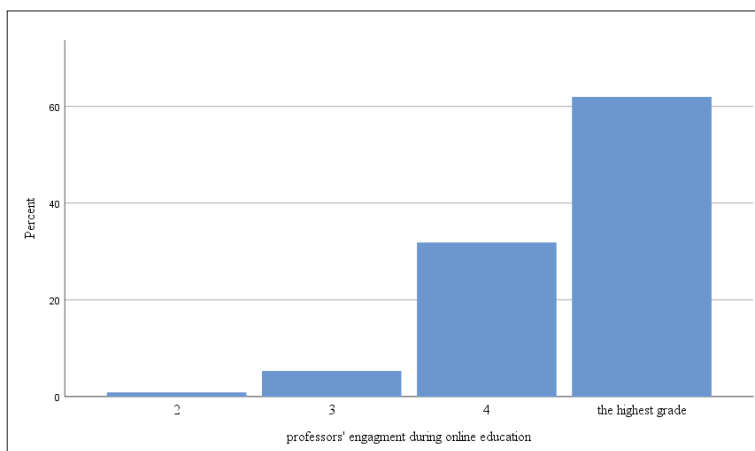
Chart 2. Quality of online education (Professors)



Source: Author's work

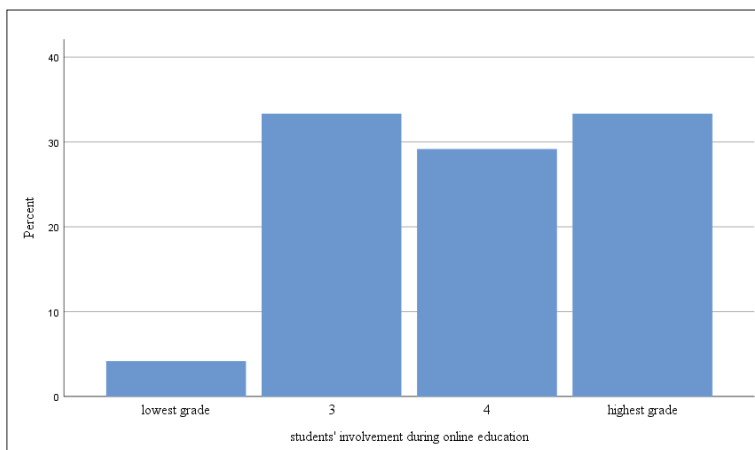
Students believe that the engagement of their professors was at an extremely high level, as many as 61.9% of them. In contrast, professors rated the involvement and engagement of students in an equal percentage, 33.3% rated them with grades 5 and 3, and 4.2% of professors decided on the lowest level of engagement, i.e., grade 1. (Charts 3 and 4)

Chart 3. Professors' engagement during online education (grade from students)



Source: Author's work

Chart 4. Students' involvement during online education (grade from professors)



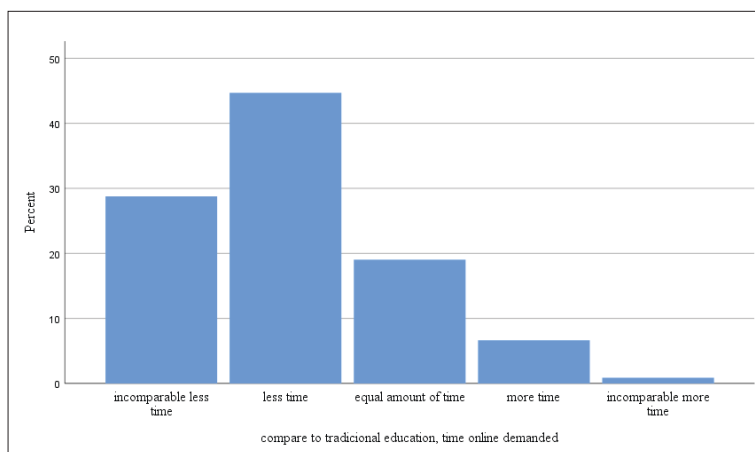
Source: Author's work

The largest number of professors and students partially agree in the claim that online teaching is of better quality than classroom teaching, professors in the percentage of 62.5%, and students in 38.5%. While none of the professors fully agree with this statement, 12.4% of students have no dilemma about it, and 7.5% of students and 4.2% of professors answered that they cannot evaluate this statement.

Regarding the adjustment to online teaching, professors and students are unanimous that half of the professors and 36.3% of students have adjusted. 35.4% of students and 41.7% of professors answered that they have fully adapted to the new reality in the educational process. None of the professors answered that they did not adapt, or I do not know, unlike the students of whom 12.4% opted for one of these two answers.

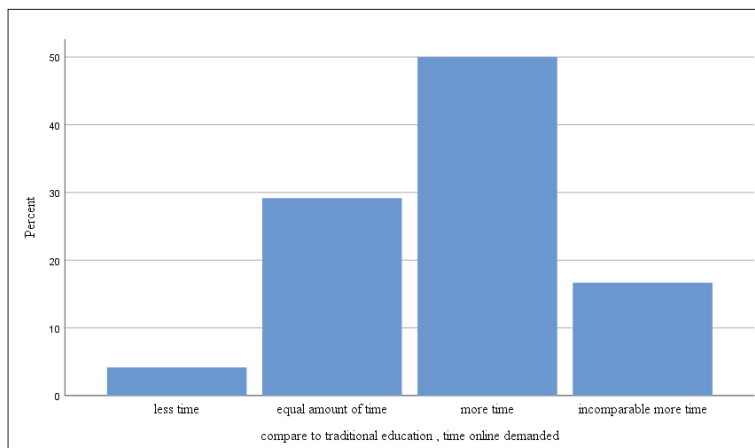
The question to which professors and students gave completely opposite answers is the question of assessing whether distance learning took them more or less time from classroom teaching. The highest percentage of students 44.7% answered less time, and 28.8% of them incomparably less time, while half of the professors answered more time, 29.2% equally time, and 16.7% incomparably more time. None of the professors answered incomparably less time, and only 4.2% less time. (Charts 5 and 6).

Chart 5. Compare to traditional education, time online demanded (students)



Source: Author's work

Chart 6. Compare to traditional education, time online demanded (professors)



Source: Author's work

More than half of the respondents from the student population, 53.1% of them estimated that they were not under stress during online classes, while only 3.5% estimate a high level of stress. A slight level of stress is the most frequent response of teachers in the percentage of 45.8%, 16.7% assessed the average level of stress, while 12.5% answered that they were under stress but could not assess the level.

Citing the main reason for the increased stress, the same percentage of professors, 37.7% state that the cause of that is too many obligations and tasks and the Covid-19 virus and limited movement. Among students, this question confirms the results of the previous one in which they claimed that they did not have increased stress, because 48.7% of them answered that there was no reason for stress, for 16.8% the Covid-19 virus and limited movement are the main reasons for increased stress. Only 15.9% state too many tasks and obligations, 12.4% poor internet connection and only 6.2% problems with the platform through which classes were held. None of the professors mentioned internet connection and problems with the platform as the main reason for the increase of stress during distance learning.

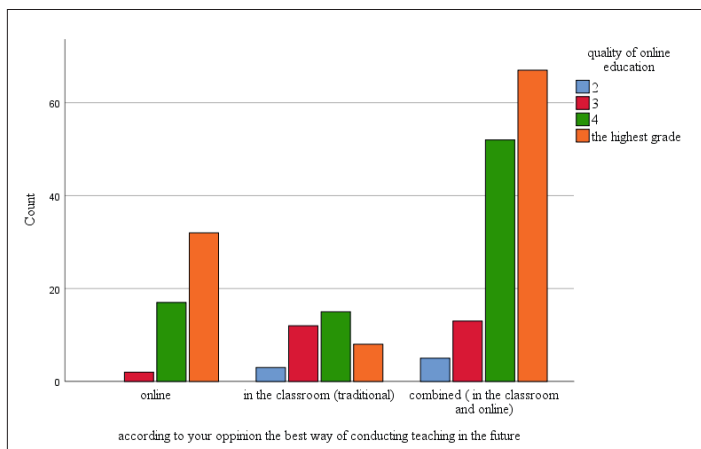
While the largest number of professors, 25%, cite the lack of procedures for conducting online classes and assessing learning outcomes as the biggest problem, the largest percentage of students, 35.4% answer that there were no problems during distance learning. 20.8% of professors opt for this offered answer, and the same percentage believe that the biggest problem is insufficient interactivity with students during online classes.

All respondents are united in the view that the best way to hold classes in the future is a combined way, with professors as much as 87.5% and with students 60.6%. What the analysis of this issue shows, and it is very interesting, is the fact that none of the professors decided for online teaching, and only 12.5% for the traditional way of education. 22.6% of students voted for online teaching, and 16.8% for the classroom, that is the traditional way of educational process.

Crossing Variables

Crosstabulation (crossover/contingency table) is a procedure by which it is examined the relationship between variables (Živković, 2015). When crossing the variables, the authors of the study also calculated Pearson Chi-Square, a test that calculates whether the crossing of the selected variables is statistically significant. Comparing students' answers to two important questions, to assess the quality of teaching and to determine which way of teaching is best in the future, this research shows that students who rated the quality of online teaching with the highest grade said in favour of a combined way of teaching, and in a slightly lower percentage for online teaching, while students who rated the quality of online teaching as four, also in the highest percentage for the combined method of teaching. (Chart 7).

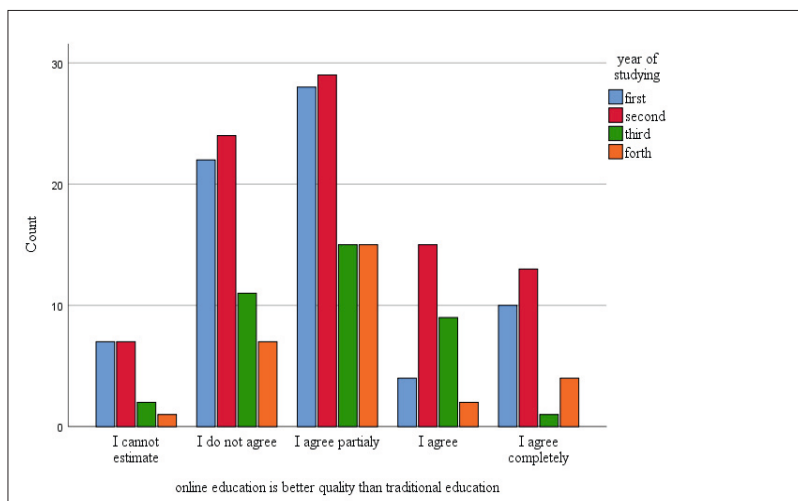
Chart 7. Quality of online education / Way of conducting future teaching



Source: Author's work

By crossing the invariant variable - year of study, with a variable - claiming that online teaching is of better quality than traditional, it is shown that first and second year students in the largest percentage partially agree with this statement, while only second year students agree and agree without hesitation. The students of the third and fourth year, also, in the largest percentage partially agree, but their disagreement is also visible, especially the students of the third year, of whom the smallest number stated that they completely agree. Thus, this research shows us that students who had more experience with the traditional way of teaching have successfully adapted to the online variant, but do not consider it a better way than the traditional way of teaching. (Chart 8).

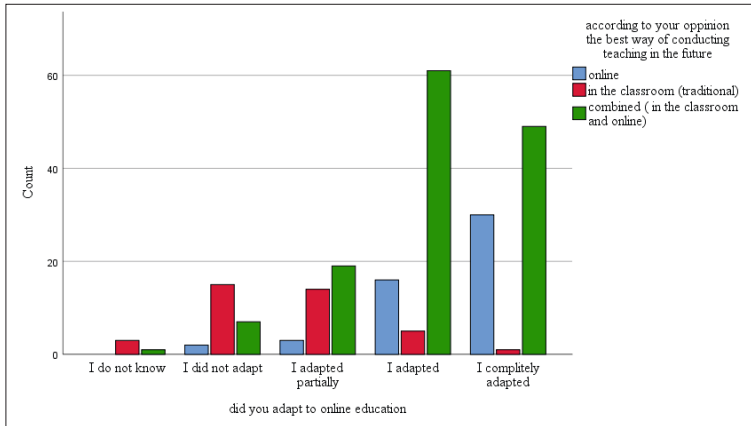
Chart 8. Year of studying / Online education better than traditional



Source: Author's work

This research shows this through the answer to the survey question - which way of teaching is considered the best for future times. Those who have declared that they have adapted and fully adapted to online teaching are in favour of combined teaching in the future, as opposed to those who have stated that they have not adapted and consider the traditional way of working the best for future times. (Chart 9).

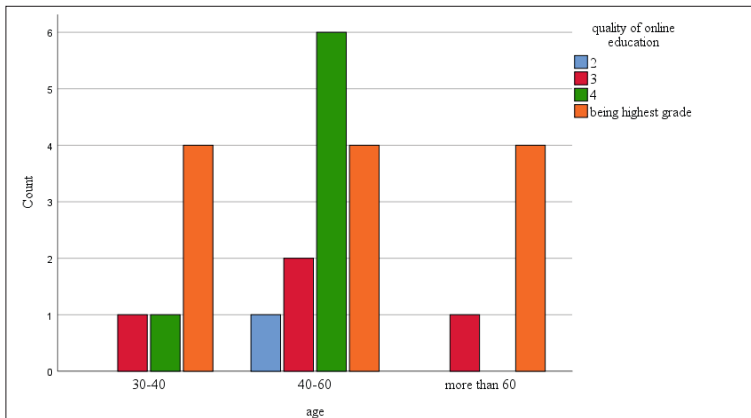
Chart 9. The way of conducting teaching / adaptation to online education



Source: Author's work

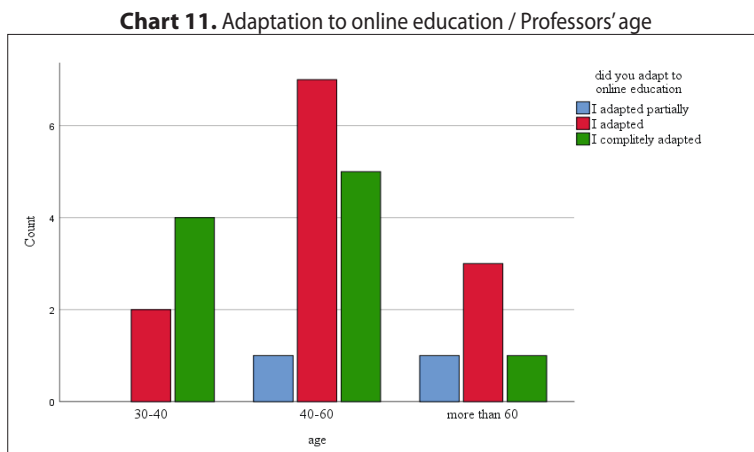
When it comes to the opinions and attitudes of professors, this research shows that age affects the adaptation and acceptance of online teaching, but not in the way that would be expected. Comparing these two variables, this research shows that the highest grades were given by the youngest teaching population and the oldest, which was not expected given that the oldest population found it most difficult to adapt to a completely different reality during classes. Professors aged 40 to 60, which is the largest number in the sample, rated the online process as four. (Chart 10).

Chart 10. Quality of online education / Professors' Age



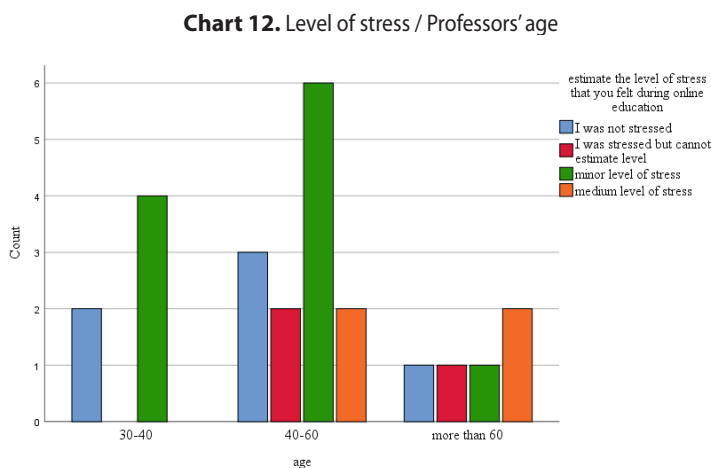
Source: Author's work

In response to the question whether only the youngest professors have adapted to online teaching, they answered without hesitation that they have completely adapted, while the largest number of middle-aged and older professors answer only in the affirmative to this survey question. (Chart 11)



Source: Author's work

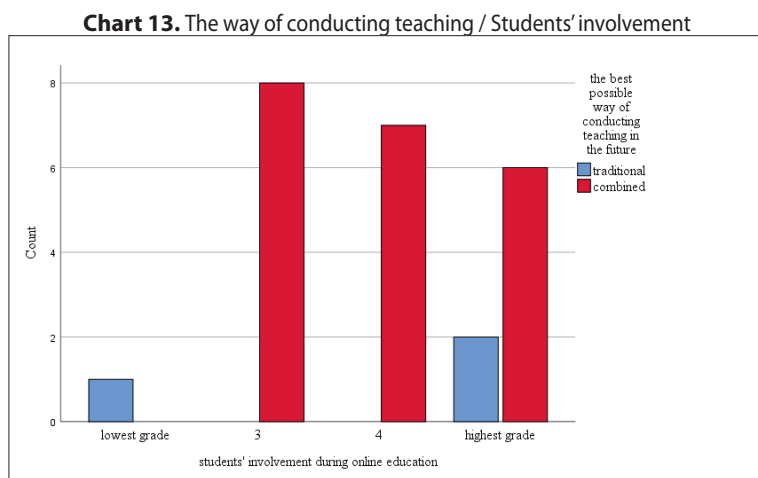
A similar situation is shown by this research during the crossing of stress levels and the age of the professor. The minimum level of stress is noticeable in the youngest and middle generation of professors, while the average level of stress is most intense in professors over 60 years of age. (Chart 12)



Source: Author's work

It is noticeable that the professors who rated the student engagement with the highest grades (3,4,5) were unanimous for the combined way of working in the future, except for a small percentage who rated online teaching with a grade of 5 (highest

grade), but believe that traditional teaching would also be a good choice. Professors who rated the work of students with the lowest grade believe that the traditional way of working is the only right way to educate students. (Chart 13).



Source: Author's work

RESULTS AND DISCUSSION

Proving the first special hypothesis - online teaching is better than teaching conducted in the traditional way before the pandemic, the answers of respondents were used to assess the quality of teaching during the pandemic, the question Assessing the quality of online teaching during the pandemic, students and professors offered option number five, high quality, in percentages of 47.3% and 50%. Expressing an opinion on the claim that online teaching is better than distance learning, most professors and students partially agree in the statement that online teaching is better than classroom teaching, teachers in the percentage of 62.5%, and students 38.5%. While none of the professors fully agree with this statement, 12.4% of students have no dilemma about it, and 7.5% of students and 4.2% of professors answered that they cannot evaluate this statement. This confirmed the first special hypothesis.

Second special hypothesis - students and professors have adapted well to all the challenges of online teaching is confirmed by this research, because professors and students are unanimous in the answer that they have adapted, half of the professors and 36.3% of students. 35.4% of students and 41.7% of professors answered that they have fully adapted to the new reality in the educational process. None of the professors answered that they did not adapt, or I do not know, unlike the students, of whom 12.4% opted for one of these two answers.

The third special hypothesis - online teaching has increased the level of stress and engagement of professors and students. This research confirmed partially. Students believe that the engagement of their professors was at an extremely high level during online classes, as many as 61.9% of them. In contrast, professors rated the involvement and effort of students in an equal percentage, 33.3% rated them with grades 5 and 3, and 4.2% of professors opted for the lowest level of engagement, i.e., grade 1.

Also, the attitudes obtained by this research are contradictory when it comes to the answer to how much time online teaching took away from them compared to the traditional way of working. The highest percentage of students 44.7% answered less time, and 28.8% of them incomparably less time, while half of the professors answered more time, 29.2% equally time, and 16.7% incomparably more time. None of the professors answered incomparably less time, and only 4.2% less time. Obviously, the results show increased engagement and more time used to prepare and conduct online classes for professors, and thus stress levels, while students spent less time and had less engagement and stress during the teaching period in a pandemic. The answers that also confirm these results are the answer to the question to state the main reason for the increased stress. Identical percentage of professors, 37.7% state that the cause of that is too many obligations and tasks and the Covid-19 virus and limited movement. 48.7% of students answered that there was no reason for stress, for 16.8% the Covid-19 virus and limited movement are the main reasons for increased stress.

The fourth special hypothesis - according to the opinion of students and professors, the best way of teaching is the combined way, this research confirmed. Professors and students are united in the view that the best way to hold classes in the future is a combined way, with professors as much as 87.5% and with students 60.6%. What the answers of the respondents show, and it is very interesting, is the fact that none of the professors decided for online teaching, and only 12.5% for the traditional way of education. 22.6% of students voted for online teaching, and 16.8% for the classroom, i.e., the traditional way of educational process.

CONCLUSION

Proving completely three set special hypotheses and partial confirmation of one special hypothesis, this research also confirmed the general hypothesis, which claims that students and professors have adapted well to online teaching, which they claim is better than traditional, but they do not consider it the best way to teach. The research is significant primarily because of the small number of this type of research that shows the first experiences and opinions of academic staff and students gained during online teaching. Its limitation is a relatively small sample, and certainly such or similar research should be done at the entity level, i.e. to include all or most of the institutions of higher education. The biggest contribution of this research is the indicator that online teaching for professors was much more stressful and demanding than for students and that attention should be directed in that direction. Citing the main reason for the increased stress, most professors state that the cause of that is too many obligations and tasks, and the Covid-19 virus and limited movement. half of the professors answered more time, and 16.7% incomparably more time (Allam, Hassan, Mohideen, Ramlan, & Kamal, 2020). The biggest problem is the lack of procedures for conducting online classes and assessing learning outcomes, which was a serious problem for them, given that the design of curricula did not in any way adapt to a completely new way of working and evaluating student engagement. It is necessary to modernize the curriculum as soon as possible and make it easier for professors to plan, conduct and assess in accordance with the requirements of online or blended teaching. Some professors had little experience and training for online education before the COVID pandemic, which posed an additional challenge due to

a lack of experience in online learning, as shown by research conducted worldwide (Bao, 2020).

Unlike some research conducted among the student population that showed higher levels of stress and anxiety, both the consequences of lockdown and the pandemic (Wang & Zhao, 2020) this research shows that students did not have major problems and stress. The main problem is the pandemic and the inability to move, and only then too many tasks and obligations, and poor internet connection. The unfamiliar environment of online learning from home through various applications was not a big problem for the respondents of this research, but the fact is that some previous research shows that it can affect their final results (Bayram & Bilgel, 2008). It is necessary to equip them with the necessary skills and knowledge about network applications that are necessary for them to move to online learning or combined, for which most of them have declared themselves.

Timely feedback on the professor-student relationship is a very important segment of the learning process. A very important segment of online learning is the availability of assessments and timely feedback to students online (Doucet, Netolicky, Timmers, & Tuscano, 2020). Higher education institutions must adapt their resources to the needs of online learning, i.e., combined work, because the fact is that the COVID-19 pandemic irreversibly changed the learning process and regardless of the further course of the pandemic, there is no return to the situation before the virus appeared.

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POPULATION PERCEPTION OF CREATING THE BRAND OF THE CITY OF OSIJEK WITH AN EMPHASIS IN THE FIELD OF CULTURE

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Abstract: *A city brand should add value to the city and in the process of building one, it is necessary to consider the values and perceptions of internal and external stakeholders, especially the local population. The purpose of the study is to observe the population's perception about the construction of the brand of the City of Osijek with an emphasis on culture. For the purposes of the research, a survey questionnaire was created, and it was conducted among the local population of the City of Osijek. The survey questionnaire consisted of questions related to socio-demographic characteristics of respondents, questions that related to the respondents' assessment of the cultural identity of the city on its heritage and public preferences, and their assessment of the need for branding Osijek. In order to process the research results, a qualitative and quantitative analysis was conducted. The results of the research show that the majority of respondents agree that the cultural identity of the City of Osijek is based on its heritage, while a smaller share of those agree that such an identity is based on public preferences. Therefore, for the successful branding of the City of Osijek, it is extremely important, first, to talk to the local community. Given that the branding of the city is a long-term process, the proposal for further research is to constantly consider the possibility of implementing an appropriate branding strategy of the City of Osijek in the field of culture.*

Key words: brand building, cultural identity, population, City of Osijek

JEL Classification: Z1, M37

INTRODUCTION

According to the American Marketing Association (AMA), a brand is defined as a name, term, sign, symbol, design, or combination thereof aimed at identifying the products or services of a manufacturer or group of manufacturers and distinguishing them from the products or services of a competitor (Kotler & Gertner, 2004, str. 46). In the Republic of Croatia, in the beginning the authors used and wrote the English word

brand next to the brand, but today the name brand has become familiar in the Croatian language. The importance of the term brand in modern times is evidenced by the expansion of its scope, so it is no longer used only for products and services but also for geographical locations / areas such as countries, regions or cities. In that case, the purpose of branding is to make a city recognizable.

It should be noted that in the scientific literature, the terms city brand and city marketing are often used as synonyms, although branding is essentially a narrower term and only part of marketing. From a practical point of view, it is somewhat understandable to equate these terms: brand development and brand management certainly involve marketing activities. Especially in the implementation phase, both branding and marketing use communication with the market and promotional campaigns. Ultimately, both city marketing and city branding aim to raise the quality of a city (Vuignier, 2016, p. 7). The notion of the destination brand refers to tourist-oriented cities / regions, which in terms of branding focus only on the preferences of potential tourists, ignoring the values of the local population (Jelinčić, Vukić, & Kostešić, 2017, p. 117). For the purposes of building the city's brand, the values and perceptions of all stakeholders, both internal and external, and especially the local population, are considered. In modern times, city branding is no longer a term reserved for tourist-oriented cities, so the general question instead of "whether to brand a city" has become "how to brand a city" (Hanna & Rowley, 2011, p. 458).

In modern times, branding is extremely important for the differentiation of cities. Modern mayors and city administrations manage cities as companies that offer their products and services, want their cities to be attractive to investors, a popular place for tourists to come, a desirable place to study and for customers around the world to buy products produced in that city (Mihevc, 2015, p. 198). Therefore, it is important to explain in more detail the specifics of branding the city and emphasize the power of the brand, which will be discussed in more detail below. When branding cities, classic marketing models and procedures are applied in a certain area, and the goal is to create and increase its economic value. A parallel can be drawn between branding a city and creating a corporate brand: a strong corporate brand requires thorough work on the image in terms of general theme, label, graphics, logo, recognizable colors and investment in advertising (Mihevc, 2015, p. 198). The same goes for cities, because without thorough work, proactive thinking, cooperation and synergy between stakeholders and representatives of the city administration, the value of the city will not increase.

It is important to point out that the scientific literature suggests that cultural and creative industries can certainly be the basis and opportunity for branding the city, but if representatives of local government and cultural institutions, as decision makers and cultural policy makers, consciously initiate this process. The difficulty is that previous research shows that there is no single solution or recommendation that would be uniquely applicable in this process. Although history, heritage and local resources are always the basis, the specific institutional organization and the integration of the creative sector in a particular society and space are crucial (Chapain, Lange, & Stachowiak, 2013, p. 124).

The goal of branding is to highlight the unique attributes of a city and thus make that city recognizable, different and more attractive than others (Skoko, Brčić, & Gluvačević, 2012, p. 10). Therefore, it should be noted that the concept of branding

is increasingly present in the management of cities. In addition to the fact that cities often try to be interesting to as many tourists as possible, a positive image of the city makes the city a more pleasant place to live for its inhabitants and can attract potential investors, entrepreneurs, media, cultural, sports, educational and other institutions as well as other stakeholders.

CREATING A CITY BRAND

To represent the city with all its qualities and to attract potential visitors so it could be possible to develop a touristic component it is needed to create and promote the recognizable city brand.

Conceptual definition of a brand

A mark or a brand can be formally the same because they represent a mark, a trademark, a recognizable, but in practical use, there are nuances that refer to the context in which these words are stated (Pavlek, 2017, p. 62). According to Jakovljević (2000, p. 26), a brand consists of three key elements, namely a sign, a name and a slogan. A good brand simplifies the purchase decision for the consumer and guarantees a certain level of quality. The brand should be understood as something more than the product and / or service itself. The brand is primarily a name, a symbol of identification, and a series of added values that simply promise the consumer both functional and psychological benefits of a product or service: its usability, price, packaging, taste, smell, color, design, associations and advertising (Kenneth & Maas, 1995, p. 16). Therefore, a brand is a combination of various factors that give a certain product and service an identity and which at the same time makes it different from other products and services. A branded product or service differs from other similar products and services in that it appears more attractive to consumers than other competing products and services.

Branding increases the value of that city in the market through the increased number of visitors and their consumption. A brand is a set of positive associations that a city evokes in the minds of people; the first thing they think of is the very mention of its name (Setayesh & al., 2016, p. 316). However, there is an important difference, and it is contained in the fact that the marketing process is oriented to all activities of creating and realizing exchange that will on the one hand to meet the needs and desires of consumers, and on the other hand to realize profits and other goals.

Ultimately, it can be said that city marketing refers to the application of marketing instruments to geographic locations, such as cities, towns, regions, and communities. These marketing instruments are supported by a user-oriented philosophy for creating, communicating, delivering and exchanging city offerings that have value for the consumers of that city and the city community in general. Unlike overall city marketing, a city brand is a symbolic construct that should add value to that city. A city brand is "only" a sign that identifies a city and evokes psychological and emotional associations that permeate that city with cultural meanings. Consequently, city branding is a process of building a city brand and one of the instruments of city marketing management (Eshuis, Klijn, & Braun, 2014, pp. 153-154).

Brand history

The beginnings of branding are associated with the first labeled products in ancient China, ancient Greece, and the Roman Empire, which, like Vesuvius, wine bottles found in Pompeii in the 1st century, bore a stamp thus becoming a kind of proto-brand (Dabo, 2012, pp. 17, 173). From the earliest history, products have been labeled in a certain way, which has become especially important at a time when products have started to be sold outside the place of production, referring to fairs outside cities, or in some other regions and countries. In the middle ages, guild associations began to create their own signs that could only be used by their members, and it was precisely such signs that guaranteed a certain level of quality.

Systematic branding is associated with the beginning of the 19th century when the industrial packaging of products began, and it was industrialization that transferred to factory production many goods, which were created in the home industry. At the time, the signs indicated the origin of the product. The main characteristic of such signs was their intelligibility, but also their recognizability, which was extremely important at a time when there was complete illiteracy. When sending their products to the market, factories would mark the products with their trademark and thus create the first brands.

It is possible to talk about the beginning of systematic branding in its full meaning, i.e. in the sense of what branding is considered and known today, only after the Second World War. Industrial military capacities developed during the war to meet military needs shifted to meeting the consumer needs of the “common man”, so there was a wave of new products and the need to differentiate such products and highlight the comparative advantages that can attract consumers. At that time, the economic power of the average citizen grew, shopping thus became a trend, and the mass media penetrated into almost all spheres of the public.

Thus, the beginnings of systematic branding date back to the time when the market began to be flooded with mass-produced products between which there were no clearly defined differences, and direct sales no longer met the needs of companies (Dabo, 2012, p. 173). Competitive branding has become an imperative of the industrial era. Along with strengthening the reputation of various factories, he had to strengthen the image of the product, that is, what sets it apart from other products, which makes it different and better than others do. The trend of the need to differentiate from the competition continued in the post-industrial era, in which intensive branding affected not only traditional and other areas, but also tertiary and quaternary activities, of which attention will be focused on branding cities.

Branding of cities

The logic of the necessity of branding products and services is increasingly being transferred to the branding of cities, so that they can be differentiated from each other, especially in the target markets. In fact, the development of city branding has been inspired by the successful application of branding in the field of product and service marketing (Kavaratzis, Warnaby, & Ashworth, 2015, p. 7). City branding is used to achieve social, economic and political goals. Therefore, branding the city should be viewed as a strategic response to economic trends and social needs of the population. In general, the process of branding a city refers to strengthening local identities and

creating useful images in order to achieve economic and social benefits. This means that the use of branding techniques and tools creates preconditions for optimal use of competitive advantages of a city over others, where communication practices infrastructure and networking of urban systems and subsystems form a platform for the implementation of this process (Primorac, 2018, p. 397).

At the heart of a city's branding consideration is always increasing the quality of that city through increasing competitiveness and increasing profits. City branding will achieve positive value when visitors and tourists respond positively to the city and in the way it is promoted in the market. However, for the successful development of the city's brand, it is important to talk to the local community, i.e. the population. Branding experiences success especially when people are given the opportunity to experience it through active participation (Glinska & Florek, 2013, p. 276).

It is especially important to emphasize the time dimension of the city's branding. City branding is a long-term process of building an image that should represent the realistic image and character of the city being branded. Designing an appropriate branding strategy and its thorough implementation requires a lot of time, effort, patience and knowledge. If done properly, the long-term tangible and intangible benefits will outweigh the costs.

Brand building process

The main goal of branding is to create a "story" behind a brand, position it in the minds of consumers and create the desired relationship with them. Therefore, branding is a communication-marketing process in which it defines what an entity (product, service, person or city / region) is, what distinguishes it from others, what its advantages are and what value it represents to the user. It is the process of highlighting, attracting attention, creating emotions, persuading, giving soul to that subject and finally gaining a share in the consciousness of consumers (Skoko, Brčić, & Gluvačević, 2012), (Matejčić, 2007).

The process of creating a brand should be led from the highest place, i.e. from the highest hierarchical level, mostly to ensure unity in goals and implementation. Special skills are needed if efforts are made to secure support, guidance and funding from the highest possible level and to exclude policy from the branding process at the same time (Mihevc, 2015, p. 199). Cultural management is part of public policy, and branding is not beyond that, so it can be said that branding, as part of public policy, while respecting the strategic perspective, should seek to identify and exclude short-term political interests. Politicians often want to achieve rapid effects during their term, all with the aim of political (self) promotion, which is in stark contrast to the long-term branding process and results that are not visible immediately, but in a certain period.

The role of cultural policy in the branding process is important in not only initiating and managing the brand but also in mitigating possible negative consequences. Namely, the scientific literature mentions the possibility of the risk of urban redesign in terms of creating clichéd environments and social divisions, but these are precisely the negatives that cultural policy at the city level can effectively avoid (Prilenska, 2012, p. 15).

Experts and all city residents should be involved in the branding process. It is extremely important to sensitize the domestic public regarding the need for branding,

as it is impossible to create a brand of a city (or tourist place) if the local population resists in the process. The condition for their contribution and acceptance of such a brand is a firm belief in the economic benefits for each of them and their descendants. A belief in the benefits for the whole community, and at the same time, it is one of the most important, difficult and demanding tasks and procedures heterogeneously with different thoughts, attitudes, and interests (Mihevc, 2015, p. 199).

It is not easy to achieve the essence of effective branding, because each city makes a unique system with complicated subsystems, and therefore it is important that experts outside the city for which branding is done be involved in the entire process of branding the city as Mihevc points out (2015, p. 199). One of the reasons for the participation of experts in this process lies in the fact that it is necessary to avoid subjectivity and achieve the most realistic basis for the branding process.

According to Lončar (2018, p. 13), the process of building a city brand once again emphasizes the importance of strategic planning because it involves preparing and building a brand, as well as building a brand and defining key strategies and implementing a city brand. In the phase of preparation for building a brand, it is necessary to identify the advantages and strengths of the observed city. As Lončar states (2018, p. 10), the goal is to recognize his unique attributes, in order to make them more recognizable, different and more attractive than the others.

Attributes commonly considered as potential components of a city's brand are cultural events (e.g., exhibitions, conferences, concerts) that are attractive to the public and have the potential for employment and / or entrepreneurial business, then unique cultural heritage, availability of natural resources and benefits and the uniqueness of tourist attractions (Pinar, Igneci, & Tutuncuoglu, 2017, p. 26).

After identifying and selecting attributes, brand building involves creating a shared vision of all key stakeholders, from the local public to experts and representatives of institutions. Building a brand means creating a common vision, common goal and strategy as well as an action plan. The process of creating a city brand results in major changes, which may include changes in the urban plan, conversion of certain business premises, environmental protection, cultural events and more. Once created, the brand needs to be continuously implemented and further developed during implementation, in which the most important place is occupied by marketing communication. Namely, it is necessary to create preconditions for the selected attributes to communicate effectively about a city. In doing so, truthfulness is crucial to the success of branding and must not be compromised with anything. Creating a fake brand is always unsuccessful and short-lived. Additionally, communication must be based on messages that are delivered in a simple, easy-to-remember way, so that they are easily recognizable in the multitude of all other messages to which recipients are constantly exposed. In addition to being simple, Mihevc (2015, p. 200) emphasizes that messages should motivate the recipient to take action.

The purpose of communication is to inform the market about what a city is like, what it offers, what is specific to it. The most common and most impressive message about a city reaches the public through a slogan, which in a few words provides the essence of the brand. Based on the slogan, the recipients of the message create an image and perception of a place without perhaps knowing a lot of data and information about that place (Mihevc, 2015, p. 200). Slogans contain messages based on which the

public creates and shapes their opinion, so they can increase the value and importance of the city's brand.

Proper selection of communication channels is especially important for the success of communication. The Internet is a very powerful channel and its application is certainly one of the main trends in city branding (Pirnar, Igneci, & Tutuncuoglu, 2017, p. 28). The development of the Internet itself, from static, one-way websites to dynamic interactive social networks, has certainly played a significant role in its application in city branding (Vukman & Drpić, 2014, p. 144). The Internet has certainly reached a level where it is changing the methods of communication and thus changing the brand development strategy.

When it comes to other communication channels, public relations should also be mentioned. Public relations are often equated with publicity, but publicity refers to unpaid forms of promotional activities, while public relations are not (Šutalo, 2017, p. 24). Namely, speeches, news, written materials such as brochures, audio-visual materials such as films, materials, and means related to identity are considered the main means of public relations (Šutalo, 2017, p. 54). Public relations require careful planning and management, and in the branding process, they can be extremely important.

EMPIRICAL PART

To visualize the perception the citizens have of what is or what is not the city brand, the research was conducted by the survey questionnaire which will show relevant results of the city brand of Osijek.

RESEARCH METHODS

149 inhabitants of the city of Osijek participated in the research, of which 53 (35.6%) were male and 96 (64.4%) female were aged 18-85. Most participants live in households with a monthly income of 10,000 HRK or more (32.9%), while the smallest number of participants live in households with incomes of up to 2,000 HRK (7.4%). In addition, the largest number of participants have a completed tertiary or quaternary degree of education (53%), while the smallest number of participants have completed a primary degree of education (0.7%). The largest number of participants is employed (68.5%) and is in a marital / extramarital union (55%). 24.2% of participants have temporary housing in Osijek, while the rest of the participants reside permanently in Osijek.

Research instruments and procedure

The survey method was used in the research, and the instrument created for the implementation of the mentioned method was a survey questionnaire, whose basic questions are the same for all categories of respondents. The level of reliability of the questionnaire sample was examined by the coefficient of internal consistency of the so-called Cronbach alpha. Measurement showed that Cronbach's alpha is $\alpha = .785$ as a result, the used questionnaire is assessed as reliable.

The survey questionnaire for the local population was conducted in writing, as an anonymous online questionnaire. The survey questionnaire for the local population consisted of seven (7) questions related to the socio-demographic characteristics of

the respondents and thirteen (13) questions related to the respondents 'assessment of the city's cultural identity based on its heritage and public preferences, respondents' assessment of the city's branding, for positioning the city in the field of culture and the attitudes of the respondents about city projects in culture.

Questions are formed as closed-ended questions in a structured survey questionnaire. Of the thirteen key questions, six (6) are dichotomous yes / no questions, and seven (7) questions are based on the Likert scale as an interval scale with grades from 1 to 5 offered. Of the seven questions based on the Likert scale, several questions contain sub-questions, so it can be said that ultimately there were twenty-six (26) individual questions based on the Likert scale. The rest of the participants are permanently residing in Osijek.

Research results

In order to examine the perception of the local population about building the brand of the city of Osijek with an emphasis on cultural areas, participants answered a series of questions starting with questions related to the foundation of the city's cultural identity on its heritage and public preferences. According to the data from Table 1, it can be concluded that the local population of the city of Osijek estimates that the cultural identity of the city is based on heritage and public preferences. However, the local population is divided when it comes to basing the cultural identity of the city of Osijek on public preferences.

Table 1. Descriptive indicators of participants' answers to questions about the cultural identity of the city (N = 149)

	Yes (%)	No (%)
Is the cultural identity of the city based on its heritage?	131 (87.9)	18 (12.1)
Is, generally speaking, the cultural identity of a city based on public preferences?	103 (69.1)	46 (30.9)
In the city of Osijek, is the cultural identity of the city based on public preferences?	74 (49.7)	75 (50.3)

Source: author's own calculation

Participants assessed the importance of certain entities for the development of the city's cultural identity, assessing the tourist board ($M = 4.11$, $SD = 1.004$) and cultural institutions ($M = 4.54$, $SD = 0.621$) as the most responsible entities, while assessing them as the least responsible entities - tourists ($M = 2.68$, $SD = 1.079$), which can be seen in Table 2.

Table 2. Description indicators of the perception of the importance of certain subjects for the development of the cultural identity of the city among the inhabitants of Osijek (N=149)

	M	SD
City council	3.99	0.962
Tourist board	4.11	1.004
Institutions in culture (museums, theatres...)	4.54	0.621
State	3.70	1.064

Businesses	3.17	1.042
Local population	3.73	0.949
Tourists	2.68	1.079
European Union	3.12	1.102

Source: author's own calculation

Furthermore, the results show that the local population to a lesser extent believes that the city of Osijek should not develop its cultural identity because it has already been built, while they largely believe that cultural identity develops through diversification and greater investment in marketing of cultural events shown in Table 3.

Table 3. Description indicators of the perception of the importance of certain subjects for the development of the cultural identity of the city among the inhabitants of Osijek (N=149)

	M	SD
The city of Osijek does not need to develop its cultural identity because it has already been built	1.80	0.830
Cultural identity would develop by diversifying (offering more different) cultural content	4.28	0.831
Cultural identity would be developed by greater investments in marketing (promotion) of cultural content	4.40	0.779

Legend: ** – $p < .01$; M – arithmetic means; SD – standard deviation

Source: author's own calculation

When asked about the need to brand the culture of the city, participants answered almost uniformly. Namely, the local population agrees that the branding of the city's culture is necessary, while they do not agree that the City of Osijek has used its heritage and cultural events to brand the city, which can be seen according to the data in Table 4.

Table 4. Descriptive indicators of local population responses to city branding issues (N=149)

	Yes (%)	No (%)
Do you think that branding the culture of the city is necessary?	145 (97.3)	4 (2.7)
Do you think that Osijek has used its heritage and cultural events to brand the city?	24 (16.1)	125 (83.9)

Source: author's own calculation

In addition, the local population expresses moderate satisfaction with the cultural facilities offered in the city of Osijek, while they believe that cultural activities are important for the development of the city and the quality of life in it. This can be concluded from the arithmetic means shown in Table 5. In addition, the results show that the population is moderately familiar with projects in the culture of the city of Osijek.

Table 5. Descriptive indicators of city brand perception in the field of culture of the local population of Osijek (N=149)

	M	SD
How satisfied are you with the offered cultural contents in the city of Osijek?	3.01	0.788
Assess how important cultural activities are for the development of the city	4.54	0.620
Assess how important cultural activities are for the quality of life in it	4.31	0.796
Rate your familiarity with the projects in the culture of Frada Osijek?	3.47	1.695

Source: author's own calculation

Regarding the interest of the local population of Osijek in attending various events, the results indicate that participants show great interest in theater performances, cinema screenings, concerts, music festivals and museum or gallery exhibitions, which can be concluded from the arithmetic means listed in Table 6.

Table 6. Descriptive indicators of the interest of the local population of Osijek in attending various events (N=149)

	M	SD
Theatre play	4.17	0.786
Ballet, dance or opera performance	3.60	1.138
Cinema projection	4.15	0.925
Concert	4.34	0.724
Music festival	4.21	0.903
Public library - book lending	3.75	1.046
Book presentation	3.42	1.104
Creative workshops	3.73	1.107
Folklore performances	3.20	1.279
Museum or gallery exhibition	4.02	0.948

Source: author's own calculation

Speaking of Osijek, the local population evaluated the representatives of the City's brand. Participants in this research largely believe that the city's brand is represented by Osijek Summer of Culture, Pannonian challenge, Landart straw festival, Croatian Singing Society 'Lipa', Osijek Youth Summer, Urban Fest Osijek (UFO), architecture and famous Osijek residents in the history of city culture shown by the arithmetic means in Table 7. On the other hand, the local population as a brand Osijek perceives at least the local film production and 'licitari'.

Table 7. Descriptive indicators of the perception of the local population of Osijek about the representatives of the brand of the City of Osijek (N=149)

	M	SD
a. theatrical productions		
National Theatre of Croatia	3.85	1.051
Krleža Days	3.42	1.169
Kids theatre	3.88	0.979
'SLUK'	3.36	1.169
Osijek Summer of Culture	4.50	0.741
'Nezavisna scena'	3.05	0.936
b. local film production	2.92	1.171
c. cinema projections	3.23	1.146
d. photography		
'Romulić i Stojčić'	3.52	1.088
Photo club Osijek	3.15	1.025
e. library activity	3.26	1.087
f. activity of Civil society associations		
'Zemlja bez granica'	3.77	1.080
Pannonian challenge	4.65	0.744
Landart festival 'Slama'	4.31	0.885
g. music		
Music school 'Franjo Kuhač'	3.78	0.085
'EPTA'	3.25	1.138
'Lipa'	4.03	1.036
'Brevis'	3.89	1.085
'Akvarel'	3.54	1.124
Osijek music Wednesday	3.88	1.065
Memorial Franjo Krežma	3.52	1.113
Memorial Darko Lukić	3.34	1.178
Concert intermezzo	3.17	1.153
Osijek Summer of Youth	4.29	0.903
Urban Fest Osijek (UFO)	4.06	1.048
h. folklore		
'Pajo Kolarić'	3.58	1.135
'Osijek 1862'	3.47	1.157
'Željezničar'	3.56	1.141
'Batorek'	3.48	0.859
'Šokačko sijelo'	3.16	0.716
'Šokačko prelo'	3.07	0.713
Pannonian folklore festival	3.55	0.672

i. manifestations and activities of minority cultural societies (Hungarians, Germans, Serbs, Slovaks, Macedonians, Jews...)	3.42	0.754
j. architecture ('Tvrdča', secession)	4.91	0.283
k. local painting, sculpturing and design	3.70	0.723
l. traditional and artistic crafts		
'Licitari'	2.70	0.934
'Zlatovez', 'šlinga' and other handiwork	3.79	0.640
m. museum and gallery exhibitions		
Slavonski biennale	3.68	0.710
'Dani grafike'	3.64	0.680
n. computer programs, computer games and new media (Osijek Software City)	3.60	0.734
o. publishing and advertising	3.15	0.783
p. famous Osijek residents in the history of the city's culture (Franjo Krežma, Franjo Kuhač, Pajo Kolarić, Branko Lustig, J.J.Strossmayer)	4.72	0.494

Source: author's own calculation

CONCLUSION

There are definitions of the term brand in numerous literature, and since different authors define this term differently, it can be said that there is no unambiguous, i.e. unified definition of the term brand. For some it is a name, for others a symbol, design, etc. It follows that the sign, name and slogan are key elements of the brand. In the scientific literature, the term city brand and city marketing are often equated, but the two terms are not synonymous. Namely, branding is a narrower term and is part of marketing. Ultimately, for both terms, the goal is the same, and that is to raise the quality of a particular city. A brand is a combination of different factors / characteristics that give an identity (products, services, cities, etc.). Branding cities contributes to increasing the value of these cities, which is reflected in the increased number of visitors and their consumption. City branding is actually the process of creating a city brand.

The logic of branding cities stems from the need to differentiate between them, especially in targeted markets. City branding seeks to achieve social, economic and political goals, so city branding should be seen as a strategic response to economic trends and social needs of the population. Prerequisites for competitive advantages achieved on the basis of branding the city, include the use of branding techniques and tools. This contributes to the optimal use of such advantages.

The focus of considering branding cities is always to increase the quality of these cities, precisely on the basis of increasing competitiveness, but also increasing profits.

For the successful development of the city's brand, communication with the local community is extremely important, with the population in mind, since they should be actively involved in the development of the local community. It is also useful to note that the process of building a brand is not short-lived, but it is a long-term process, which ultimately should present a realistic picture and character of the city that is the subject of branding. In the process of branding the city, cultural policy also plays an important role, both in initiating and managing the brand, and in mitigating possible

negative consequences. The focus of this research is the perception of the population about building the brand of the City of Osijek with an emphasis on culture. A survey questionnaire was used in the research, and the answers of the respondents were anonymous. More than half of the respondents are females, ranging in age from 18 to 85 years. The majority of respondents live in households with a monthly income of HRK 10,000 or more. The largest number of respondents have a university degree or higher, and also, the largest number of respondents is employed. More than $\frac{3}{4}$ respondents have a permanent residence in the City of Osijek.

When assessing the importance of certain entities for the development of the cultural identity of the City of Osijek, the respondents single out the tourist community and cultural institutions as the most responsible entities, and consider tourists to be the least responsible. The local population of the City of Osijek to a lesser extent believes that the City of Osijek should not develop its cultural identity, because it has already been built, and they largely agree with the statement that cultural identity develops through diversification and greater investment in marketing cultural events. It is almost equal to those who believe that the branding of the culture of the City of Osijek is necessary, and those who do not agree that the City of Osijek has used its heritage and cultural events to brand the City. The local population is moderately satisfied with the cultural facilities offered in the City, while activities in the field of culture are considered important for the development of the City of Osijek. Furthermore, the respondents largely show interest in theater performances, cinema screenings, concerts, etc., which speaks of their positive intention to attend various cultural events in the City of Osijek. As the main representatives of the brand of the City of Osijek, respondents single out the Osijek Summer of Culture, Pannonian Challenge, Landart Straw Festival, Croatian Singing Society Lipa, Osijek Youth Summer, Urban Fest Osijek (UFO), architecture, and famous Osijek citizens in the history of culture.

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DIGITALNI POTPIS I MOGUĆNOSTI NJEGOVE PRIMJENE U POSLOVNOM SISTEMU BOSNE I HERCEGOVINE

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Sažetak: Digitalni potpis u poslovnom sistemu Bosne i Hercegovine je nešto što još uvijek nije našlo svoju primjenu. Zakonom o carinskoj politici Bosne i Hercegovine, ovaj način potpisivanja jedino se primjenjuje kod špeditera, jer svoje dokumente u postupku elektrosnog prevoza roba ovjeravaju na novi način i šalju u sistem Uprave elektronskim putem. U drugim sferama poslovnog svijeta, ovaj potpis se koristi isključivo kao prelazno rješenje. Ovaj rad pored ispitivanja zakonske mogućnosti primjene iste, te koristi koje bi poslovni sistem imao od implementacije iste, urađena je i analiza koja pokazuje koji je uticaj digitalnog potpisa na poslovni sistem jedne države, te u kojoj mjeri on olakšava poslovanje. Cilj je analizirati stepen primjene digitalnog potpisa na bh tržištu. Pored toga, analizirat će se najviše korišteni algoritmi u kriptosistemu digitalnog potpisivanja sa fokusom na način rada i sigurnost. Također kroz rad ćemo se osvrnuti na principe na kojima je zasnovano digitalno potpisivanje kao i metode pomoću kojih određujemo autentičnost pošiljaoca. Dalje, definisat ćemo područja primjene digitalnog potpisa. Cilj ovog rada je dokazati da digitalni potpis u Bosni i Hercegovini bi u velikoj mjeri olakšao način poslovanja, te pojednostavio procedure u poslovnom sistemu, te na taj način podigao konkurentnost privrede u odnosu na trenutno stanje. Prema navedenom, nameće se i hipoteza ovog rada, a to je da digitalni potpis, pored digiralnog pečata i digitalnog komuniciranja, ima najveći uticaj na efikasnost i brzinu poslovanja između kompanija koje posluju na području Bosne i Hercegovine. Hipoteza je ispitana primjenom multiplog regresionog modela, koju je istražio i obradio autor.

Ključne riječi: digitalni potpis, zakonski okvir, model, poslovni sistem, analiza kompanija.

JEL klasifikacija: K20, K22, K29

UVOD

Digitalni potpis se koristi u cilju zaštite poruka od neželjenih izmjena u transportu kroz put komunikacije i kako bi potvrdili da je poruka zaista primljena od osobe koja to i tvrdi. U infrastrukturi digitalnog potpisivanja upotrijebljeni su princip kriptografije s javnim ključem i digitalni certifikat. Informatičko poslovanje je veoma važan i nezamjenjiv način komunikacije u današnje doba. Bez napredne zaštite i osiguranja, i pored svih prednosti koje donosi, može biti izvor brojnih rizika. “Zato digitalni potpis predstavlja sigurnost i povjerenje na širokom spektru djelatnosti i usluga, a najviše se koriste u područjima potpisivanja dokumenata, slijepog potpisa, potpisa u internetskim aplikacijama i kao zaštita multimedijalnih sadržaja” (Škorić, 2018).

Za BiH kažemo prije svega da je zemlja u razvoju i kao takva digitalni potpis kao aspekt je veoma značajan. On prije svega osigurava integritet poruke, dakle utvrđuje da li se poruka promijenila dok je došla do njenog primaoca. U Bosni i Hercegovini zastupljenost digitalnih potpisa je dosta neistražena pojava. Kada korisnik potpiše poruku privatnim ključem, on je ne može poreći, budući da samo on zna šifru za privatni ključ. Iz tog razloga veoma je bitno istaknuti značaj privatnog ključa i sve što je vezano za njega neophodno je držati u tajnosti. Preporučuje se čuvanje privatnog ključa na smart kartici kao i na računaru. Međutim, u slučaju čuvanja na računaru, korisnik onda samo može potpisati dokumente na tom računaru. Postoji još jedna vrsta digitalnog potpisa, tzv. slijepi potpis. Kod te vrste potpisa je skriven sadržaj poruke od potpisnika prije potpisivanja. Digitalni potpisi se koriste najviše u slučajevima kada potpisnik i autor nisu iste osobe. Primjer takvih situacija su digitalizirani kriptografski sistemi za glasanje i sigurni elektronski platežni sistemi. Još jedno područje primjene slijepih potpisa dolazi iz potrebe sprječavanja potpisnika da poveže potpisanu skrivenu poruku s kasnije otkrivenom porukom.

Analiza rada zasnovana je na multiplom regresionom modelu koji mjeri uticaj netavinih varijabli na zavisnu. Ovaj model daje najbolja moguća predviđanja vrijednost zavisne varijable na temelju vrijednosti neovisne varijable, ako su ispunjene sve pretpostavke. Na osnovu veličine regresijskih koeficijenata, zaključujemo koliki je relativni utjecaj od važnost svake nezavisne varijable je ako ovi koeficijenti se pretvaraju u beta koeficijente β . Dobijaju se koeficijenti kada su sve vrijednosti varijable standardizirane. „Preduslov za korištenje regresije analiza je postojanje linearne ovisnosti između varijabli. To je neophodno budući da analiza počinje s izračun koeficijenta jednostavne korelacije (bivarijantne korelacije) za sve parove varijabli, i svi ti proračuni zahtijevaju linearni odnos između parova varijabli.“ (Šupuković, Jakupović, & Obhodaš, 2019) Zahvaljujući internetu, fizička i pravna lica iz različitih dijelova svijeta mogu razmijeniti informacije za samo nekoliko sekundi. Stoga, najveći dio komunikacije se i odvija upravo putem interneta. Moramo posebno naglasiti autentičnost kao vrlo bitan dio komunikacije – važno nam je da znamo da je primljena informacija zaista i upućena od lica od kojeg je i očekivana. U prošlosti je to regulisano voštanim pečatom na koverti u srednjem vijeku, u novijoj historiji vlastoručnim potpisom. Danas se autentičnost elektronskog dokumenta utvrđuje putem digitalnog potpisa. Ukoliko poznajemo identitet autora, dokument ćemo smatrati autentičnim. Vjerodostojnost potpisanog dokumenta provjerava se enkripcijom. Enkripcija je postupak putem kojeg se prije slanja podaci kodiraju na način da ih samo primatelj može dekodirati i razumjeti. Digitalnim potpisom se, pored autentičnosti, osigurava i integritet i neporeci-

vost. Kada govorimo o integritetu, govorimo o sigurnosti podataka u smislu da nije došlo do promjene ili uništenja prilikom prenosa od pošiljalatelja do primatelja.

Neporecivost znači činjenicu da pošiljalatelj informacije ne može poreći svoje sudjelovanje u procesu komunikacije, budući da jeidno on ima uvid u privatni ključ pomoću kojeg je potpisana predmetna poruka. Nekoliko kriptografskih ključeva, privatni i javni, stvaraju se funkcijom digitalnog potpisa. Potpisana poruka sažeta je hash1 algoritmom. Privatni kriptografski ključ je u cijelosti tajan, dok je javni ključ dostupan svima. Iz korisnikovog privatnog ključa i sažete poruke stvara se digitalni potpis koje se šalje u sklopu potpisane poruke, ili se objavljuje.

Digitalni potpis je ključ sigurnosti i povjerenja u savremenom internet poslovanju. Digitalni potpis omogućava brže i jednostavnije potpisivanje, uštedu kada je riječ o poštanskim troškovima, jednostavnije sklapanje ugovora, elektronsko slanje dokumenata, zahtjeva i slično. Uprkos tehnološkom napretku, mnogi preduzetnici i danas preferiraju ličnu komunikaciju, ne edukuju se ili se malo edukuju, nisu povjerljivi prema tehnologiji digitalnog potpisa, a također, prisutni su povećani troškovi implementacije (baza podataka, certifikati, programska podrška). Uprkos tome, očekuje se da će u budućnosti digitalni potpis biti preovladavajući način za utvrđivanje da li su dokumenti autentični. Vremenom se digitalni potpisi sve više približavaju ručnim potpisima. Smatra se da će se u skorijoj budućnosti ručni potpisi u potpunosti prestati koristiti. Također, očekuje se da će povećanom upotrebom digitalnih potpisa doći i do povećanja pokušaja zloupotrebe istih i cyber napada. Iz tog razloga je bitno raditi na razvijanju mehanizama i algoritama kako bi se isti sprječavali.

METODOLOGIJA RADA

U istraživačkom radu, gdje su preuzeta sekundarna istraživanja korišteni su podaci, te za statističku obrade podataka sljedeće metode: opisna ili deskriptivna statistika, regresija i korelacija. „Deskriptivna statistika korištena u ovome rada ogleda se u prikazu podataka tabelarno i grafički, bez dublje analize. Na temelju serijala iz prethodnih godina, metoda trenda predviđa da li je moguće trendove prognozirati u budućem razdoblje“ (Newbold, Carlson, William, & Thorne, 2010). Korišteni podaci prikupljeni su na području Bosne i Hercegovine, te ciljna skupina i veličina uzorka pokazuje da se radi o reprezentativnom uzorku. „Jedan od preduvjeta za korištenje regresijske analize su postojanje linearne ovisnosti između varijabli. To je neophodno budući da analiza počinje računanjem određivanje jednostavnih koeficijenata korelacije (bivarijantno korelacije) za sve analizirane varijable, i svi izračuni zahtijevaju da su odnosi između varijabli linearni i statistički značajni“. (Šupuković, Jakupović, & Obhodaš, 2019)

Primarni podaci mogu dati rezultate na osnovu kojih će se utvrditi koje motivacijske tehnike najbolje utiču na kvalitetu digitalnog potpisa, te koliko isti utiče na uspješnost i efikasnost kompanije. „U korelaciji sa problemom, predmetom i objektom istraživanja, te postavljenom radnom i pomoćnim hipotezama postavlja se svrha istraživanja, a to je pokazati pomoću statističkih metoda da je digitalni potpis u odnosu na digitalni pečat i ostale digitalna pomagala u smislu podizanja efikasnosti poslovanja, najvažniji, ta da ima najveći uticaj na podizanje efikasnosti kompanije“ (Danović, Obhodjas, & Jakupović, 2020).

DIGITALIZACIJA POTPISA I NJEGOVA ZAKONSKA OSNOVA

Zakon o elektronskom potpisu je usvojila Parlamentarna skupština BiH i Dom naroda 2006. godine. Ovaj Zakon uređuju osnove formiranja i upotrebe elektronskog potpisa i pružanja usluga u vezi s elektronskim potpisom i ovjeravanjem poslovnih subjekata. “Također, ovaj Zakon podrazumjeva da se u pravnom i poslovnom prometu mogu koristiti elektronski potpisi formirani postupcima različitih nivoa sigurnosti i zasnovani na potvrdama različitih klasa. Pravno djelovanje elektronskog potpisa i njegova upotreba kao dokaznog sredstva ne može se isključiti zbog činjenice da je elektronski potpis dostupan jedino u elektronskoj formi ili zbog toga što nije zasnovan na kvalificiranoj potvrdi, ili kvalificiranoj potvrdi akreditiranog ovjerioca, ili zbog toga što nije formiran upotrebom tehničkih sredstava i postupaka iz člana 14. ovog Zakona.” (Ministarstvo pravde FBiH, 2021)

Prema Zakonu o elektronskom potpisu, da bi potvrda bila kvalificirana mora sadržavati sljedeće podatke:

- oznaku ili dokaz koji potvrđuje da se radi kvalificiranoj potvrdi,
- ime ili firmu, kao i sjedište,
- ime - pseudonim potpisnika
- dodatne podatke o potpisniku
- podatke za provjeru potpisa, a koji pri tome odgovaraju podacima kako bi se formirao potpis koji je I pod kontrolom potpisnika,
- podatke o početku i prestanku važenja potvrde,
- jedinstvenu oznaku potvrde,
- ograničenja upotrebe potpisa, ako postoji,
- ograničenja u pogledu vrijednosti transakcija

Kvalificirana potvrda mora biti potpisana elektronskim potpisom ovjerioca. Prema Zakonu o digitalnom potpisu (Ministarstvo pravde FBiH, 2021) Ovjerilac koji izdaje kvalificirane potvrde dužan je da:

- pokaže pouzdanost i sigurnost kod korištenja elektronskog potpisa i ovjere;
- pomaže kod pružanja neodložive usluge opoziva i vodi registar potvrda na brz i siguran način;
- za kvalificirane potvrde, kao i za registar potvrda i pružanje usluga opoziva, koristiti podatak o vremenu koji je nesumnjivo kvalitetan (npr. siguran vremenski pečat) i osigurati za sve slučajeve da se datum i vrijeme izdavanja ili opoziva potvrde mogu tačno utvrditi,
- provjerava identitet i druga pravna obilježja kod lica koja podnesu zahtjev za izdavanje potvrde;
- zapošljavati pouzdana lica, koja za pružanje usluga imaju potrebna specijalistička znanja, iskustvo i stručne kvalifikacije i naročito upravljačke sposobnosti i poznavanje tehnologije elektronskog potpisa i odgovarajućih sigurnosnih postupaka, i primjenjuju administrativne i upravljačke postupke i propise, u skladu s važećim pravilima struke,
- imati finansijsku sposobnost za obavljanje djelatnosti u skladu s ovim zakonom i na osnovu njega donesenim podzakonskim propisima, i za pokriće eventualnih zahtjeva za naknadu štete,
- evidentirati sve okolnosti i činjenice značajne za kvalificirane potvrde, tokom vremena njihove primjene, tako da se ovjeravanje može dokazati, na-

ročito u sudskom postupku, te čuvati ove podatke trajno i u elektronskom obliku,

- poduzima neophodne mjere i spriječava kopiranje ili čuvanje podataka ovjerioci i trećim licima.

Osoba, u ovom slučaju ovjerilac, koja pruža usluge vezane za elektronski potpis, kao i za izdavanje, formiranje i čuvanje potvrda, dužna je da koristi sistem koji je pouzdan i tehnički zaštićen od izmjena. Također, taj sistem mora pružati i tehničku i kriptografsku sigurnost. Pored toga, mora preduzeti neophodne mjere da osigura tajnost podataka za formiranje potpisa. Za generiranje i čuvanje podataka za formiranje potpisa i za formiranje i čuvanje kvalificiranih potvrda ovjerilac je dužan koristiti tehnička sredstva i postupke.

Pored toga, bitno je naglasiti i važnost elektronskih nabavki. Ovim zakonima je unaprijeđeno trenutno stanje u Federaciji Bosne i Hercegovine na način da je uvedena mogućnost korištenja elektronskog pečata i potpisa, u cilju unaprjeđenja pravnog prometa i poboljšanja koja prate najviše tehnološke i tehničke standarde. Usvajanje ovih zakona je i dio ispunjavanja Reformske agende, i znatno doprinose kreiranju sigurnijeg i povoljnijeg poslovnog i društvenog okruženja u Federaciji Bosne i Hercegovine, u Bosni i Hercegovini, na domaćem tržištu, kada su upitanju ne samo domaći, nego i strani investitori. Time je napravljen veliki korak kada su u pitanju tehnološki napredak, komunikacija i obavljanje poslovnih aktivnosti. Javna uprava je postala mnogo ekonomičnija i efikasnija za građane. Ovi zakoni su i važan, tj. Ključni korak ka implementaciji Programa uvođenja jednošalterskog sistema i elektronske registracije privrednih subjekata u Federaciji BiH, što predstavlja jedan od prioritarnih zadataka Vlade Federacije Bosne i Hercegovine. Na kraju, usvajanjem ovih zakona, građanima Federacije Bosne i Hercegovine i Bosne i Hercegovine su omogućena najviša komunikacijska i tehnološka dostignuća koja će im olakšati život u velikoj mjeri, a državu Bosnu i Hercegovinu približiti Evropskoj uniji.

TEMELJNI PRINCIPI I ALGORITMI DIGITALNOG POTPISIVANJA

“Internet je najrasprostranjenija računarska mreža koja omogućuje pojedincima iz svih dijelova svijeta međusobnu komunikaciju, razmjenu informacija i dokumenta. Tipična situacija je kada osoba A putem interneta želi kupiti nešto od osobe B. Međutim u takvom vidu komunikacije, uz klasične, pojavljuju se i neki sasvim novi problemi. Tako treba biti siguran da poruku koju je osoba A poslala osobi B ne može pročitati niko drugi, te da ta poruka nije promijenjena. Također, problem je da osoba B može biti u potpunosti sigurna da joj je upravo osoba A poslala primljenu poruku i da osoba A ne može poreći da je upravo osoba B poslala tu poruku. U rješavanju ovih problema pomaže nam digitalni potpis.” (Liđan & Ibrahimpašić, 2010)

Danas je komunikacija elektronskim putem zastupljena u gotovo cijelom svijetu. U velikoj mjeri je klasična pošta na papiru zamijenjena elektronskom poštom. Elektronska pošta je danas izuzetno značajna, poslovnim partnerima je nezamjenjiv način komunikacije. Ključan faktor uspjeha e-trgovine je digitalni potpis. Digitalni potpis je osnovni uslov da e-trgovina ne bude nepouzdana i nesigurna. Iako današnja tehnologija kakvu znamo ne pruža stoprocentnu sigurnost, ona ipak omogućava dovoljnu razinu zaštite koja se uporediva, i možda čak i bolja od papirnate komunikacije.

Internet ima mnogobrojne prednost za poslovanje. Pristup informacijama, elek-

tronsko plaćanje, predaja i preuzimanje obrazaca i drugih dokumenata, razmjena računa i informacija, elektronsko potpisivanje dokumenata su samo neke od njih. Međutim, pored mnogobrojnih prednosti, internet i internet poslovanje nose i velike rizike, stoga je potrebno voditi računa o naprednoj elektroničkoj zaštiti i platformama povjerenja. Da bi elektronski dokument bio prihvatljiv, mora biti tehnički ispravan, nepromjenljivog sadržaja, te izvor, odnosno stvaraoc dokumenta moraju biti vjerodostojni. Sve to je obuhvaćenom elektronskim potpisom kao instrumentom kojim je moguće osigurati zaštitu integriteta sadržaja i vjerodostojnost izvora. Sistem digitalnog potpisivanja možemo podijeliti na 3 algoritma:

- Algoritam za generisanje javnog i privatnog ključa - rezultati su privatni i odgovarajući javni ključ;
- Algoritam za izradu potpisa - generiše se digitalni potpis na osnovu sažetka (digesta) poruke i privatnog ključa;
- Algoritam za provjeru potpisa – koristeći poruku i javni ključ, potvrđuje ili opovrgava autentičnost poruke.

Tri najčešća i najpouzdanija algoritma koji se koriste za digitalno potpisivanje su: (Vranješ, 2017)

1. DSA (*Digital Signature Algorithm*)
2. ECDSA (*Elliptic Curve Digital Signature Algorithm*)
3. RSA (*Rivest – Shamir – Adleman*)

DSA (Digital Signature Algorithm) i generisanje ključeva i parametara

Digital Signature Algorithm (DSA) je algoritam koji se najviše koristi u vladinim i nevladinim organizacijama, odobren od strane DSS (eng. *Digital Signature Standard*) - standarda savezne vlade SAD-a i koristi se isključivo za digitalno potpisivanje.

Generisanje ključeva je jedan proces koji se sastoji od 6 faza:

- a. Odabrati odobrenu kriptografsku hash funkciju H . U originalnom DSS-u, preporuka je bila koristiti SHA-1, ali u trenutnom DSS-u je preporučena upotreba SHA-2. Rezultat hash funkcije se može skratiti na veličinu para ključeva.
- b. Odabrati dužine ključeva L i N . Dužine ključeva su prvi simptomi kriptografske snage ključeva. Prvi DSS je uslovljavao da L bude broj između 512 i 1024, te da bude djeljiv sa 64.
- c. Odabrati prosti broj q dužine N bita.
- d. Odabrati prosti broj p dužine L bita tako da vrijedi $p = q * z + 1$ za neki cijeli broj z , L mora biti između 512 i 1024 i djeljiva sa 64.
- e. Odabrati proizvoljno broj h takav da vrijedi $1 < h < (p - 1)$
- f. Izračunati broj g takav da vrijedi $g = h^z \bmod p$. Ako se pokaže da je $g = 1$, treba odabrati drugačiju vrijednost h . Ipak, većina uzoraka će polučiti upotrebljiv broj g , a najčešće se za vrijednost h uzima broj 2.

ECDSA (Elliptic Curve Digital Signature Algorithm)

„Iz ranije objašnjenog DSA algoritma je nastao ECDSA algoritam. Kao ANSI standard prihvaćen je 1999. godine, a kao IEEE i NIST standard, prihvaćen je godinu kasnije“ (Johanson, Menzes, & Vanstone, 2001). Za razliku od prethodnika na čijim je temeljima nastao, ECDSA se ne oslanja na problem faktorizacije velikih brojeva,

već na eliptičke krive što snagu njegovih ključeva čini mnogo većom. Svaka se vrsta enkripcije zasniva na složenosti rješavanja određenog problema i upravo su te složenosti iskoristavali autori dosad napravljenih enkripcijskih algoritama kako bi razvili što sigurnije i neprobojnije algoritme.

„Do pojave primjene eliptičkih krivih u kriptografiji, većina algoritama se zasnivala na složenosti problema faktorizacije velikih brojeva. Primjenu eliptičkih krivih u kriptografiji su prvi uveli Koblitz i Miller 1985. godine iskoristivši činjenicu da je u grupi eliptičkih krivih matematička operacija potenciranja puno lakša od matematičke operacije logaritmiranja“ (Dujella & Maretić, 2007). Da bi primjena eliptičkih krivih bila jasna, u dijelu rada koji slijedi su objašnjenje postavke i matematičke operacije nad grupom eliptičkih krivih koje su potrebne za primjenu spomenutih krivih u kriptografiji.

RSA (Rivest – Shamir – Adleman) algoritam

„RSA algoritam je jedan od prvih praktičnih kriptografskih algoritama koji koristi ideju javnog ključa (Wikipedija, 2022). Asimetrija algoritma se ogleda u praktičnoj nemogućnosti faktorizacije produkta dva velika prosta broja. Algoritam je nazvan po prvim slovima prezimena njegovih tvoraca, Rona Rivesta, Adija Shamira i Leonarda Adlemana koji su algoritam prvi puta predstavili 1978. godine. „Korisnik RSA algoritma kreira i objavljuje javni ključ koji se bazira na dva velika prosta broja zajedno s pomoćnom vrijednošću“ (Wezika, 2007). Pritom je važno naglasiti da odabrani prosti brojevi moraju ostati tajni. Svako može šifrirati poruku pomoću javnog ključa, ali samo osoba koja zna o kojim se prostim brojevima radi je može i dešifrirati.

„Do danas se algoritam pokazao prilično sigurnim iako mnoge stvari, koje se u algoritmu podrazumijevaju, nisu dokazane“ (The World Bank, 2018). Na primjer, nije dokazano da je moduo aritmetika najbolji izbor za proračun velikih prostih brojeva. Također, nije dokazano da je osnovni postulat ovog algoritma, složenost proračuna prostih brojeva, toliko složen problem kao što se čini. „Postoji mogućnost da će napredak u teoriji brojeva donijeti nova otkrića. Algoritam koji koristi RSA za digitalno potpisivanje se sastoji od 5 koraka“ (Wikipedija, 2022).

ANALIZA UTICAJA DIGITALNOG POTPISA NA EFIKASNOST POSLOVANJA

U narednom dijelu rada primjenom odgovarajućih statističkih metoda i alata izvršit će se analiza varijabli koje analiziraju efikasnost kompanije. Naime, izmjerit će se uticaj određenih varijabli, koje se mogu okarakterisati kao nezavisne, na efikasnost kompanije, primjenom višestrukog regresionog modela. „Bitno je istaknuti da korištenje digitalnog potpisa omogućava kvalitativni skok u razvoju mnogih aplikacija jer omogućava brže i jednostavnije poslovanje, lakše sklapanje ugovora. Konceptcija digitalnog potpisa zasigurno će otvoriti vrata novim uslugama i oblicima poslovanja“ (Zovkić & Vrbanc, 2012).

Ovaj uzorak obuhvata 235 kompanija u Bosni i Hercegovini, a podaci su prikupljeni uz pomoć anketnog upitnika. Pored ispitanih varijabli, anektni upitnik je sadržavao još neke interesantne teme koje se tiču efikasnosti poslovanja, a koje su predmet nekog drugog istraživanja. Fokus ove analize je uticaj digitalnog potpis, digitalnog pečata i digitalnog komuniciranja na efikasnost poslovanja. „Promjene jedne pojave

uvijek su uzrokovane djelovanjem više faktora, odnosno postoji visok stepen slaganja varijacija između više pojava. Ukoliko jednu pojavu možemo identifikovati kao zavisno promjenjivu, a ostale pojave kao nezavisno promjenjive, tada možemo odrediti model regresije, koji izražava prosječnu vezu između zavisno promjenjive i nezavisno promjenjivih” (Ophodjas, Jerković, & Ilić, 2015). Postojanje linearne zavisnosti između varijabli je jedna od pretpostavku za upotrebu regresione analize.

„Analiza počinje tako što se prvo izračuna koeficijent proste korelacije - bivarijantnih korelacija, za sve parove varijabli, a sva ova izračunavanja zahtevaju linearan odnos između parova varijabli“ (Newbold, Carlson, William, & Thorne, 2010).

Tabela 1: Korelacija modela

		Correlations			
		EP	DP	DPČ	DK
Pearson Correlation	EP	1.000	.734	.629	.427
	DP	.734	1.000	.636	.401
	DPČ	.629	.336	1.000	.399
	DK	.427	.401	.399	1.000
Sig. (1-tailed)	EP	.	.003	.020	.031
	DP	.003	.	.040	.034
	DPČ	.020	.040	.	.040
	DK	.031	.034	.040	.

Izvor: Obrada autora u statističkom paketu SPSS 20

Prema Pearsonovom koeficijentu korelacije, može se zaključiti da između zavisne i nezavisnih varijabli postoji visok stepen povezanosti, koje se nalaze u pozitivnom linearnom odnosu. Naime, najveća povezanost je između efikasnosti poslovanja i digitalnog potpisa, gdje koeficijent korelacije iznosi 0,734, zatim digitalnog pečata, pa tek onda digitalnog komuniciranja. Važno je spomenuti da su sva tri koeficijenta izuzetno visoka, te da iznose između 0,427 do 0,734.

„Ovaj model daje najbolje moguće predviđanje vrijednosti zavisne promjenjive na osnovu vrijednosti nezavisnih promjenjivih, ako su sve pretpostavke ispunjene. Na osnovu veličine regresionih koeficijenata možemo zaključiti koliki je relativni uticaj ili važnost svake nezavisne promjenjive, ako se ti koeficijenti konvertuju u beta koeficijente β . Ovi koeficijenti se dobiju kada se sve vrijednosti promjenjivih standardizuju“ (Šupuković, Jakupović, & Obhodaš, 2019).

Tabela 2: Koeficijenti modela

Nezavisne varijable	Beta	t	Singifikantnost
Digitalni potpis - DP	0,771	4,940	0,029 ($p < 0,05$)
Digitalni pečat - DPČ	0,689	4,092	0,047 ($p > 0,05$)
Digitalno komuniciranje - DK	0,414	3,132	0,045 ($p > 0,05$)
Zavisna varijabla: Efikasnost poslovanja - EP			

Izvor: Obrada autora u statističkom paketu SPSS 20

Prema rezultatima analize, koje mjere uticaj nezavisnih varijabli na zavisnu, može se zaključiti da sve tri nezavisne varijable imaju uticaj na zavisnu. Naime, digitalno komuniciranje, digitalni pečat i digitalni potpis utiču na efikasnost poslovanja, jer je p vrijednost u sva tri slučaja manja od 0,05. Pored toga, može se zaključiti da najveći uticaj na efikasnost poslovanja ima digitalni potpis, sa beta koeficijentom od 0,771, zatim digitalni pečat, pa tek na kraju digitalno komuniciranje.

Tabela 3: Heteroskedastičnost

Test	LM	Sig.
B – P test	47,916	0,000

Izvor: Obrada autora u statističkom paketu SPSS 20

Ukoliko je sig.vrijednost manja od 0,05 tada Test Breusch - Pagan test nije pri-
sutan. Ovom analizom smo dobili rezultat od $p = 0,000 < 0,05$ što znači da je testirani
model normalno distribuiran te da se analizirani koeficijenti koji su predstavljeni u
prethodnoj tabeli mogu uzeti kao tačni.

ZAKLJUČNO RAZMATRANJE

Zakon o elektronskom potpisu u Federaciji Bosne i Hercegovine i Zakon o elek-
tronskom dokumentu stvorili su podlogu za primjenu najboljih i najviših tehnoloških,
tehničkih, komunikacijskih i informacionih dostignuća u evropskim i svjetskim prav-
nim sistemima. Ovim zakonima stvara se elektronsko poslovno okruženje u kojem je
omogućen promet elektronskih dokumenata u pravosuđu, državnoj upravi, privredi i
ostalim oblastima, te su stvoreni uslovi za razvoj racionalne i efikasnije državne upra-
ve, konkurentnije privrede, te se putem uspostavljanja e-servisa ostvaruje uspješna
komunikacija među poslovnim partnerima, državnom upravom i građanima. Na ovaj
način smanjeni su troškovi poslovanja, povećane uštede, stvorena dodatna vrijednost,
smanjena siva ekonomija i korupcija.

Ukoliko dođe do usvajanja zakona, to će odmah značajno olakšati poslovnim
subjektima, građanima, itd. Vrlo važan aspekt elektronskog poslovanja jeste moguć-
nost izdavanja i dostavljanja elektronskih faktura, uzevši u obzir da većina pravnih
lica ima mogućnosti da elektronski ispostavlja fakture putem vlastitih informacionih
sistema ili infrastrukture za elektronsko bankarstvo.

Predstavljeno je i IT rješenje po kojima bi potpis i pečat digitalnog potpisnika
bio maksimalno zaštićen. Međutim, danas kriptosistemi zasnovani na eliptičkim kri-
vim daju istu sigurnost kao i RSA algoritam uz desetak puta kraću dužinu ključeva i
da će u budućnosti taj odnos dodatno rasti u korist algoritama s eliptičkim krivim, što
je pojašnjeno u gornjem dijelu rada. Dokazano je da u poređenju sa DSA algoritmom,
RSA je brži u šifriranju i verifikaciji potpisa, dok je DSA brži u generisanju ključeva i
dešifriranju. Algoritmi su podjednako jaki, ali u slučaju digitalnog potpisivanja, ipak se
mala prednost pri izboru daje DSA algoritmu, što je jedan od zaključaka. Pokazalo se
da u Bosni i Hercegovini generalno postoji percepcija da je upotreba digitalnih potpisa
i njegova korisnost na globalnom nivou ipak, primjenom adekvatnih metoda i tehnika,
moguće poboljšati i unaprijediti i na taj način povećati broj korisnika digitalnog pot-
pisa.

Posebno ovome ide u prilog provedeno istraživanje i urađeni model. Naime, autor je na uzorku od 235 kompanija istražio i analizirao primjenom višestrukog regresijskog modela uticaj digitalnog potpisa, digitalnog pečata i digitalne komunikacije na efikasnost poslovanja. Rezultati su pokazali da sve tri varijable imaju uticaj na efikasnost poslovanja u određenoj mjeri. Prema rezultatima, ipak, se može zaključiti da digitalni potpis, pa zatim i digitalni pečat imaju veoma visok uticaj na efikasnost poslovanja.

Prema navedenom, može se zaključiti da je postavljena hipoteza u ovom radu, koja glasi: „*Digitalni potpis, pored digiralnog pečata i digitalnog komuniciranja, ima najveći uticaj na efikasnost i brzinu poslovanja između kompanija koje posluju na području Bosne i Hercegovine*“ (Yan, 2002), u potpunosti ispitana i dokazana kroz navedeni model. Prema rezultatima analize, upravo je dokazano da najveći beta koeficijent je upravo kod varijable koja analizira uticaj digitalnog potpisa na efikasnost poslovanje, prema tome, rezultati modela su se poklopili sa postavljenom hipotezom. Ispunjen je i cilj rada, a koji treba da analizira stepen primjene digitalnog potpisa na bh tržištu, koji je trenutno veoma skroman, kao i najčešće algoritme koji se koriste u kriptosistemu digitalnog potpisivanja, što je i urađeno, i analizirano u radu i zaključku ovog rada.

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DIGITAL SIGNATURE AND POSSIBILITIES OF ITS APPLICATION IN THE BUSINESS SYSTEM OF BOSNIA AND HERZEGOVINA

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Summary: *Digital signature in the business system of Bosnia and Herzegovina is something that has not yet found its application. According to the Law on Customs Policy of Bosnia and Herzegovina, this method of signing is only applied to freight forwarders, because they certify their documents in the procedure of electronic transport of goods in a new way and send them to the Administration system electronically. In other spheres of the business world, this signature is used exclusively as a transitional solution. This paper, in addition to examining the legal possibility of its application, and the benefits that the business system would have from its implementation, also made an analysis that shows the impact of digital signatures on the business system of a country, and to what extent it facilitates business. The aim is to analyze the degree of application of digital signatures in the BiH market. In addition, the most widely used algorithms in the digital signature cryptosystem with a focus on mode and security will be analyzed. Also through the paper we will look at the principles on which digital signing is based as well as the methods by which we determine the authenticity of the sender. Next, we will define the areas of application of the digital signature. The aim of this paper is to prove that a digital signature in Bosnia and Herzegovina would greatly facilitate the way of doing business, and simplify procedures in the business system, and thus raise the competitiveness of the economy compared to the current situation. According to the above, the hypothesis of this paper is that digital signature, in addition to digital printing and digital communication, has the greatest impact on the efficiency and speed of business between companies operating in Bosnia and Herzegovina. The hypothesis was tested using a multiple regression model, which was investigated and processed by the author. The author investigated and analyzed the impact of digital signature, digital printing and digital communication on business efficiency in a sample of 235 companies using a multiple regression model. The results showed that all three variables have an impact on business efficiency to a certain extent. According to the results, however, it can be concluded that the digital signature and then the digital stamp have a very high impact on business efficiency. It has been shown that in Bosnia and Herzegovina there is a general perception that the use of digital signatures and its usefulness at the global level, however, by applying adequate methods and techniques, can be improved and improved and thus increase the number of digital signature users.*

Keywords: digital signature, legal framework, model, business system, company analysis.

JEL classification: K20, K22, K29



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PORTFOLIO DIVERZIFIKACIJA SA BITKAINOM - DOKAZI IZ PERSPEKTIVE INSTITUCIONALNIH INVESTITORA

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Sažetak: Rad se bavi empirijskom provjerom djelotvornosti i korisnosti diverzifikacije ulaganja koristeći glavne berzanske indekse u zemljama evrozone i Bitcoin. U radu se istražuje da li je i u kojoj mjeri poželjno da institucionalni investitori, osim u tradicionalne finansijske instrumente, ulažu u Bitcoin. Cilj istraživanja jeste da se ispita da li je opravdano i u kojoj mjeri u portfelj institucionalnog investitora uključiti Bitcoin. U ovom istraživanju nastoji se odgovoriti na istraživačko pitanje: „Koji je udio Bitkoina u strukturi portfolija opravdan, uzimajući u obzir odnos prinosa i rizika”? U analizu su uključeni podaci o dnevnom kretanju izabranih akcijskih indeksa kao i kretanje Bitkoina. Metodologija podrazumijeva analizu podataka visoke frekvencije, s obzirom na to da su korišteni dnevni podaci o trgovanju. Rezultati pokazuju da je opravdano u strukturu portfelja uključiti Bitcoin. Takođe, rezultati pokazuju i koji je udio opravdan sa aspekta institucionalnih investitora. Korišteni podaci obuhvataju period iz 2019. godine i 2020. godine. Kreirana su dva portfelja, jedan bez Bitkoina i drugi sa Bitkoinom. Cilj u optimizaciji kod oba portfolija jeste minimiziranje rizika. Posmatrani period analize odlikuje kriza izazvana pandemijom korona virusa i period aktivnog trgovanja bitkoinom. Rezultati istraživanja ukazuju na to da kriptovaluta Bitcoin predstavlja poželjan izvor diversifikacije u investicionom portfelju koji je sačinjen primarno od tradicionalnih finansijskih instrumenata. Štaviše, rezultati pokazuju da ova tvrdnja vrijedi i za investitora koji ima veliku averziju prema riziku i za institucionalne investitore koji žele više da rizikuju. Zaključak je da racionalno ponašanje institucionalnih investitora nalaže razmatranje ulaganja u Bitcoin upotrebom Markowitz modela. Međutim, s obzirom na izuzetno visok nivo volatilnosti posmatrane kriptovalute, investitori treba da sa posebnom pažnjom razmotre uključivanje ove kriptovalute u investicioni portfolio.

Ključne riječi: optimizacija; diverzifikacija; Bitcoin; rizik; prinos.

JEL klasifikacija: C53, C61, G11, G12, G15, G23, Q55.

UVOD

Tokom posljednje godine ne smanjuje se interes za ulaganje u kriptovalute, posebno u Bitcoin, s ciljem ostvarivanja iznadprosječnih prinosa. Uprkos posljedicama korone, pad kamatnih stopa je evidentan i na domaćem i na stranim tržištima (Grujić & Baškot, 2020). Takve informacije i kretanja povećavaju oprez, posebno u sektoru institucionalnih investitora, ali i pozivaju na razmatranje alternativnih ulaganja. Rasprostranjeno je mišljenje da je Bitcoin izuzetno vlatilan i rizičan ali i potencijalo profitabilan finansijski instrument. Za sada, kriptovalute namaju pokriće u nekoj valuti niti aktivni. Takođe, ne mogu se upotrijebiti za plaćanje poreza. Kriptovalute su oličenje Hajekove težnje jer „postoji konkurencija među privatnim novcem a ne monopol vlade“ (Hayek, 1990, 9).

Prvobitni model portfolio diverzifikacije stvorio je Heri Markovic još 1952. godine (Markowitz, 1952). Ovaj model je uobzirio iskazivanje varijanse portfelja, potpm očekivane stope prinosa, rizika pojedinih finansijskih instrumenata, korelacije kao mjere uzajamne povezanosti prinosa između pojedinih finansijskih instrumenata ali i preferencija investitora izražene kao sklonost prema rizikovanju. U najkraćem, klasična portfolio teorija je koristila koncept diverzifikacije tek da bi se smanjio rizik portfelja. S druge strane, moderna portfolio teorija uzima u obzir izračunavanje prinosa i rizika. U skladu sa tim, rezultat moderna portfolio teorije jeste da iskaže optimalan skup finansijskih instrumenata. Ovaj skup nosi ima rizik. Međutim, s obzirom na to da prinosi odabranih finansijskih instrumenata nisu u savršeno pozitivnoj korelaciji, prinos portfelja jeste manji od ponderisanog prosjeka rizika finansijskih instrumenata koje su obuhvaćene u portfelj. Naime, u praksi, finansijski instrumenti nerijetko u isto vrijeme imaju suprotna kretanja cijena. Upravo ova činjenica omogućava investitoru da kupovinom oba finansijska instrumenta smanji rizik portfelja.

Cilj ovog istraživanja jeste da ispita i utvrdi da li je, i u kojoj mjeri, preporučljivo uključiti određeni udio Bitkoina u portfelj koji sadrži akcijske indekse. Polazi se od pretpostavke da kriptovaluta Bitcoin predstavlja jedan od izvora za diversifikaciju portfelja (Šoja & Chamil, 2019). Za potrebe rada korišćena je metodologija odnosno tehnologija moderne optimizacije portfelja kojom je iskazan optimalan udio tradicionalnih finansijskih instrumenata i Bitkoina u portfelju. S ciljem optimizacije portfelja u istraživanju korištena je Markowitzeva portfolio teorija.

Rad je sačinjen iz nekoliko dijelova. Prvi dio predstavlja uvod. Drugi dio opisuje dosadašnja istraživanja i najvažnije zaključke na ovu temu. Treći dio opisuje korištenu metodologiju i pretpostavke. Četvrti dio prikazuje podatke i deskriptivnu statistiku koji se koriste u istraživanju. Poslije toga pokazuju se se najvažniji rezultati istraživanja. Nakon toga se diskutuje se testiranje diversifikacije na osnovu prikupljenih podataka. Na kraju daje se zaključak istraživanja u preporuke za dalja istraživanja.

Problem istraživanja je definisanje i stvaranje smjernica i donošenje okvira za donošenje investicionih odluka učesnika tj. institucionalnih investitora na međunarodnom finansijskom tržištu. Predmet istraživanja su dnevna kretanja akcijskih indeksa i Bitcoin. Ciljevi istraživanja je pokazati da se uvršavanjam u portfelj rizičnih instrumenata može smanjiti rizik ukupnog portfelja ali i povećati pronos. U radu se istražuju dometi i ograničenja takvog pristupa. Motivi i misiju istraživanja predstavljaju nastojanje objasne razlozi i posljedice kombinovanja Bitkoina i tradicionalnih finansijskih instrumenata u portfelju te da se ukaže na primjenu tih spoznaja u teoriji i u praksi. Os-

novna hipoteza istraživanja glasi: „Posmatrajući podatke na dnevnom nivou, ukoliko se posmatra portfelj koji uključuje tradicionalne finansijske instrumente, kriptovaluta Bitcoin predstavlja poželjan izvor diversifikacije portfelja, odnosno može smanjiti rizik portfelja a povećati prinos.“

PRETHODNO ISTRAŽIVANJE

S obzirom na stečenu popularnost kao kriptovalute i prateće tehnologije blokčejn, brojna su istraživanja koja ispituju pokažu špekulativnu prirodu Bitkoina (Yermack, 2015; Kristoufek, 2015; Baek and Elbeck, 2015; Dyhrberg, 2016b). Yermack (2015) i Kristoufek (2015) su nakon ispitivanja prirode Bitkoina zaključili nju nije moguće objasniti uz pomoć savremenih ekonomskih teorija jer ona pokazuje više špekulativnih osobina u odnosu na druge finansijske instrumente i valute (Šoja & Chamil, 2019). Drugi autori nastoje da objasne da li je ova kriptovaluta valuta ili dobro, roba (Dyhrberg, 2016ab; Fry i Cheah, 2016; Katsiampa, 2017; Pieters i Vivanco, 2017; Radivojac i Grujić, 2018). Osim toga, Dyhrberg (2016ab) i (Al-Yahyaee, Mensi, Al-Jarrah, Hamdi, & Kang, 2019) ukuazuju na to da Bitcoin ima određene karakteristike ostalih klasa aktive odnosno finansijskih instrumenata kao što su valute i zlato. Prema tome, omogućava diversifikaciju portfelja. Postoje i oprečni nalazi. Na primjer, Baur i saradnici (2018) dokazuju da se karakteristike Bitkoina, posmatrano kao finansijski instrumenti, razlikuju u odnosu na zlato ili dolar.

Druga istraživanja pokazuju da kriptovaluta Bitcoin može biti poželjan instrument za diversifikaciju (Liew & Hewlett, 2017). Ova tvrdnja je testirana upravo u portfelju koji čine tradicionalni finansijski instrumenti kao što su zlato, obveznice i akcije, kako za konzervativne investitore, tako i za one investitore koji preferiraju rizična ulaganja (Guesmi, Saadi, Abid, & Ftiti, 2019; Šoja & Chamil, 2019; Šoja, 2019; Platanakis & Andrew, 2019).

Osnovni motiv privlačnosti institucionalnih investitora za ulaganje u Bitcoin jesu diverzifikacija plasmana i jednostavnost investiranja kapitala (Levy, 2020). Za razliku od drugih finansijskih instrumenata, Bitcoin nema podlogu koja bi garantovala njegovu vrijednost i održivost. Zbog toga institucionalni investitori sa posebnim oprezom prilaze ulaganju u ovaj instrument. Važnost institucionalnih investitora manifestuje se kroz unapređenje efikasnosti finansijskog sistema. Oni obogaćuju tržište stvarajući efikasne kanale za alociranje ekonomskih resursa „i kroz prostor i kroz vrijeme“ (Olgić Draženović, Mario, & Stella, 2017). Uzevši u obzir slabu ili gotovo nikakvu vezu Bitkoina sa ostalom aktivom, ovaj finansijski instrument se prepoznaje kao instrument za hedging odnosno „zaštite od rizika“ u portfelju (Šoja & Chamil, 2019). Koristeći mjesečne podatke o povratu, Chan et al. (2019) dokazuju da je Bitcoin moguće iskoristiti upravo kao zaštitu od rizika u odnosu na poznate berzanske indekse Nikkei, S&P 500, Euro STOXX, Shanghai A-Share i TSX Index.

Ram (2019) je u opširnoj analizi upotrebljavajući Šarprpov racio pokazao da Bitcoin osigurava povrate ponderisane rizikom veće u poređenju sa drugim finansijskim instrumentima odnosno klasama aktive. Trautman i Dorman, (2018) su sprovedi korelacionu analizu među različitim finansijskim instrumentima kao što su akcije, nekretnine, zlato, i obveznice. Dokazali su da su benefite od primjene diversifikacije na ove finansijske instrumente. S tim u vezi, postoje različita istraživanja koja ispituju rizike povezane sa ulaganjem u Bitcoin. Na primjer, Eisl et al. (2015) u analizi polaze

od uslovnog VaR-a sa ciljem da ispitaju da li ulaganje u Bitcoin zaista može da optimizuje portfelj. Njihovi nalazi ukazuju na to da, uprkos činjenici da Bitcoin povećava VaR, dodatni rizik se kompenzuje visokim povratom koji Bitcoin odbacuje.

Koristeći se DCC modelom (dynamic conditional correlation – model multivarijantne dinamičko uslovnu korelacije) Chuen et al. (2018) istražuju u kojoj mjeri kombinovanje ulaganja deset kriptovaluta u tradicionalni portfelj pruža benefite povratu prilagođenom za rizik. Rezultati istraživanja ovih autora ukazuju na to da uključivanje indeksa kriptovaluta značajno popravља performance, što su i potvrdili spaninig testom (Šoja & Chamil, 2019). Slične zaključke dobili su Ehlers i Gauer (2019) koristeći Kolmogorov-Smirnov test i test racija varijanse uz glavnu pretpostavku heteroskedastičnosti s ciljem da ispitaju kakvi su efekti ulaganja u pet najpoznatijih kriptovaluta kao što su u portfelju. Zaključuju da Bitcoin i Ripple pružaju minimalne pogodnosti u portfelju i volatilnosti koji su u skladu sa idejom optimizacije portfelja prema Markowitzovoj teoriji dok Ethereum, Litecoin i Dash ne pružaju takav efekat. Štaviše, Baur i Dimpfl (2021) ukazuju na činjenicu da je Bitcoin ekstremno volatiln – čak deset puta više od volatilnosti kursa američkog dolara prema evru i jenu.

Briere et al. (2015) su u koristeći podatke o sedmičnim promjenama tokom perioda od 2010. do 2013. godine analizirali su investiranje u Bitcoin iz pozicije institucionalnog investitora iz Sjedinjenih Američkih Država koji ulaže u tradicionalne finansijske instrumente (akcije, obveznice i glavne valute) i alternativne investicije (robe i nekretnine). Zaključili su da, tokom posmatranog perioda, investiranje u Bitcoin ima odlikuje izuzetno visok nivo povrata ali i rizika. Osim toga, zapažaju da investiranje u Bitcoin omogućava benefite od uključivanja u takav portfelj. Carpenter (2016) je insistirajući na varijansi i na očekivanoj vrijednosti pokazao da Bitcoin može biti poželjan instrument za diverzifikaciju. Bouri et al. (2017) koristi dinamički korelacioni model i ispituje da li Bitcoin može da se (is)koristi kao zaštita od rizika i kao alternativna aktiva u portfelju koji uključuje glavne akcijske indekse, obveznice, naftu, zlato, te najpoznatije indekse na dobra (Šoja & Chamil, 2019). Ova grupa autora obrađuje podatke na dnevnom i na sedmičnom nivou dnevne tokom perioda od polovine 2011. do kraja 2015. godine. Pokazali su da efekti ulaganja u bitcoin imaju efekte hedžinga. Uvrštavanje Bitkoina u portfelj tradicionalnih finansijskih instrumenata jeste u skladu sa ispitivanjima diversifikacije ulaganjem u tradicionalne finansijske instrumente. Empirijski nalazi naše studije sugerišu da će tokom cijelog perioda investitori imati koristi od diverzifikacije kombinacijom ulaganja u kompanije iz razvijenih i novih ekonomija (Switzer & Tahaoglu, 2015). Takođe, ranija istraživanja pokazuju da ova strategija daje odlične rezultate i kada se primjenjuje i na instrumente sličnih karakteristika i nivoa rizika, poput državnih obveznica (Grujić, Application of the modern portfolio theory in diversification of the debt securities portfolio in emerging markets, 2016).

METODOLOGIJA

Optimizacija portfelja podrazumijeva nekoliko koraka. Prvi korak predstavlja izbor instrumenata koji se u analizu uključuju, drugi korak je izračunavanje povrata, sljedeći jeste izračunavanje te iskazivanje kovarijansi među finansijskim instrumentima i posljednji korak jeste konstrukcija optimalnog portfelja.

Pretpostavke portfolio teorije prema Makowitzu jesu:

- investitor uzima u obzir svaku alternativu za investiranje koja je predstav-

ljena rasporedom vjerovatnoće očekivanih prinosa u posmatranom periodu;

- investitor iskazuje tj. ocjenjuje rizik portfelja na osnovu varijabilnosti sastavnih elemenata;
- investitorove odluke baziraju se jedino na očekivanom prinosu i riziku, tako da su njihove krive korisnosti funkcija očekivanog prinosa i očekivane varijanse (ili standardne devijacije) prinosa (Grujić, 2021)
- investitori maksimiziraju očekivanu korist i njihove krive korisnosti demonstiraju umanjujuću marginalnu korisnost bogatstva;
- za isti nivo rizika ulagači priželjkiju ostvarivanje viših prinosa i obratno – za određen nivo očekivanih prinosa, investitori preferiraju manji rizik
- zanemarivanje transakcionih troškova.

Volatini finansijski instrumenti imaju visoku standardnu devijaciju. S druge strane, standardna devijacija kod relativno stabilnih finansijskih instrumenata je niska niska. S tim u vezi, standardna devijacija iskazuje neizvjesnost kao rizik, čak i u slučaju kada postoje natprosječni povрати koji su poželjni za investitora.

Value-at-risk (VaR) jeste metodologija koju institucionalni investitori koriste upravo za iskazivanje tj. kalkulaciju potencijalnih gubitaka na određenoj investiciji. Ista metodologija omogućava iskazivanje vjerovatnoće nastanka takvih gubitaka. Upotrebom VaR modela se iskazuje najgori mogući scenario sa kojim bi se pojedinačni investitor mogao moći susreti kada bi uložio u konkretnu aktivu. U procjeni VaR-a se uzima u obzir posmatrani period, nivo povjerenja i suma svih gubitka izražena procentualno (Formula 1).

Formula 1.

$$VaR_{x,a} = -z_a \sigma S$$

Izvor: (Bodie et al., 2014)

U ovoj formuli z_a čini kvantilni red a jeste standardizovana slučajna varijabla dok je S vrijednost pozicije. Sa ciljem da se izračuna VaR portfelja primjenom Markowitz metodologije, nužno je iskazati kovarijansu i korelaciju među posmatranim finansijskim instrumentima, očekivani povrat i rizik svakog pojedinačnog finansijskog instrumenta koji se uključuje u portfelj (Formula 2).

Formula 2.

$$E_{r(p)} = \sum_{i=1}^n W_i E_{i(r)} = W_1 E_{1(r)} + W_2 E_{2(r)} + \dots + W_N E_{N(r)}$$

Izvor: (Levišauskait, 2010)

U ovom slučaju $E_r(p)$ predstavlja očekivani povrat r portfelja, p i W predstavljaju težinu odnosno procentualno učešće ili udio finansijskog instrumenta i u portfelju p . S ciljem da se stekne uvid kako se kreću vrijednosti finansijskih instrumenata koji se uključuju u portfelj, neophodno je izračunati korelaciju među njima.

Bez obzira na to što postoje indicije da ulaganje u Bitcoin zaista smanjuje rizik cijelog portfelja, poželjno je uobziriti VaR u analizu. Naime, racionalni institucionalni investitori će svakako ispitati i iskazati nivo rizika iskazane kroz dnevne promjene vrijednosti određenog finansijskog instrumenta (Formula 3).

Formula 3.

$$\text{Kovarijansa } (A, B) = \frac{\sum(r_A - \bar{r}_A) \sum(r_B - \bar{r}_B)}{N}$$

Izvor: (Šoja & Chamil, 2019)

Pri čemu r_A predstavlja povrat aktive A, a sa aspekta investitora, r_B predstavlja povrat aktive B dok N predstavlja broj opservacija.

Korelacija između aktiva A i B u portfelju se iskazuje na uobičajen način (Formula 4).

Formula 4.

$$\text{Korelacija } (\rho) = \frac{\text{cov}(A, B)}{\sigma_A \sigma_B}$$

Izvor: (Šoja & Chamil, 2019)

U ovom iskazu Cov (A, B) pokazuje kovarijansu između finansijskih instrumenata A i B, dok σ_A i σ_B predstavljaju standardnu devijaciju finansijskih instrumenata A i B.

PODACI

Portfelj koji se struktura obuhvata berzanske indekse iz zemalja evrozone koji predstavljaju aproksimaciju tržišta akcija izabраних zemalja. Zemlje koje su uzorku predstavljaju zemlje evrozone. Uzete su u uzorak s ciljem da se pri kalkulacijama zanemare valutni rizik i arbitraža a s ciljem da se istraživanje fokusira na efekte diverzifikacije. U analizi su indeksi posmatrani kao zasebne hartije od vrijednosti. U praksi najbliže tome su *exchange traded funds* koji repliciraju kretanje indeksa. Naime, na razvijenim tržištima postoje brojni „berzovni trgovani fondovi“ koji repliciraju ulaganje u određeni indeks ili sektor. Za određivanje rizika pojedinačnih pozicija u koje se ulaže potrebna je standardna devijacija, odnosno varijansa, jer ona mjeri koliko su pojedini iznosi, u ovom slučaju prinosi, udaljeni od prosjeka. Prilikom određivanja optimalnog portfelja koji uključuje kriptovalutu Bitcoin, u radu se, iz pozicije institucionalnog investitora koji ulaže u zemlje Evrozone, posmatraju dnevne promjene berzanskih indeksa.

Na početku su iskazani dnevni povrati za svaki finansijski instrument koji će se razmotriti za uključivanje uključuje u proces optimizacije. Poslije toga, koristeći modernu teoriju optimizacije portfelja, izračunat je efikasan portfelj, tj. „optimalan portfelj“, kojeg upravo odlikuje činjenica da odbacuje najmanji rizik - izražen standardnom devijacijom. Postavljena su određena ograničenja prilikom izračunavanja optimalnog portfelja. Prvo, udio svakog instrumenta može biti 0% i ići do 100%. Drugim riječima, tokom simulacije se može potpuno odbaciti ulaganje u neki berzanski indeks ali se može i sav iznos uložiti samo u jedan. Dalje, cilj optimizacije jeste da se iznađe

Tabela 1. Deskriptivna statistika: dnevni podaci za 2020 godinu.

	Austrija	Belgija	Kipar	Finska	Francuska	Njemačka	Grčka	Irska	Italija	Nizozemska	Portugal	Slovačka	Španija	Slovenija	Bitcoin
Mean	-0.03%	-0.01%	-0.05%	0.06%	-0.01%	0.03%	0.00%	0.03%	0.00%	0.03%	-0.01%	-0.41%	-0.04%	0.00%	0.60%
StDev	2.33%	2.12%	1.24%	1.77%	2.05%	2.08%	2.61%	1.95%	2.21%	1.79%	1.68%	6.42%	2.14%	1.33%	2.84%
Freq<0	51.78%	47.43%	51.78%	48.62%	48.62%	50.20%	47.43%	46.64%	45.85%	46.64%	48.22%	34.78%	49.01%	42.29%	39.53%
Parametric VaR	-3.85%	-3.50%	-2.09%	-2.86%	-3.38%	-3.39%	-4.30%	-3.18%	-3.63%	-2.92%	-2.78%	-10.96%	-3.56%	-2.19%	-4.08%
Empirical VaR	-3.51%	-3.80%	-1.62%	-3.03%	-3.52%	-3.69%	-4.00%	-2.88%	-3.34%	-3.06%	-2.27%	-1.99%	-3.28%	-1.87%	-3.51%
Parametric CVar	-4.82%	-4.38%	-2.60%	-3.60%	-4.24%	-4.26%	-5.39%	-4.00%	-4.55%	-3.67%	-3.48%	-13.64%	-4.45%	-2.75%	-5.27%
Empirical CVar	-6.01%	-5.61%	-3.35%	-4.58%	-5.32%	-5.19%	-7.14%	-5.18%	-5.76%	-4.54%	-4.22%	-10.56%	-5.18%	-3.61%	-5.72%

Izvor: Kalkulacija autora

portfelj sa minimalnim rizikom, minimalnom standardnom devijacijom koji uključuje Bitcoin, kao i potoflio koji ne uključuje Bitcoin. Treće, nisu predviđene podaje na kratko. Na kraju, ignorišu se odnosno zanemaruju stvari troškovi transakcija i prilagođavanja portfelja.

Deskriptivna statistika za analizirani period obuhvata podatke o prosječnom povratu, standardnoj devijaciji, učestalosti negativnog povrata i VaR-u za analizirani period (Tabela 1). Dnevni povrati za analizirane instrumente pokazuju da je povrat kod tradicionalnih instrumenata uglavnom skroman, dok je ovaj podatak najveći za Bitcoin i iznosi 0,60% dnevno. Međutim, i standardna devijacija, kao mjera za iskazivanje rizika, je najveća upravo kod Bitkoina, što se može smatrati potvrdom da je ovaj instrument zaista najrizičniji.

Ukoliko rizik određenog finansijskog instrumenta u velikoj varira tokom posmatranog perioda, kao što je to slučaj tokom, „pandemijske”, 2020. godine, standardna devijacija nudi manje pouzdane procjene stvarnog rizika. Prema tome, je za procenu rizika korisno primjeniti i metod VaR. Na ovaj način se iskazuje koliko institucionalni investitor može da očekuje da će izgubiti investirajući sredstva u neki finansijski instrument, pod istim tržišnim uslovima kao što su bili u posmatranom period (Šoja & Chamil, 2019). Na primjer, banke i regulatori, koriste VaR mjeru sa namjerom da iskažu koji dio portfelja mora da bude pokriven od mogućeg gubitka pri određenom nivou rizika.

U ovomradu su iskazani parametarski te empirijski VaR i CvaR, uz interval povjerenja koji iznosi 95%. Rezultati pokazuju da standardna devijacija kao mjera rizika kao i VaR za Bitcoin ne odstupaju u značajnoj mjeri u odnosu na ostale instrumente. To znači da je tokom posmatranog perioda Bitcoin imao slabiju volatilnost. Razlozi tome su različiti, ali neki od vjerovatnih jeste činjenica su brojne kompanije počele da prihvataju Bitcoin kao instrument plaćanja (Tesla kompanija), dok su provajderi platnih kartica istakli da su spremni svoje platforme prilagoditi kriptovalutama (Mastercard i Visa). Ovakve okolnosti su pojačale povjerenje u Bitcoin i zasigurno umanjile njegove dnevne volatilnosti.

REZULTATI

Moderna portolio teorija navodi na zaključak da diversifikacija portfelja mora da uključi one instrumente koji nisu u međusobno visokoj korelaciji. Polazeći od toga uslova, iskazana je korelacija za posmatrane finansijske instrumente (Tabela 2).

Tabela 2. Matrica korelacije, dnevni povрати

	Austrija	Belgija	Kipar	Finska	Francuska	Njemačka	Grčka	Irska	Italija	Nizozemska	Portugal	Slovačka	Španija	Slovenija	Bitcoin
Austrija	1														
Belgija	-0.063	1													
Kipar	0.140	0.049	1												
Finska	0.706	0.044	0.084	1											
Francuska	0.023	0.901	0.041	0.112	1										
Njemačka	0.110	0.118	-0.152	0.170	0.092	1									
Grčka	0.211	-0.115	0.121	0.129	-0.202	0.327	1								
Irska	0.074	0.809	0.037	0.184	0.875	0.091	-0.201	1							
Italija	0.247	0.168	0.023	0.255	0.216	0.216	0.092	0.270	1						
Nizozemska	0.053	0.853	0.059	0.149	0.933	0.084	-0.211	0.836	0.196	1					
Portugal	0.062	0.789	0.052	0.140	0.867	0.101	-0.185	0.789	0.211	0.844	1				
Slovačka	0.021	0.023	-0.002	-0.036	0.048	-0.007	0.003	0.055	0.006	0.024	0.038	1			
Španija	-0.017	0.884	0.078	0.084	0.929	0.074	-0.160	0.820	0.261	0.847	0.854	0.074	1		
Slovenija	0.568	0.009	0.165	0.630	0.076	0.062	0.094	0.111	0.062	0.127	0.113	0.003	0.027	1	
Bitcoin	-0.071	0.049	0.056	-0.031	0.038	-0.034	0.123	0.015	-0.096	0.049	0.008	-0.064	0.026	0.001	1

Izvor: Kalkulacija autora

Rezultati pokazuju da je među posmatranim finansijskim instrumentima niska korelacija. Tačnije, gotovo da i ne postoji. Ovakav rezultat pokazuje da se od analiziranih finansijskih instrumenata može stvoriti optimalno diversifikovan portfelj. Da bi se ispitali uloga i doprinos Bitkoina u portfelju analizirana su dva portfelja. Oba portfelja imaju za cilj minimalizovanje rizika investitora, odnosno kreiranje portfolija koji minimizira rizika i nudi odgovarajući stepen povrata (Tabela 3).

Tabela 3. Optimalan portfelj sa ulaganjem u Bitkoin bez ulaganja u njega

	Minimalan rizik, sa Bitkoin	Minimalan rizik, bez Bitkoin
Prosječan povrat	0,019%	-0,022%
Standardna devijacija	0,752%	0,784%
Nagib/slope	0,026	-0,028
Austrija	0,0000%	0,0000%
Belgija	0,0000%	0,0000%
Kipar	33,7406%	35,6691%
Finska	0,0000%	0,0000%
Francuska	0,0000%	0,0000%
Njemacka	12,1013%	6,3712%
Grčka	2,6201%	6,2782%
Irska	0,0000%	0,0000%
Italija	6,2244%	6,6993%
Nizozemska	2,1714%	5,6866%
Portugalija	12,2027%	12,5609%
Slovačka	1,4753%	1,3723%
Španija	0,0000%	0,0000%
Slovenija	22,7795%	25,3625%
Bitkoin	6,6848%	0,0000%

Izvor: Kalkulacija autora

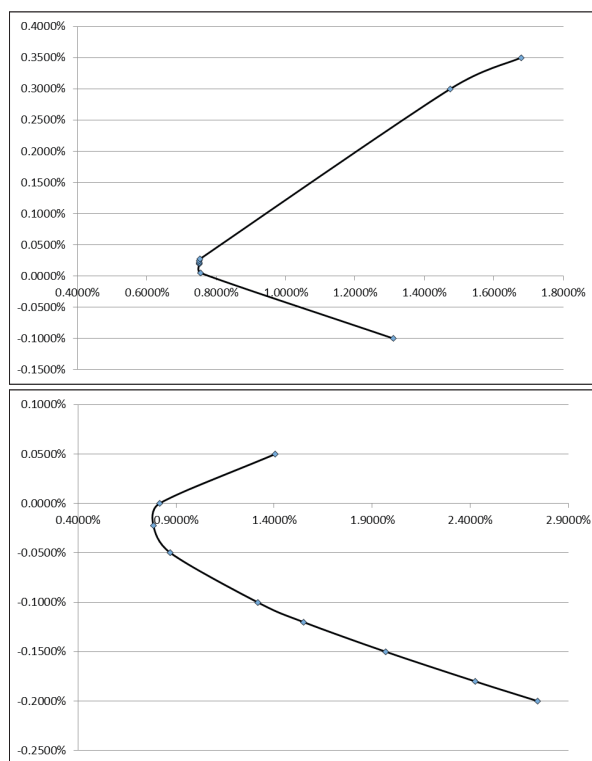
Rezultati pokazuju da potfolio koji je uključuje Bitkoin nosi negativan dnevni povrat koji iznosi -0,022%, dok portfelj koji uključuje Bitkoin nosi dnevni povrat od 0,019%. Primjećuje se da je standardna devijacija potoflija koji uključuje Bitkoin niža od strandardne devijacije portfelja koji ne uključuje ovaj instrument, što sugerise da je sa aspekta rizika opravdano uključiti Bitkoin u strukturu portelja. Tačnije, rezultati sugerišu da uključivanje Bitkoina u udjelu od oko 6,7% pojačava omjer rizika i povrata, odnosno čini portelj efikasnijim.

DISKUSIJA

Rezultati pokazuju da je, ukoliko se uvrsti Bitkoin u potfolio, moguće ostvariti veći prinos uz manji rizik, ukoliko se rizik mjeri standardnom devijacijom. Rezultati pokazuju da je Shape ratio pozitivan kod portfelja koji uključuje Bitkoin, što je još jedna mjera koja potvrđuje korisnost uključivanja Bitkoina u investicioni portfelj. Ta-

kođe, diverzifikacija i njena primjena na investicioni portfelj jeste prvobitno teorijski koncept ali ima široku primjenu i u praksi. Osim toga, ovaj koncept je široko prihvaćen instrument za akademsku zajednicu ali i za praktičare odnosno institucionalne investitore. Ovakvi rezultati su u skladu sa istraživanjem koje su izveli Liu i Tsyvinski iz 2018. koje je pokazalo da je opravdano u portfelj uključiti oko 6% Bitkoina kako bi se postigao optimalan portfelj. Prema ovom autoru, čak i oni koji su izraženi skeptici prema Bitkoinu treba da u svom portfelju drže barem 4% Bitkoina. Rezultati istraživanja koje je proveo u ovom radu potvrđuju tezu koja je iznijeta od strane Tsyvinski (2018). Isto tak, ranije studije (Šoja & Chamil, 2019) su pokazale da je opravdano uvrstiti oko 2% Bitkoina strukturu portoflija. U ovom slučaju, pomarajući sve podtke iz 2020. godine, pokazano je da opravdano da taj udio bude i veći. Grafion broj 1 pokazuje efikasan set za portfelj sa bez Bitkoina za analizirani period, odnosno za 2020. godinu, dnevni povrati.

Grafikon 1. Efikasan set sa Bitkoin (lijevi graf), efiksan set bez Bitkoin (desni graf)



Izvor: Kalkulacija autora

Očigledno je da efikasan set koji uključuje Bitkoin nosi pozitivan povrat, dok efikasan set koji predstavlja strukturu portfelja bez Bitkoina uglavnom nosi negativne dnevne povrate. Rezultati pokazuju da portfelj koji uključuje Bitkoin predstavlja portfelj koji obezbjeđuje bolji odnos rizika i povrata, što je prihvatljivo sa aspekta racionalnog investitora.

Optimalan portfelj, odnosno portfelj koji nosi minimalan rizik, osim Bitkoina, uključuje akcijske indekse Kipra, (33,74%), Njemačke (12,1%), Grčke (2,6%), Italije (6,2%), Nizozemske (2,17%), Portugalijske (12,2%), Slovačke (1,47%) i Bitkoina (6,7%). Sa druge strane, portfelj bez Bitkoina uključuje iste instrumente uz povećanje njihovog udjela u ukupnoj strukturi portfelja.

ZAKLJUČAK

Bitcoin predstavlja izuzetno volatilan instrument. S obzirom na to da se radi o spekulativnoj i visoko volatilnom finansijskom instrumentu, investitori imaju različite stavove oko Bitkoina. Prvo u pogledu definisanja ove kriptovalute a onda po pitanju uključivanja ovog instrumenta u investicioni portfelj. Uključivanjem Bitkoina u investicioni portfelj ostvaren je cilj diverzifikacije. To je smanjivanje rizika institucionalnog investitora na najmanju moguću mjeru. U praksi, to znači da je moguće kreirati portfelj koji nosi prihvatljiv nivo rizika uz željeni nivo povrata. S obzirom na to da je Bitcoin izuzetno volatilan i posljedično - rizičan instrument, očekivani povrat je takođe - visok. Rezultati istraživanja pokazuju da kriptovaluta Bitcoin može poslužiti kao poželjan instrument za diversifikaciju investicionog portfelja, kada se posmatra portfelj koji uključuje akcijske indekse. Ovi rezultati potvrđuju polaznu hipotezu istraživanja. Takođe, rezultati upućuju na zaključak da je poželjno uključiti u strukturu portfelja određeni udio Bitkoina, oko 6%. Takođe, ukoliko investitor želi da se dodatno izloži riziku, može kreirati portfelj u kojem će biti značajnije učešće Bitkoina i koji može odbaciti veći dnevni povrat ali i značajno veći nivo rizika. Međutim, prije nego što donesu odluku o investiranju u Bitcoin, investitori treba da donesu investicionu politiku i ciljeve iz čega će proizaći sklonost ka riziku i ciljani tj. očekivani povrat, te da u skladu sa tim odluče i udio bitkoina koji žele da uključe u portfelj. U konačnici, uključivanje Bitkoina u portfelj pojačava diversifikaciju portfelja, kreira efikasniji portfelj prihvatljiv racionalnom investitoru. Pri interpretaciji dobijenih rezultata nužno je imati u vidu pretpostavke optimizacije portfelja. Institucionalni investitor će razmotriti svaku alternativu za investiranje koja je predstavljena rasporedom vjerovatnoće očekivanih prinosa u posmatranom periodu. Potom će da iskaže rizik na osnovu varijabilnosti posmatranih finansijskih instrumenata. Dakle, njegove odluke se zasnivaju isključivo na očekivanom prinosu i riziku tako da za isti nivo rizika ulagači priželjkuju ostvarivanje viših prinosa i obratno. Osim toga, pretpostavka je da su u modelu zane-mareni transakcioni troškovi. Na kraju, rad otkriva prostor za druga istraživanja. Prvi, u pravcu kombinovanja drugih kriptovaluta sa različitim finansijskim instrumentima i, drugi, u pravcu, analiziranja u pravcu diverzifikacije portfelja koristeći kriptovalute ali iz aspekta investitora sa različitim averzijom prema riziku.

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PORTFOLIO DIVERSIFICATION WITH BITCOIN. EVIDENCE FROM INSTITUTIONAL INVESTORS PERSPECTIVE

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Summary: *The paper investigates the empirical verification of the efficacy of investment diversification using the main stock exchange indices in the Eurozone countries and Bitcoin. The paper also investigates whether and to what extent it is desirable for institutional investors, in addition to traditional financial instruments, to invest in*

Bitcoin. The aim of the research is to examine whether it is justified and to what extent to include Bitcoin in the portfolio of an institutional investor. Through this research, an attempt is made to find an answer to the research question: "What share of Bitcoin in the portfolio structure is justified, taking into account the ratio of return and risk"? The analysis includes data on the daily movement of selected action indices as well as the movement of Bitcoin. The methodology involves the analysis of high-frequency data, given that daily trading data were used. The results show that it is justified to include Bitcoin in the portfolio structure. Also, the results show which share of Bitcoin in the portfolio is justified from the aspect of institutional investors. The data used in the analysis cover the period from 2019 and 2020. Two portfolios have been created, one without Bitcoin and the other with Bitcoin. The goal in optimization for both portfolios is to minimize risk. The observed period of the analysis is characterized by the crisis caused by the coronary virus pandemic and the period of active bitcoin trading. The results of the research show that Bitcoin is a good source of diversification in a portfolio that contains traditional financial instruments, both for an investor who is not prone to risk, and for those investors who have a greater appetite for risk. The conclusion is that the rational behavior of institutional investors requires consideration of investing in Bitcoin using the Markowitz model. However, given the high degree of volatility, investors should be careful when making decisions about including Bitcoin in their investment portfolio. Bitcoin is an extremely volatile instrument. Given that it is a speculative and highly volatile financial instrument, investors have different views on Bitcoin. First in terms of defining this cryptocurrency and then in terms of including this instrument in the investment portfolio. By including Bitcoin in the investment portfolio, the goal of diversification has been achieved. This is to reduce the risk of the institutional investor to a minimum. In practice, this means that it is possible to create a portfolio that carries an acceptable level of risk with the desired level of return. Given that Bitcoin is an extremely volatile and consequently - risky instrument, the expected return is also - high. The results of the research show that the cryptocurrency Bitcoin can serve as a desirable instrument for diversification of the investment portfolio when looking at a portfolio that includes stock indices. The results suggest that it is desirable to include in the structure of the portfolio a certain share of Bitcoin, about 6%.

Keywords: portfolio optimization; diversification; cryptocurrency Bitcoin; modern portfolio theory; risk.

The JEL Classification: C53, C61, G11, G12, G15, G23, Q55.



PORESKI TRETMAN VLASTITIH PRIHODA U JAVNOM SEKTORU

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Sažetak: Svaka ekonomija se sastoji od dva komplementarna dijela, javnog i privatnog sektora koji moraju biti uskladjeni kako bi se ostvario kontinuirani privredni rast. Ipak, između ova dva sektora postoje značajne razlike. Jedna od razlika ogleda se u poreskom tretmanu vlastitih prihoda. U privredama u tranziciji, kakve su privrede Republike Srpske i Bosne i Hercegovine, javni sektor ima značajniju ulogu u ukupnim ekonomskim odnosima, za razliku od razvijenih privreda. U javnosti Republike Srpske ne postoji jasna percepcija o pojmu vlastiti prihodi javnog sektora. Cilj ovog rada jeste da se da odgovor na pitanje da li se i u kojoj mjeri prihodi koje ostvaruju poslovni subjekti u javnom sektoru – budžetski korisnici – mogu smatrati vlastitim prihodima i kakav je njihov poreski tretman? U analizu su uključeni podaci o ostvarenim prihodima budžetskih korisnika u okviru prosvjete i kulture u Republici koji se svrstavaju u vlastite prihode. Napominjemo da ove rezultate treba posmatrati kroz prizmu ograničenja istraživanja, koje smo detaljno opisali u tekstu.

Ključne riječi: javni sektor, privatni sektor, vlastiti prihodi, obrazovni sektor

Jel klasifikacija: E 24, J 31

UVOD

Javne finansije su oblast ekonomije koja se bavi analizom poreske politike i politike javne potrošnje. Ova oblast je poznata i pod nazivom ekonomija javnog sektora ili javna ekonomija. Oblast javnih finansija je usko povezana sa fiskalnom politikom jedne države koja detaljno izučava odnos fiskalnih varijabli i makroekonomskih agregata. Ova oblast ekonomske nauke bavi se izučavanjem uticaja poreza, javne potrošnje, deficita, javnog duga na porast cijena, na spoljnotrgovinski bilans, na investicije i

cjelokupnu privrednu aktivnost. Kako su javni i privatni sektor komplementarni dijelovi svake ekonomije bez čije usklađenosti nije moguće ostvarivati kontinuirani privredni rast, odlučili smo se za analizu poreskog tretmana vlastitih prihoda koje ostvaruju javne ustanove u odnosu na poreski tretman prihoda u okviru privatnog sektora.

Problem istraživanja ovog rada definišimo pitanjem: da li i u kojoj mjeri javne ustanove mogu ostvarivati vlastite/sopstvene prihode i kakav je poreski tretman ostvarenih prihoda? Predmet istraživanja je zakonski osnov ostavljivanja vlastitih prihoda i uporedni prikaz važeće zakonske regulative iz ugla posmatranja javnog sektora i privatnog sektora.

Osnovnu hipotezu rada definišemo sljedećom tvrdnjom: *javne ustanove imaju pravo na ostvarivanje vlastitih prihoda, iako nisu registrovane za obavljanje djelatnosti po kojoj ostvaruju prihode, ali bi trebalo da se prihodi sa aspekta poreza isto tretiraju kao i u privatnom sektoru*. Analizom određenih zakonskih rješenja, osnovnu hipotezu ćemo odbaciti, djelimično potvrditi ili potvrditi.

Prvi dio rada smo posvetili analizi pojma i uloge javnog sektora uz posmatranje karakteristika javnog sektora u evropskim zemljama i Republici Srbiji. U nastavku rada bavimo se vlastitim prihodima u javnom sektoru u Republici Srpskoj, sa posebnim osvrtom na ustanove u okviru obrazovnog sektora. Razmatranja koja dajemo kroz zaključak rada daće nam odgovor na postavljeni problem istraživanja i odrediti, potvrditi ili opovrgnuti istinitost postavljene hipoteze.

ULOGA JAVNOG SEKTORA I POJAM JAVNOG SEKTORA

U većini svjetskih država, u njihovim privrednim strukturama, javni sektor igra značajnu ulogu. Još uvijek se ne može utvrditi jasna veza između dvije varijable: obima javnog sektora i razvijenosti privrede. Često se u medijima može čuti informacija da izrazito nerazvijene zemlje imaju prevelik državni aparat koji predstavlja balast privredi, međutim postoje i izrazito razvijene privrede u kojima je javni sektor izuzetno obiman (Norveška, Danska) (Manojlović, 2010).

Istovremeno, postoje razvijene države sa niskim obimom javnog sektora (Japan, Sjedinjene Američke Države). Smatramo da se još uvijek ne može jasno i eksplicitno utvrditi obim javnog sektora koji bi bio optimalan i adekvatan za sve svjetske države. S obzirom da se naša država, kao i susjedne države članice Zapadnog Balkana¹ pokušava integrisati u Evropsku Uniju, kada posmatramo Evropsku Uniju i njen javni sektor možemo primjetiti sljedeće činjenice:

- „javni sektor ima ključnu ekonomsku ulogu kao regulator, pružalac usluga i poslodavac (u okviru ovog sektora zaposleno je više od 25% od ukupnog broja zaposlenih u EU; javni sektor obuhvata značajan dio ekonomske aktivnosti u 28 država članica EU);
- postoje mnoge uloge i funkcije javnog sektora: razvijanje i održavanje povjerenja u Vladu, donošenje i primjena zakona, osiguravanje socijalne sigurnosti, kreiranje institucionalnog okvira, pružanje usluga i odgovaranje na potrebe građana i privrede na evropskom, nacionalnom, regionalnom i lokalnom nivou;

¹ Zapadni Balkan je termin određen u političkim krugovima EU i označava države koje imaju ambiciju da postanu članice EU: BiH, CG, Srbija, Makedonija, Albanija (prim. aut.).

- javni sektor ima ključnu ulogu u razvijanju mjera koje bi osigurale finansijsku stabilnost i fiskalnu konsolidaciju, kao i u preduzimanju koraka za podsticaj rasta, konkurentnosti i zaposlenosti;
- efikasan i produktivan javni sektor može biti snažan pokretač ekonomskog rasta kroz podršku privatnom sektoru.“ (European Commission, 2013)

Često se u praksi dešava da se budžetski i javni sektor poistovjećuje, međutim budžetski sektor je uži pojam od javnog sektora. Ukoliko posmatramo Republiku Srbiju i njen javni sektor on je u velikoj mjeri sličan javnom sektoru Republike Srpske. Ono što je drugačije u Republici Srbiji u odnosu na nas, jeste da imamo sljedeće pod-niveoe budžetskog sektora:

- administracija na centralnom i lokalnom nivou,
- obrazovni sektor
- sektor vojske i policije
- zdravstveni sektor.

Sve organizacije koje se finansiraju iz budžeta Republike predstavljaju budžetski sektor. Budžetski sektor je slično definisan i kroz Zakon o reviziji javnog sektora Republike Srpske

(„Službeni glasnik Republike Srpske“, br. 98/05, 20/14). U skladu sa predmetnim zakonom budžetske institucije su sve institucije u Republici Srpskoj, uključujući ministarstva i druge republičke organizacije koje se finansiraju iz Budžeta Republike Srpske, dok su budžetski korisnici sve institucije koje se finansiraju iz budžeta, kako republičkog, tako i opštinskog budžeta. Za razliku od budžetskog sektora javni sektor uključuje i sektor javnih preduzeća. Javna preduzeća u Srbiji podrazumevaju javna preduzeća čiji je osnivač centralni nivo vlasti – republička javna preduzeća, i javna preduzeća čiji je osnivač lokalni nivo vlasti – lokalna javna preduzeća.

Javni sektor Republike Srpske podrazumjeva institucije osnovane Ustavom Republike Srpske ili zakonom i u kojima Republika ima učešće u vlasništvu („Službeni glasnik Republike Srpske“, br. 98/05).

Evropska unija na sličan način uređuje ovu problematiku. Prema rječniku statističkih pojmova koji je donijela Organizacija OECD „javni sektor obuhvata opšti sektor Vlade plus sva javna preduzeća uključujući centralne banke (OECD, 2005).

Fraskatijevo uputstvo definiše javni sektor kao skup dva entiteta:

- svi sektori, kancelarije i drugi organi koji pružaju zajednici zajedničke usluge bez naknade, koje se drugačije ne bi mogle obebjediti a da bi bile ekonomski opravdane, kao i upravljanje državom, vođenje ekonomske i socijalne politike zajednice,
- neprofitne institucije² koje su kontrolisane i uglavnom finansirane od strane vlade (Sašić & Novakovic, 2015).

POJAM I VRSTE JAVNIH PRIHODA

Pojam javnih prihoda se kroz teoriju pojavljuje uz korekcije definicije javnih prihoda u zavisnosti od naučne discipline koja ih tretira. Tako sa aspekta ekonomije javni prihodi predstavljaju prihode države od poreskih i vanporeskih izvora kako bi se omogućila javna potrošnja odnosno javni rashodi.

² Non-profit institutions (engl., prim. aut.).

Javni prihodi predstavljaju novčana sredstva koja država prikuplja radi pokrivanja državnih rashoda. Samim tim, prihodi imaju osnovnu namjenu, a to je finansiranje državnih (javnih) funkcija. Iz tih sredstava se finansiraju opšte i zajedničke društvene potrebe. Sa aspekta pravnih nauka javni prihodi su različiti u zavisnosti od pravnog osnova sticanja javnih prihoda, a u skladu sa pravnim nastankom i razvojem države. U državama srednjeg vijeka najveći značaj u prihodima koje je država ostvarivala jesu:

- regali i
- domenski prihodi (Drljača, 2018).

U savremenim državama do prihoda država dolazi po osnovu fiskalnog suvereniteta, po osnovu prava prinude, prava svojine, prava iz ugovora, prava iz retorzija, prava naslijeđa i drugih osnova. U literaturi najčešće nalazimo sljedeću klasifikaciju javnih prihoda:

- "orginarni i derivatni prihodi;
- javnopravni i privatnopravni prihodi;
- redovni i vanredni prihodi;
- prihodi od stanovništva i prihodi od pravnih lica;
- prihodi širih i užih teritorijalnih jedinica;
- namjenski i nenamjenski prihodi i
- prihodi u novcu i prihodi u nature" (Drljača, 2018).

Izvorni javni prihodi, odnosno originarni su oni prihodi do kojih država dolazi na osnovu svoje privredno – pravne aktivnosti, kao i po osnovu svojine. Tada država ima ulogu privatno – pravnog lica. Ove prihode država ostvaruje svojom ekonomskom aktivnošću na tržištu. S obzirom da je u pitanju tržišna aktivnost ona izvorne prihode ostvaruje ravnopravno nastupajući sa drugim privrednim subjektima ili po osnovu prava vlasništva. Izvorni prihodi predstavljaju prihode od državne imovine, prihode koje država obezbjeđuje kroz dobit javnih preduzeća koja su u državnoj svojini, kao i prihode koji su ostvareni od prodaje dobara i usluga i slično.

Derivarni javni prihodi su oni koje država ubire po osnovu svoje poreske vlasti. Ovi prihodi su izvedeni iz imovine, dohotka ili potrošnje drugih lica. Derivarni prihodi su prihodi javno-pravnog karaktera. Po načinu na koji se obezbjeđuju mogu se podijeliti na dvije vrste: dadžbinski (fiskalni) javni prihodi i nedadžbinski

Dadžbinski javni prihodi se obezbjeđuju neposrednim nametanjem javnih nameta fizičkim i pravnim licima: porezi, takes, naknade i doprinosi. Druga grupa derivarnih javnih prihoda su oni prihodi koje država obezbjeđuje posrednim nametanjem obaveza plaćanja od strane fizičkih i pravnih lica: novčane kazne, eksproprijacija, obvezni zajam i slično.

Glavne karakteristike javnih prihoda su:

- svi služe za podmirenja javnih potreba, tj. državnih rashoda (javnih rashoda),
- svi se ubiru u novcu,
- ubiru se redovno (godišnje ili u nekom drugom intervalu),
- plaćanje ne dovodi u pitanje postojeću imovinu (izuzetno, realni porez na imovinu). (Centar za zastupanje građanskih interesa, 2010)

Država ostvaruje prihode i od stanovništva i od pravnih lica. To su prihodi koje građani plaćaju državi na osnovu ostvarenog dohotka (ličnog primanja po osnovu rada ili po osnovu imovine). Prihodi koje država ostvaruje od pravnih lica su prihodi koje

privredni subjekti plaćaju iz dobiti, koju ostvaruju na kraju godine po osnovu ekonomske aktivnosti. Redovne prihode država prihuplja kontinuirano. Neredovne prihode država ostvaruje ad hoc, neredovno, u svrhu pokrivanja rashoda koji su nastali iznenada (Centar za zastupanje građanskih interesa, 2010).

Fiskalni javni prihodi: porezi, takse, naknade, doprinosi. Nefiskalni javni prihodi se mogu ostvariti po više osnova: u vidu poklona, prihodi od državne imovine, prihodi koje ostvaraju državne ustanove, prihodi koje ostvaruju državna preduzeća, i slično.

U literaturi možemo naći i četiri podjele javnih prihoda, to su:

- klasifikacija OECD-a;
- klasifikacija Ujedinjenih nacija;
- Evropski sistem integrisanih ekonomskih računa i
- klasifikacija Međunarodnog monetarnog fonda (Trklja, Dašić, & Trklja, 2014).

Jedna od najpotpunijih klasifikacija javnih prihoda jeste klasifikacija koju je definisao OECD. Prethodno pomenute međunarodne klasifikacije javnih prihoda kreiraju mogućnost za uporednu analizu savremenih poreskih sistema i poreske politike (Trklja, Dašić, & Trklja, 2014).

Zakonska regulativa u svakoj državi kroz različit set zakona posebno obrađuje javne prihode, odnosno prihode koji se smatraju prihodom budžeta države. U našem slučaju poseban naglasak ćemo staviti na javne prihode Budžeta Republike Srpske.

VLASTITI PRIHODI U JAVNOM SEKTORU REPUBLIKE SRPSKE SA POSEBNIM OSVRTOM NA OSNOVNE ŠKOLE

Ključna uloga države kao regulatora i nosioca uticaja na privredu i privredne djelatnosti jeste da država donosi i usvaja propise kojima se definišu pravila ponašanja svih učesnika na tržištu. Druga uloga države jeste da ona obezbjeđuje primjenu tih propisa. Odgovornost države se ogleda i u obezbjeđivanju makroekonomske stabilnosti kroz kombinaciju ekonomskih politika, a naročito kombinacijom monetarne³ i fiskalne politike. U skladu sa prethodno navedenim javni sektor utiče na alokaciju resursa, kao i preraspodjelu dohotka. Međutim, postavlja se pitanje da li je javni sektor po pitanju ostvarivanja takozvanih vlastitih prihoda u povlašćenom položaju u odnosu na privanti sektor.

U Republici Srbiji, svojevremeno je kroz Zakon o budžetskom sistemu iz 2009. godine takođe bio definisan pojam sopstvenih prihoda, međutim Zakonom o budžetskom sistemu stav 8., člana 19., taj pojam je brisan ("Službeni glasnik Republike Srbije" br. 68/2015, 103/2015, 99/2016, 113/2017, 95/2018, 31/2019, 72/2019 i 149/2020). Tako se sada u Republici Srbiji pod javnim prihodima podrazumjevaju, a u skladu sa pomenutim članom Zakona, prihodi nastali upotrebom javnih sredstava, kako slijedi:

1. "prihodi od kamata;
2. prihodi od davanja u zakup, odnosno na korišćenje nepokretnosti i pokretnih stvari u državnoj svojini;

³ Monetarna politika u Bosni i Hercegovini nema ulogu kakvu imaju monetarne politike u razvijenim zemljama. U praksi funkcioniše kao Valutni odbor, što je najniži stepen funkcionisanja monetarnog sistema jedne zemlje.

3. prihodi od davanja u zakup, odnosno na korišćenje nepokretnosti i pokretnih stvari u svojini autonomne pokrajine i jedinice lokalne samouprave;
4. prihodi nastali prodajom usluga korisnika javnih sredstava čije je pružanje ugovoreno sa fizičkim i pravnim licima na osnovu njihove slobodne volje;
5. prihodi od novčanih kazni izrečenih u krivičnom, prekršajnom i drugom postupku koji se vodi pred državnim organom i oduzeta imovinska korist u tom postupku;
6. prihodi od novčanih kazni izrečenih u prekršajnom postupku za prekršaje propisane aktom skupštine lokalne vlasti i oduzeta imovinska korist u tom postupku;
7. koncesiona naknada.
8. *(brisana)*”

Zakon o budžetskom sistemu Republike Srpske definiše prihode budžeta Republike Srpske članom 8., kako slijedi:

“Prihodi budžeta Republike su:

- a. dio prihoda od indirektnih poreza uplaćen u budžet Republike sa Jedin-stvenog računa UIO, utvrđen u skladu sa principima raspodjele definisa-nim ovim zakonom. koji nakon raspodjele sa drugim korisnicima u Repu-blici pripadaju budžetu Republike;
- b. porez na dobit;
- c. porez na dohodak:
 1. porez na dohotke od autorskih prava, prava srodnih autorskim pravima i prava industrijske svojine.
 2. porez na prihode od kapitala.
 3. porez na prihode od kapitalnih dobitaka;
 4. porezi na upotrebu, držanje i nošenje dobara;
 5. porez na upotrebu motornih vozila,
 6. porez na upotrebu čamaca, plovećih postrojenja i jahti,
 7. porez na upotrebu vazduhoplova i letjelica,
 8. porez na držanje i nošenje oružja;
- d. takse:
 1. republičke administrativne takse,
 2. republičke sudske takse,
 3. posebna republička taksa;
- e. naknade:
 4. koncesione naknade za ustupljeno pravo za koncesije koje dodjeljuje Vlada Republike Srpske,
 5. naknade, odnosno sredstva za zaštitu okoline,
 6. naknade za korišćenje prirodnih i drugih dobara od opšteg interesa,
 7. naknade za priređivanje igara na sreću;
- f. novčane kazne, izuzev kazni utvrđenih aktima grada, odnosno opštine;
- g. prihodi od nezakonito stečene imovine i imovinske koristi;
- h. prihodi od grantova;
- i. prihodi koje budžetski korisnici ostvare vršenjem redovne i dopunske djelat-nosti u skladu sa zakonom, u procentu utvrđenom zakonom kojim se uređuje izvršenje budžeta,

- j. doprinos za penzijsko i invalidsko osiguranje i
- k. ostali prihodi budžeta Republike.” („Službeni glasnik Republike Srpske“, br. 121/2012, 52/2014, 103/2015 i 15/2016).

Sa aspekta obrazovnih ustanova u Republici Srpskoj Zakon o osnovnom vaspitanju i obrazovanju određuje da:

“škola može obezbjeđivati sredstva iz vlastitih prihoda – izdavanjem školskog prostora i na druge načine, o čemu odluku donosi školski odbor. Sredstva ostvarena izdavanjem školskog prostora uplaćuju se na račun javnih prihoda – organizacioni kod škole i koriste se isključivo za investiciona ulaganja, opremanje, poboljšanje materijalnog položaja škola i obilježavanje značajnih datuma za školu.” („Službeni glasnik Republike Srpske”)

Na osnovu citiranih odredaba Zakona o osnovnom vaspitanju i obrazovanju data je mogućnost ostvarivanja vlastitih prihoda i navedena namjena utroška tih prihoda.

Međutim, postavlja se pitanje da li je neophodno oporezovati preostalu razliku sredstava koja je ostala nakon utroška dijela ostvarenog prihoda. Sadašnja praksa je da ukoliko se ostvareni prihod ne utroši u tekućoj kalendarskoj godini prihod se prenosi u sljedeću godinu.

Ukoliko prihvatimo i branimo tezu da budžetski korisnici imaju zakonsko pravo na ostvarivanje vlastitih prihoda, a u skladu sa Zakonom o izvršenju budžeta za tekuću kalendarsku godinu, te da ostvarene prihode rashoduju prema sopstvenoj procjeni, potrebno je da obuhvatimo i zakonsku regulativu po kojoj se ostvaruje i oporezuje prihod.

Zakon o porezu na dobit članom 4, stav 1, tačka 4), alineja 2) jasno govori da su pravna lica koja su registrovana za obavljanje nedobitne djelatnosti, a ostvaruju prihode, u obavezi da, ukoliko obavljaju i djelatnost na tržišnom osnovu i ostvaruju prihode iz tržišnih izvora, obveznici poreza na dobit za onaj dio dobiti koju ostvare obavljanjem takvih djelatnosti („Službeni glasnik Republike Srpske”). Razlika između oporezivih prihoda i rashoda koji se odbijaju za datu poresku godinu, a u skladu sa Zakonom o porezu na dobit predstavlja poresku osnovicu za poresku godinu. Poreska stopa iznosi 10% na poresku osnovicu za poresku godinu, koja je za pravna lica kalendarska godina.

Na ovaj način su budžetski korisnici koji iznajmljuju prostor i koji ostvaruju prihod po tom osnovu u značajnoj prednosti u odnosu na privredna društva koja ostvaruju prihod po osnovu izdavanja u zakup određene nepokretnosti ili u odnosu na fizička lica koja su u skladu sa Zakonom o porezu na dohodak obavezna da plaćaju 10 % poreza na dohodak ostavren po tom osnovu (“Službeni glasnik Republike Srpske” broj: 60/15, 5/16, 66/18, 105/19, 123/20).

Drugi aspekt sa kojeg bismo mogli posmatrati ostvaren prihod jeste da on spada u neporeske prihode. Naime, “neporeski prihodi su heterogena kategorija prihoda u kojoj preovlađuju prihodi od imovine (naplaćene kamate, zakupnine) naknade, takse, kazne i drugi prihodi koji se ne mogu razvrstati. Za razliku od poreskih prihoda, neporeske prihode karakteriše postojanje protivusluge za naplaćen iznos” (Drljača, 2018) kao što je, na primjer, naknada za korišćenje nekog prirodnog dobra.

Kako bismo otklonili nedoumice, a u cilju potvrde ili odbacivanja postavljene hipoteze, obratili smo upitom Poreskoj upravi Republike Srpske. Mišljenje Poreske uprave Republike Srpske broj: 06/1.01/0103-052.4-10545/2021 od 16.06.2021. godine potvrdilo je postavljenu hipotezu, odnosno javne ustanove su obveznici poreza na

dobit koju ostvare obavljanjem djelatnosti na tržišnom osnovu i ostvaruju prihode iz tržišnih izvora.

Ograničenja sa kojim su se autori suočili da empirijski prikažu vrijednosti ostvarenih prihoda obrazovnih ustanova u Republici Srpskoj u određenoj mjeri svode ovaj rad na aspekt preglednog rada. Međutim, ovo pitanje svakako otvara nove pravce istraživanja u smislu praćenja primjene zakonskih rješenja u praksi.

ZAKLJUČAK

Privatni i javni sektor su komplementarni sektori svake privrede. Između ova dva sektora postoji jasna međuzavisnost, a ne konkurentnost i isključivost. Istovremeno, postoje i određene razlike između ova dva sektora, koje su uslovljene vlasničkom strukturom, ciljevima poslovanja i sl. Javni i privatni sektor imaju različite uloge u svjetskim ekonomijama. U razvijenim zapadnim ekonomijama, koje nisu imale „izlete“ u socijalističko (plansko) privredno organizovanje, privatno vlasništvo ima dugu tradiciju postojanja i shodno tome igra mnogo značajniju ulogu u privrednoj strukturi zemlje. Nerazvijene države i države u tranziciji, kakve su Republika Srpska i Bosna i Hercegovina, institut privatne svojine uvode nakon raspada socijalističkih uređenja. Kako zbog navedenog, tako i zbog mnogih drugih razloga, javni sektor u nerazvijenim državama i državama u razvoju ima značajniju ulogu u ukupnoj privrednoj strukturi nego u razvijenim zapadnim državama. Uticaj države na privredu ostvaruje se preko različitih mehanizama. U većini razvijenih zemalja i zemalja u tranziciji javni sektor kroz poreze i javnu potrošnju preraspodeljuje oko 40% BDP, a u nekim zemljama i više od toga. U modernim privredama država je najveći poslodavac koji zapošljava značajan procenat radne snage. Problem istraživanja ovog rada definisali smo pitanjem: da li i u kojoj mjeri javne ustanove mogu ostvarivati vlastite/sopstvene prihode i kakav je poreski tretman ostvarenih prihoda? Predmet istraživanja je bio zakonski osnov i uporedni prikaz važeće zakonske regulative iz oblasti poreza iz ugla posmatranja javnog sektora i ugla privatnog sektora. U prvom dijelu rada smo analizirali pojam i ulogu javnog sektora, osvrćući se na određene karakteristike sektora u zemljama Evropske unije (EU) i drugim susjednim zemljama. U nastavku rada bavili smo se sopstvenim prihodima u javnom sektoru u Republici Srpskoj, sa posebnim osvrtom na ustanove obrazovanja. Vođeni ovim problemom, analizirali smo poreski tretman vlastitih prihoda koje ostvaruju javne ustanove u odnosu na poreski tretman prihoda u okviru privatnog sektora. Shodno prethodnom, i diskusijom koju smo imali u posljednjem dijelu rada zaključujemo da je osnovna hipoteza: *javne ustanove imaju pravo na ostvarivanje vlastitih prihoda, iako nisu registrovane za obavljanje djelatnosti po kojoj ostvaruju prihode, ali bi trebalo da se prihodi sa aspekta poreza isto tretiraju kao i u privatnom sektoru*, istinita. Da zaključimo, javnim ustanovama je ostavljena sloboda da ostvaruju vlastite prihode. Međutim, rezultati provedene analize nameću određena pitanja, čije odgovore je potrebno tražiti u narednim istraživanjima. *Koje mjere je potrebno preduzeti i koje korake je neophodno da učine javne ustanove kako bi evidentirane vlastite prihode koristile u cilju poboljšanja obrazovnog sistema?* Stoga predlažemo dodatna istraživanja na ovu temu, kako bi se ponudili kvalitetni odgovori na postavljena pitanja.

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Summary: *The private and public sectors are complementary sectors of any economy. There is a clear interdependence between these two sectors, not competitiveness and exclusivity. At the same time, there are certain differences between these two sectors, which are conditioned by the ownership structure, business goals and the like. The public and private sectors have different roles in world economies. In developed western economies, which did not have “excursions” into socialist (planned) economic organization, private property has a long tradition of existence and, accordingly, plays a much more important role in the economic structure of the country. Underdeveloped countries and countries in transition, such as the Republika Srpska and Bosnia and Herzegovina, introduced the institute of private property after the collapse of socialist organizations. For this reason, as well as for many other reasons, the public sector in underdeveloped and developing countries has a more significant role in the overall economic structure than in developed western countries. The influence of the state on the economy is realized through various mechanisms. In most developed and transition countries, the public sector redistributes about 40% of GDP through taxes and public spending, and in some countries even more. In modern economies, the state is the largest employer employing a significant percentage of the workforce. We defined the research problem of this paper with the question: can and to what extent public institutions can generate their own / own revenues and what is the tax treatment of realized revenues? The subject of the research was the legal basis and a comparative overview of the current legislation in the field of taxes from the point of view of the public sector and the point of view of the private sector. In the first part of the paper, we analyzed the concept and role of the public sector, looking at certain characteristics of the sector in the European Union (EU) and other neighboring countries. In the continuation of our work, we dealt with our own revenues in the public sector in the Republic of Srpska, with a special focus on educational institutions. Guided by this problem, we analyzed the tax treatment of own revenues generated by public institutions in relation to the tax treatment of revenues within the private sector. According to the previous, and the discussion we had in the last part of the paper, we conclude that the basic hypothesis is: public institutions have the right to generate their own revenues, although they are not registered to perform revenue-generating activities, but tax revenues should be treated as and in the private sector, true. To conclude, public institutions are left free to generate their own revenues. However, the results of the conducted analysis raise certain questions, the answers to which need to be sought in future research. What measures need to be taken and what steps do public institutions need to take in order to use the recorded own revenues in order to improve the education system? Therefore, we suggest additional research on this topic, in order to offer quality answers to the questions asked.*

Keywords: *private sector, public sector, own source revenues, educational sector.*

JEL Classification: *E 24, J 31*



THE INTENSITY OF IMPACT OF LABOR SUPPLY REDUCTION ONTO THE GROWTH OF WAGES IN REPUBLIC OF SRPSKA

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Abstract: *The aim of this research is to determine the level of intensity of the impact of labor supply reduction onto the growth of wages in Republic of Srpska. Simple linear regression is the main tool that is used in this research. The model of the relationship is established between two variables, the labor supply reduction and growth of wages in order to draw conclusions about the behavior of one, based on the behavior of the other variable. Concerning the results, we have seen that there is a marked reduction in labor supply at the level of the entire economy of Republika Srpska and a significant growth of wages. More importantly, the wage growth is very strongly influenced by labor supply reduction. By statistical regression analysis, we have determined the statistically significant, strong impact of the reduction of labor supply on wage growth ($y = -0.004x + 2365.3$; $R = -0.91$; $R^2 = 0.83$; $p < 0.01$). There is a general trend of wage growth that the pandemic crisis has not stopped and which will certainly continue in the post-crisis period. However, the key question is whether this kind of growth is sustainable. Unfortunately, there is a decline in labor productivity. The decline in gross value added per worker or labor productivity has been more or less pronounced in the three observed years. Current wage growth, with declining productivity, is not sustainable in the long run. If things with productivity remain as they have been for the three observed years and if the wage growth continues, it will inevitably lead to reduced competitiveness of the economy. The RS economy can avoid this trap if productivity starts to rise again. Improving productivity requires large investments in knowledge and technology, and companies need public sector support in this area.*

Key words: Labor Supply, Wages, Labor Productivity, Competitiveness

JEL Classification: E24.

INTRODUCTION

At the level of the overall economy of Republika Srpska, there is a significant decline in labor supply. This decrease in labor supply has a negative impact on the entire economy; however, labor-intensive economic sectors are more negatively affected, and geographically the most vulnerable are underdeveloped areas where the local economy has not developed in a way that creates enough quality jobs. Average gross and net wages continued to rise in this environment. From 2010 to the present, wages have constantly increased. However, salary growth has been particularly strong since 2017. Despite the pandemic health and economic crises, wages continued to rise in 2020.

The main problem addressed in this research is the impact of labor supply reduction onto to growth of wages. The main hypothesis in this research is that labor supply reduction very strongly influences growth of wages. This paper presents the results of that analysis and also some projection of trends in the labor market of Republika Srpska. The aim of this analysis is to determine the level of intensity of the impact of labor supply reduction onto to growth of wages and also to provide certain estimates related to labor market developments in the Republic of Srpska in the period 2021-2026, based on an analytical approach and exact indicators. The result of this analysis is a comprehensive estimation of the impact of declining labor supply on wage growth in the medium term, based on current trends.

In addition to the introduction, this document consists of five other parts. The second part reviews the literature that investigates relations between labor supply and wages. The third part presents the methodology, and the fourth the empirical data of labor supply, wage growth and productivity trends in the labor market of Republika Srpska. The fifth part of this paper is presenting results and discussion of results - correlation and regression between falling labor supply and rising wages. The sixth part provides some concluding remarks.

LITERATURE REVIEW

The large body of research that investigates relations between labor supply and wages can be divided into two categories. The first is concerned with the micro level. According to significant research of the micro supply of labour (Meghir & Phillips, 2010) (Saez, Slemrod, & Giertz, 2012) labor economists agree that relations between labor supply and wages are not very strong. Extending this approach to include all potentially significant sources of dynamism, like human capital accumulation, has been considered by a number of academics. This research has demonstrated that, even if the genuine model comprises different sources of dynamics, the data must be seen through the lens of the basic model. This research has demonstrated that if the genuine model comprises other sources of dynamics but the data is evaluated via the lens of the basic model, estimations of supply of labour changes will tend to underestimate their true values significantly.

The macro perspective is the focus of the second branch. Macroeconomists, on the other hand, frequently use equilibrium models with large Hicks and Frisch labor supply elasticities (Chetty, Guren, Manoli, & Weber, 2011). This research focuses on challenges related to aggregating in the relatively large margin. Small elasticities at the individual level might be compatible with large elasticities at the macro level, according to the research.

There is one thing that each of these literatures have in common. There is a direct link between parameters of individual level preferences and Hicks and Frisch elasticities at the aggregate level in MaCurdy's basic life cycle model (MaCurdy, 1981). That direct link is broken by all of the extensions to the basic model. This isn't to argue that personal preferences aren't still important.

The relation of labor supply and wages is a function of all other characteristics of the economic environment as well, not just supply itself: The wage process (e.g., how human capital is acquired), production technology (e.g., how productivity varies with hours), and so on are all examples of this. Individual preferences alone are insufficient to describe labor supply in these more complex situations. In general, structural modeling of the entire economic environment is required to predict the impacts on changes in wages. Also, changes of after-tax salaries can have a wide range of effects on labor supply, due to the nature of the adjustment, how long it's been in force, and the age range affected.

THE METHODOLOGY

Simple linear regression is the main tool that is used in this research. It is statistical method used when we want to model the relationship between two variables, or draw conclusions about the behavior of one, based on the behavior of the other variable. In particular, simple linear regression gives us information on how much variation of the response variable Y is described by the explanatory variable X . The linear relationship between the response variable Y and the explanatory variable X means that

$$Y = \beta_0 + \beta_1 \cdot X$$

As in practice we will not come across data that can be perfectly described by direction, ie there will inevitably be noise among the data, an approximation error will occur and therefore the model of simple linear regression is

$$y_i = \beta_0 + \beta_1 \cdot x_i + \varepsilon_i,$$

where:

- y_i value of the dependent variable for the i -th data
- x_i value of the explanatory variable for the i -th data
- ε_i error value (which we cannot observe) for the i -th data
- β_0 unknown parameter, cross-sectional parameter
- β_1 unknown parameter, slope parameter

What we assume in the model so far is that the linear relationship between the dependent and independent variables is reasonable. In order to be able to draw statistical conclusions, we must introduce assumptions about the error that represents the deviations of the response variable from the adjusted direction.

Also, certain projections were created in this research. The basic method in creating projections on the labor market in the Republic of Srpska is the statistical method of extrapolation of the trend. Extrapolation of a trend consists of predicting the situ-

ation or future movements based on the situation or past movements. The subject of the analysis is a set of chronologically determined values of selected variables in the field of wages, employment and unemployment of labor force, labor productivity, etc.

In this research, we used three different methodologies, ie. trend extrapolation models:

- Linear trend model that explains the linear movement (positive or negative) of the values of the observed time series over time
- Exponential trend model that explains nonlinear exponential motion, ie. exponentially increasing values of the observed time series over time
- A polynomial trend model that explains a pattern in data that is curved or detached from a real linear trend, in a large data set that contains many fluctuations, and graphs with curved trend lines are generally used to show a polynomial trend.

We used all three models for each time series, and the choice of which model to choose for which time series depended on the coefficient of determination (R^2). The coefficient of determination is the ratio of the sum of squares of deviations interpreted by the trend model and the sum of squares of total deviations. The coefficient of determination shows what percentage of the sum of squares of the deviation of the value of the variable Y from the arithmetic mean is interpreted by the trend model. Simply put, how much the movement of the phenomenon can be explained by the trend. The trend model is more representative the closer this indicator is to 1 or 100%. The representativeness of the trend model is higher in cases where there are small differences between the original values of the time series and the trend value. For each time series that we analyzed, we chose to extrapolate the trend according to the model that is most representative, ie. where the coefficient of determination is the highest.

We used the linear trend model in the following form:

$$Y_t = \beta_0 + \beta_1 X + \varepsilon_i$$

where:

Y - value of the time series; dependent variable,

β_0 - parameter indicating the expected value of the dependent variable in the initial period β_1 - indicator of change in each subsequent period

X - time; independent variable,

ε_i - a random component that shows that there are positive and / or negative deviations from the original values around the line of a specific linear trend model.

We used the exponential trend model in the following form:

$$Y_t = \beta_0 \cdot \beta_1^{X_t}$$

where:

Y_t - the expected value of a variable whose movement we interpret as a trend

β_0 - parameter that indicates the expected value of the dependent variable in the initial period β_1 - indicator of change in each subsequent period

X_t - variable time

We used the polynomial square trend model in the following form:

$$Y_t = \beta_0 + \beta_1 X + \beta_2 X^2$$

where is:

Y_t - the expected value of a variable whose movement we interpret as a trend

β_0 - parameter that indicates the expected value of the dependent variable in the initial period

β_1 - indicator of change in the first period

β_2 - indicator of change in the second period

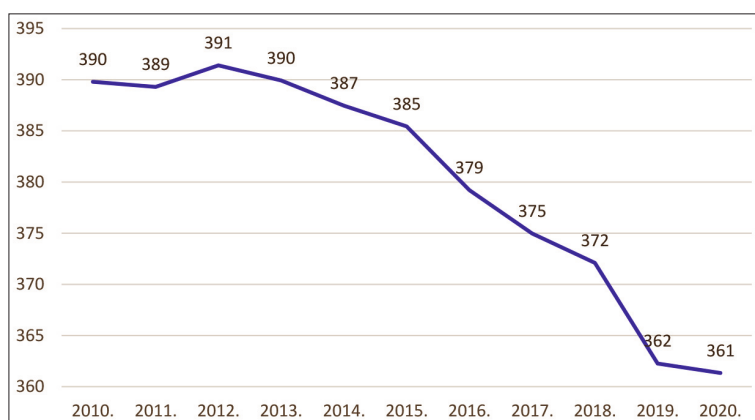
X_t - variable time

The basis for this survey were standard reports of statistical institutions (Statistical Yearbook, Labor Force Survey, etc.), but also special reports generated for the specific needs of this survey.

EMPIRICAL DATA

The workforce in Republika Srpska has been at a fairly stable level of some 390,000 workers for many years. The decline in the total population, which exists as a long-term trend in the Republika Srpska and Bosnia and Herzegovina (Kadušić & Suljic, 2018), (Pasalic & Pasalic, 2016) until 2015, did not significantly affect the stability of the labor force. This is especially due to the fact that the Republika Srpska has a large number of people in the category of economically inactive population, so during the entire period until 2015, the loss of labor could be compensated by entering the economically inactive labor force.

Graph 1. Labor force in Republika Srpska (in thousands of workers)



Source: Republic Statistical Office of Republika Srpska

However, since 2015, we have seen a very pronounced trend of declining labor force, ie, a decline in labor supply in the Republika Srpska. A larger reduction in the labor force compared to a reduction in the inactive population means that fluctuations

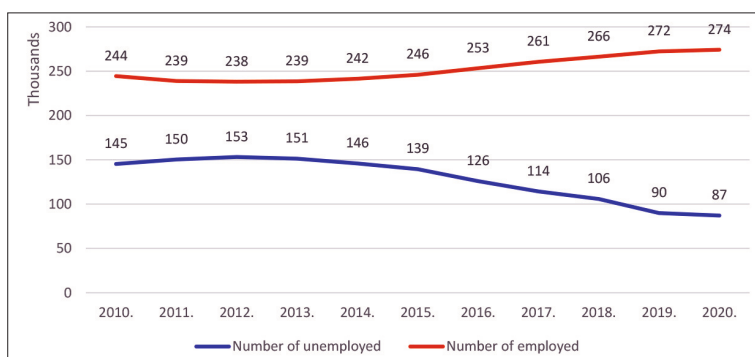
from the inactive to the active contingent are more difficult. This fluctuation increases the costs for companies in the field of training of newly arrived workers (Apgar IV, 2002) and lasts for a long time, compared to the outflow of “finished” skilled workers abroad.

As in the part where we talked about economic growth, here we see a strong impact of economic expansion in the European Union (Popović & Erić, 2018). As much as that expansion contributed to the growth of RS economy, in the same way it led to the outflow of labor to the countries of the European Union that were expanding at that time and which lacked labor. These countries could and can offer significantly higher salaries compared to the Republika Srpska and Bosnia and Herzegovina.

This trend is much better visible when we compare the data on the number of employed and unemployed, as we see in the chart below. The number of employees has been growing almost all the time, especially since 2015. If we look at all 10 years, we see that the number of employees increased from 244,000 in 2010 to 274,000 in 2020. This means that in this ten-year period, about 30,000 new jobs have been created in the economy of Republika Srpska.

However, when we look at the number of people registered as unemployed in the RS Employment Bureau, we see a much more pronounced decline. Thus, in 2010 there were 145,000 unemployed, while in 2020 that number was 87,000. This means that 58,000 unemployed people have stopped being registered as unemployed in the records of the Employment Bureau.

Graph 2. Number of employed and unemployed in Republika Srpska (in thousands)



Source: Republic Statistical Office of Republika Srpska

Here we can perform a simple calculation. About 30,000 of these unemployed people were employed in the 30,000 jobs created during this period. The other 28,000 people probably found work elsewhere¹.

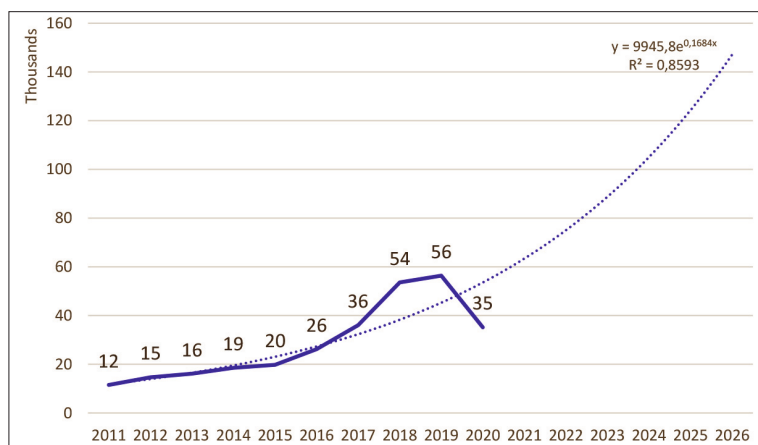
Where could that number of people find work? It is known that due to the migration outflow, the Republika Srpska is losing a significant number of young, working

¹ It is probable that there are those in this number who were removed from the records for some other reason, but that number is relatively small.

age population. In this analysis, we will use data on newly issued residence permits for BiH citizens in EU countries², which are kept in Eurostat databases. In this research, we will use the assumption that the trend of migration of the population of BiH is very similar, if not the same, as the trend of migration from RS. It must be emphasized here that only legal migration has been recorded here, where people obtain residence permits and join the formal sector. Also, there is a part of the population that “illegally” moves to EU countries, and that number is estimated at at least 15-20% of the number of migrants who move through official channels.

The five key countries to which BiH migrants have moved are: Germany, Slovenia, Croatia, Austria and Italy (Zoppi, 2019). What is particularly worrying is that the number of those emigrating from BiH has been growing year by year. As we can see in the chart below, the pandemic slowed down this process. Primarily due to restrictions on movement because the pandemic has led to numerous restrictions on population movement between countries.

Graph 3. Projection of the number of migrants from BiH to the EU (in thousands)



Source: Eurostat, <http://ec.europa.eu/eurostat/web/population-demography-migration-projections/migration-and-citizenship-data/database> and author calculations

There is also the impact of the EU’s economic slowdown, as there are fewer jobs available. Overall, the pandemic and recession of the EU economy have temporarily slowed the departure of the population from BiH, and the assumption of this projection is that this process will continue when the pandemic and recession pass.

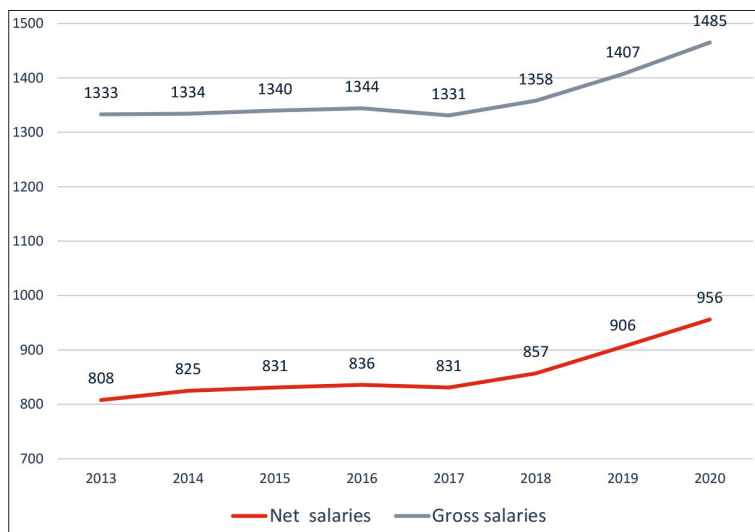
In this situation, average gross and net wages continued to rise. Even in 2020, despite the pandemic health and economic crisis, gross salaries increased by 78 KM, and net salaries by 50 marks, to the level of 1485 and 956 marks, respectively.

Wages have risen throughout the period from 2010 to the present. However, wage growth since 2017 is particularly pronounced, as we can see in the chart below. It

² Eurostat has data only for BiH. At the moment, it is not possible for the Republika Srpska to reach exact migration indicators.

is obvious that the growth of demand for work by companies, and the decline in labor supply due to people going abroad, led to an effect that came to the fore only in 2017, therefore, with a delay of two years.

Graph 4. Gross and net average salaries in Republika Srpska (in KM)

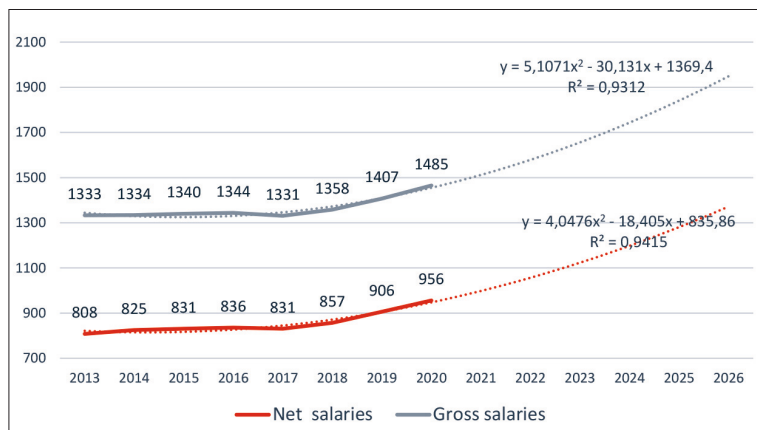


Source: Republic Statistical Office of Republika Srpska

This trend does not differ from the trend in other countries in the region such as Serbia and Croatia (Astrov, Leitner, Mara, Podkaminer, & Weinberger-Vidovic, 2020). A similar trend exists in the countries of the European Union, where most working age people from Bosnia and Herzegovina and Republika Srpska go.

All this will not be without an impact on the future level of salaries, in the next five to six years. When we look at the projection of wage growth in the economy of the Republika Srpska in the chart below, we see that this growth is much more pronounced in the period 2021-2026 than in any previous period. Thus, the average net salary in the Republic of Serbia will, in the period 2021-2026, increase by about 300 KM³.

³ Wage growth calculation was obtained based on the equation of the polynomial trend ($y = 4.0476x^2 - 18.405x + 835.86$) and projected for 2026

Graph 5. Projection of gross and net average salary in Republika Srpska until 2026 (in KM)


Source: Republic Statistical Office of Republika Srpska and author's calculations

RESULTS AND DISCUSSION - CORRELATION AND REGRESSION BETWEEN FALLING LABOR SUPPLY AND RISING WAGES

As already noted in the review of literature the relationship between labor supply and labor prices is well known in economic theory. Economic theory implies that changes in supply for labor also lead to changes in the price of labor. This means that it is completely logical to expect that a reduction in the supply of labor leads to an increase in its price. In this study, we supported this theoretical concept with exact econometric analysis, using statistical regression analysis. The goal here is to determine how strong is this relation. As part of this research, we analyzed the relationship between the decline in labor supply and growth of wages by the method of linear regression.

Linear regression was used to determine the impact of labor supply reduction (x - independent variable) on the amount of average net wage (y - dependent variable).

Regression line equation:

$$y = 2365.3412 - 0.004006x$$

X predicted Y, $R^2 = .83$, $F(1,9) = 44.31$, $p < .001$.

$\beta = -.004$, $p < .001$.

Regression ANOVA

Source	DF	Sum of Square	Mean Square	F Statistic (df1,df2)	P-value
Regression (between $\hat{y}_i$ and $\bar{y}$)	1	20005.3338	20005.3338	44.3078 (1,9)	0.00009305
Residual (between y_i and $\hat{y}_i$)	9	4063.5752	451.5084		
Total (between y_i and $\bar{y}$)	10	24068.9091	2406.8909		

R Square (R²) equals 0.8312. It means that 83.1% of the variability of Y is explained by X.

Correlation (R) equals -0.9117. It means that there is a very strong inverse relationship between X and Y.

Goodness of fit. Overall regression: right-tailed, $F(1,9) = 44.3078$, $p\text{-value} = 0.00009305$. Since $p\text{-value} < \alpha$ (0.01), we reject the H₀.

The linear regression model, $Y = b_0 + b_1X + \varepsilon$, provides a better fit than the model without the independent variable resulting in, $Y = b_0 + \varepsilon$.

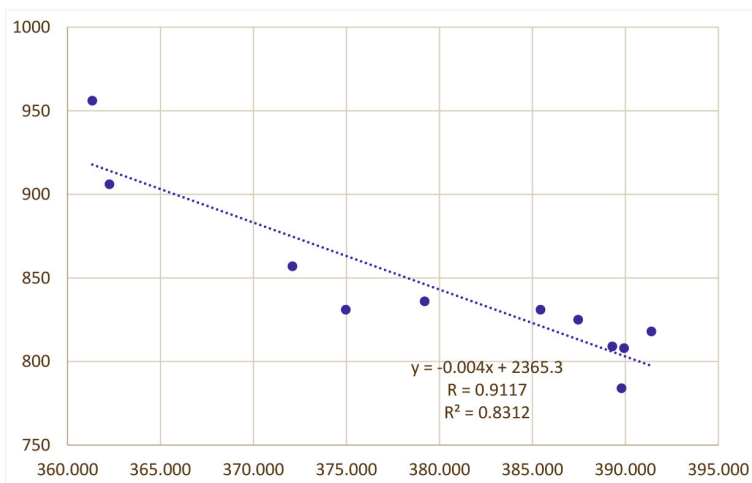
The Slope (a): two-tailed, $T(9) = -6.6564$, $p\text{-value} = 0.00009305$. For one predictor it is the same as the p-value for the overall model.

The Y-intercept (b): two-tailed, $T(9) = 10.331$, $p\text{-value} = 0.000002727$. Hence b is significantly different from zero.

Residual normality. The linear regression model assumes normality for residual errors. Shapiro will p-value equals 0.9966. It is assumed that the data is normally distributed.

A very strong negative correlation was found ($R = -0.91$, $p < 0.01$), with a coefficient of determination (R²) of high 83.1%. Simply put, regression analysis shows that there is a very strong cause-and-effect relationship between the reduction in labor supply and the increase in average net wages in the Republika Srpska.

Graph 6. Regression line of the impact of falling labor supply (x variable) on average net wages (y variable)



Source: Republic Statistical Office of Republika Srpska and author's calculations

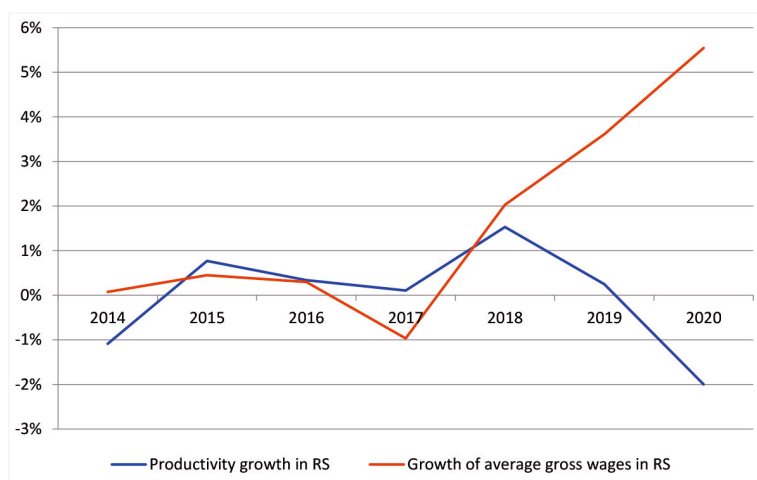
Based on the linear regression equation ($y = -0.004x + 2365.3$; $R^2 = 0.8312$), we can calculate the extent to which the decline in the labor force affects wage growth. For example, if the labor force from 2020 is reduced by 5% (about 18,000 workers), the net average salary at the level of Republika Srpska will increase by 72.3 KM (this refers only to the impact of falling workers, other impacts on wage growth are not included).

Regression statistical analysis shows that wage growth will inevitably happen and that is why it is important to start activities in time that can help the economy to adapt to these trends. The biggest problem in the labor market at the moment is the complete opposite of wage growth and labor productivity. It is known from economic theory, as well as economic practice, that if we want wage growth, it must be accom-

panied by productivity growth (Cahuc, Carcillo, & Zylberberg, 2014). If this is not the case, then the increase in wages inevitably leads to a deterioration in the competitiveness of the company, a reduction in profits and, ultimately, a reduction and jeopardization of the business itself.

In the chart below, we see that until 2018, wages and labor productivity followed each other. However, since 2018, we see an extremely pronounced divergence between wages and productivity, so wages continue to grow in all three years, at significantly higher rates than it was until 2018. In the same period, we have a marked decline in labor productivity.

Graph 7. Wage growth and productivity decline in Republika Srpska (in%)



Source: Republic Statistical Office of Republika Srpska and author's calculations

If the decline in productivity continues and wages continue to rise, it cannot be sustainable in the long run. Simply put, if there is no at least equal or higher productivity growth in the domestic economy, this increase in wages will significantly reduce their competitiveness, especially in the international market.

This is especially true for labor-intensive sectors, such as leather and footwear, textiles, and all companies that perform so-called *lohn jobs* (Hanson, 2021). The key competitive advantage of such companies is cheap labor, and when it becomes more expensive, this advantage is lost. Therefore, it is crucial to increase the productivity and added value of such and other companies, because that is the only way to compensate for this increase in wages.

CONCLUSION

At the beginning of this analysis, we asked ourselves how strong is the impact of the current reduction in labor supply on wage growth in the Republic of Srpska? What did we conclude?

First, we have seen that there is a marked reduction in labor supply at the level of the entire economy of Republika Srpska. This reduction in labor supply has a nega-

tive impact on the whole economy, however, some parts are more negatively affected - labor-intensive economic sectors such as footwear and clothing, and geographically the most vulnerable are underdeveloped areas where there is no economy developed in a way that creates enough quality jobs. What is even more worrying is the migration from Republika Srpska and Bosnia and Herzegovina abroad. The projections we made in this analysis show that in the previous period we had an explosive, exponential growth in the number of migrants from BiH to Europe. The projection also takes into account the impact of the pandemic on migration. This impact is, by all accounts, short-term, so it is to be expected that the departure of people from RS and BiH will continue after the pandemic. Second, we have seen that wage growth is very strongly influenced by labor supply reduction. By statistical regression analysis, we have determined the statistically significant, strong impact of the reduction of labor supply on wage growth. So there is a general trend of wage growth that the pandemic crisis has not stopped and which will certainly continue in the post-crisis period. That in itself is not a bad thing. On the contrary, it is crucial for the population to achieve a rise in living standards. However, the key question we asked is whether this kind of growth is sustainable. To recall, wage growth is only sustainable in a situation where there is equal or greater growth in labor productivity. It is an economic fact that cannot be refuted. Thus we come to the third conclusion. Third, in the last three observed years, unfortunately, there is a decline in labor productivity, ie. decline in gross value added per worker. This increase in wages and declining productivity provides the answer to more fundamental question. Is current wage growth in Republika Srpska sustainable in the long run? Current wage growth, with declining productivity, is not sustainable in the long run. If things with productivity remain as they have been for the last three years and if the wage growth continues, it will inevitably lead to reduced competitiveness of the economy, reduced opportunities for companies to participate and compete in the European market and jeopardize survival of many economic sectors. The RS economy can avoid this trap if productivity starts to rise again. Improving productivity requires large investments in knowledge and technology, and companies need public sector support in this area. Businessmen often emphasize that the professional assistance provided by public institutions is insufficient and inadequate (Pucar, 2014). The almost complete disconnection of the scientific-research and business community, further aggravated by the weak demand for knowledge and technology by companies, indicates that much work is needed by the private and public sectors to increase the technological potential and the productivity and economic competitiveness. This requires a change in the doctrinal approach to economic policy in the post-crisis period. During the recession, as economic theory and practice dictate, it was very important to pursue an expansive fiscal policy as the only instrument available in such situations. However, this impact on aggregate demand has only a short-term effects. Generic expansionary fiscal policy cannot yield good results in the long run.

At this moment, it is necessary to turn to the management of aggregate supply, which means improving the competitiveness of the economy. It is necessary to turn to a focused policy that affects the aggregate supply, a policy that stimulates the technological development of companies, which stimulates the increase and adjustment of workforce knowledge, which stimulates the improvement of existing and new products, improving the position of RS companies in European value chains.

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UTJECAJ KORONA KRIZE NA EKONOMIJE MALIH SREDINA NA PRIMJERU POŽEŠKO-SLAVONSKE ŽUPANIJE U REPUBLICI HRVATSKOJ

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Sažetak: Početkom 2020. godine Svjetska zdravstvena organizacija proglasila je epidemiju COVID-19 javnozdravstvenom prijetnjom na međunarodnoj razini. Uz javno zdravstveni problem, korona kriza sa mjerama prevencije i liječenja od iste, koje su zahtijevale fizičku distancu, izolacije, zabranu putovanja, posjećivanja i okupljanja dovela je do značajnog udara na ekonomije svih zemalja pa čak i onih najrazvijenijih. Pogođen je velik broj sektora i građana, došlo je do poremećaja u lancima opskrbe, a Europska unija i vlade zemalja su pokušale pomoći ili i danas pomažu subvencijama ili drugim mjerama, kako bi se koliko toliko održala uposlenost i zaštitila tehnologija, radnici i radna mjesta. Pojedini sektori poput prometa ili turizma zabilježili su ogromne gubitke i dovedeni pred slom kakav se ne pamti. I Republika Hrvatska, (a s njom i predmet ovog istraživanja prostor Požeško-slavonske županije) se susrela s ovom opakom bolešću i njenim utjecajem na gospodarstvo. Nakon nešto više od 1,5 godine od početka epidemije, opravdano je istražiti utjecaj korona krize na mikroregije kao što je Požeško-slavonska županija.

Ključne riječi: požeško-slavonska županija, gospodarstvo, zaposleni, nezaposleni, BDP.

JEL: H12

UVOD

Požeško-slavonska županija (u daljnjem tekstu PSŽ) nalazi se u sjeveroistočnom dijelu Republike Hrvatske (u daljnjem tekstu RH), a Grad Požega mu je upravno i administrativno središte. Ukupna površina ove administrativne jedinice iznosi 1.815

km² što čini 3,2% ukupnog (kopnenog) teritorija RH-e. PSŽ sastoji se od dvije prostorno odvojene cjeline - Požeške kotline, koju nazivamo Požeštinom i Pakračko-lipičkog kraja, a administrativno je podijeljena na pet gradova (Požega, Pakrac, Lipik, Pleternica i Kutjevo) i pet općina (Brestovac, Velika, Kaptol, Jakšić i Čaglin). PSŽ reljefno promatrano podijeljena je na dva osnovna tipa, nizine uz rijeke Orljavu, Londžu i Pakru, te planine: Psunjom (984 m), Papukom (953 m), Krndijom (792 m), Dilj gorom (461 m) i Požeškom gorom (618 m).

Prema Nacionalnoj klasifikaciji prostornih jedinica za statistiku 2012. godinu, od 01. siječnja 2013. godine Požeško - slavonska županija je ušla u sastav statističke regije Kontinentalna Hrvatska. (Županija, 2013)

Arheološka nalazišta na području PSŽ potvrđuju da su prvobitni oblici različitih zanimanja, trgovine i građevinarstva u PSŽ postojali od najranijih vremena. Upravo iz toga doba potiče i naziv „Vallis aurea“ – zlatna dolina koji su dali Rimljani, zbog niza povoljnih uvjeta za boravak ljudi. Među najstarije gospodarske aktivnosti stanovnika PSŽ se ubrajaju trgovina, poljoprivreda, obrtništvo i graditeljstvo. Požeška županija u srednjem vijeku je upravno politička jedinica feudalne države i plemstva, a obuhvaćala je prostor Požeške kotline do Slavanskog Broda i bila je posjed ugarskih kraljeva. Za vladavine Turaka ovim prostorom (1537-1691), Požega je središte Sandžaka i time vojno, političko, upravno, administrativno i kulturno središte i na taj način dobiva najistaknutiju ulogu u Slavoniji koja joj prema ranijim povijesnim pokazateljima ili naknadno sve do današnjih dana nikad nije bila. O značaju Požeštine u doba Habsburgovca, najbolje govori podatak iz izvještaja Bečkoj komori od 2. prosinca 1698. godine, u kojem se navodi da je Požega nekoć bila metropola Slavonije, veliko trgovačko središte i grad s prosperitetom, mjesto koje su posjećivali i u njemu boravili visoki dužnosnici tih doba, što su bili dobri preduvjeti za budući razvoj. U vrijeme Habsburgovaca Požega je uz Zagreb, jedini centar višeg obrazovanja u Hrvatskoj. Postojao je filozofski studij za mlade franjevence i Academia Posegana. U rujnu 1765. godine, poveljom Marije Terezije Požega postaje slobodan kraljevski grad.

Od 1900. godine, kreće razvoj raznih industrijsko-prerađivačkih pogona, za obradu metala, izradu stakla, pilane za drvo, tvornica alkoholnih pića, poljoprivredni kombinati itd, od kojih i danas neke posluju (Kutjevo, Plamen, Zvečevo itd). (Strbašić, 1977) One svoj najveći uspjeh doživljavaju krajem 70-godina 20. stoljeća, kada su proizvodi iz Požege bili prisutni na mnogim izvoznim tržištima. Rat 90-godina 20. stoljeća koji je zahvatio prostor zapadnog djela PSŽ, te tranzicija nakon istog, ostavili su traga na ovom prostoru u vidu odljeva stanovništva i u pogledu negativnih kretanja gospodarstva. Stoga je ulazak u EU bio željeni i dugo očekivani pomak ka boljem, koji nažalost nije značajnije doprinijeo ukupnom oporavku ovog područja, a epidemija COVID-19, koja se svojim utjecajem prelila i na gospodarstvo, dodatno je usložila stanje.

METODOLOGIJA ISTRAŽIVANJA

Predmet istraživanja ovog rada, bio je istražiti određene pokazatelje temeljem kojih se može izvesti zaključak o kretanju stanja gospodarstva i utjecaja istog na druga područja društva (posebice demografske pokazatelje) koji su ukoliko su povoljni, preduvjet za boravak građana na nekom području ili ako su negativni, jasno ukazuju na to da gospodarstvo ne osigurava kvalitetne uvjete za boravak građana na nekom područ-

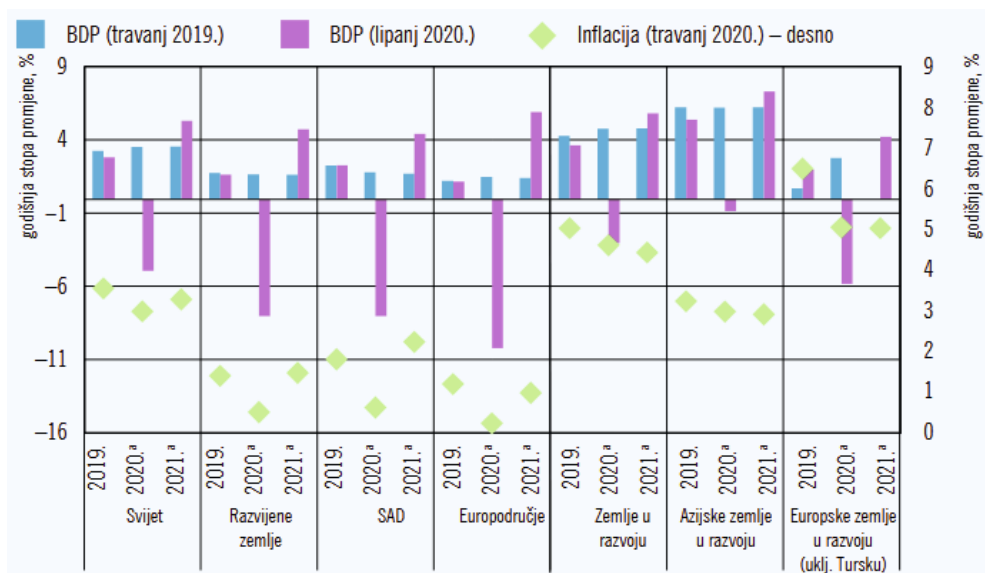
ju, posebice u vrijeme epidemije COVID-19. Cilj ovog rada je istražiti i prikazati kretanje demografskih i određenih gospodarskih pokazatelja, te korištenje EU sredstava na području PSŽ. Rezultat istraživanja kao postignuti cilj bi u konačnici doveo do kvalitetnijeg sagledavanja stanja gospodarstva, sigurnosti i demografskih pokazatelja, te mogli biti korišteni kao podloga za izradu budućih planova i smjernica. Za dobivanje rezultata, korištena je metoda analize sadržaja i s njom povezana statistička metoda, kojom je analizirano više grupa pokazatelja, zatim metoda kompilacije i klasifikacije kojom je analizirani sadržaj svrstan u skupove.

COVID-19 I NJEGOVE POSLJEDICE

Od kada je evidentiran prvi slučaj korona virusne bolesti i to u prosincu 2019. godine, do izrade ovog rada (25.10.2021), diljem svijeta je od ove bolesti oboljelo više od 244 milijuna građana, 221 milijun se oporavio od posljedica iste, a preminulo je 4,95 milijuna građana. Najveći broj oboljelih evidentiran je u SAD-a i to 45,5 milijuna, zatim Indiji 34,2 milijuna, Brazilu 21,7 milijuna, Velikoj Britaniji 8,81 milijuna, Rusiji 8,15 milijuna, Turskoj 7,88 milijuna, Francuskoj 7,22 milijuna itd. U RH, od ove bolesti oboljelo je 446 tisuća građana, 420 tisuća se oporavilo, dok je od posljedica bolesti preminulo 9060 građana. Na području PSŽ, evidentirano je do sada 5316 oboljelih ili 1,19% od svih oboljelih na području RH, pri čemu je od posljedica bolesti preminulo 134 građana što je 1.48% od svih preminulih na području RH-e. (RH, 2021) .

Zdravstvena kriza zbog korona virusa COVID-19, u vrlo kratkom roku zahvatila je kako je iz pokazatelja vidljivo, čitav svijet, te izazvala povijesno jedinstven i nedoživljen utjecaj na sve sfere ljudskog života što uključuje i gospodarske odnose koji su upali u krizu nesagledivih razmjera s nepoznatim rokom trajanja. Nijedna dosadašnja ekonomska kriza (Velika depresija 1929, Velika recesija 2008) nije nastupila tako brzo s dubokim padom gospodarskih aktivnosti i nije istovremeno zahvatila cijeli svijet. (Čavrak, 2020). Mjere ograničavanja kretanja ljudi, zabrane putovanja, zabrane zadržavanja u pojedinim prostorima, zatvaranja niza institucija i ograničenja u nizu gospodarskih grana, kao mjere prevencije i zaštite građana direktno su utjecale na gospodarsku aktivnost. (Ratten, 2020) Gospodarstvo svijeta u 2020. godini, u jeku pandemije obilježila je globalna recesija, čiji su uzrok bile mjere prevencije i zaštite od širenja korona virusne bolesti.

U prvom polugodištu 2020. godine, evidentiran je do sada nezabilježen pad ekonomskih aktivnosti u svijetu sa neizvjesnim očekivanjima za budućnost.

Grafikon 1. Kretanje BDP-a 2019. i 2020. godine, te projekcije za 2021

Izvor: (HNB, 2020)

Najveći rizik za globalnu financijsku stabilnost je neizvjesnost oko daljnjeg tijeka epidemije i njezinih posljedica na gospodarski rast i međunarodna financijska tržišta. Potencijalne ranjivosti u nekim važnim svjetskim ekonomijama bile su relativno visoke i prije izbijanja pandemije, koja ih je dodatno pogoršala, posebice kada je riječ o zaduženosti privatnoga i javnog sektora. (HNB, 2020).

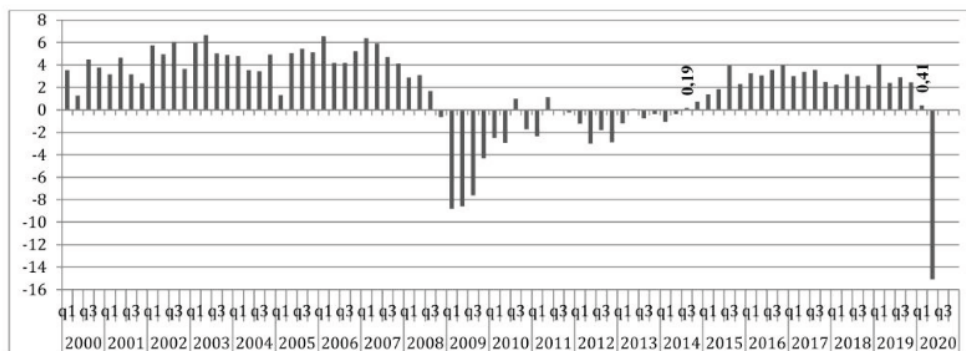
Korona kriza u Europskoj uniji, tijekom 2020. godine, posebice u počecima pandemije postala je skoro egzistencijalno pitanje za Europsku uniju. Naime, aktivnosti pojedinih zemalja na planu provođenja određenih mjera prevencije, liječenja opake bolesti, a potom s njima povezane aktivnosti zatvaranja ustaljenih logističkih pravaca, nabavke cjepiva i mjera na planu ekonomije imale su sve drugo osim zajedničke politike.

U pogledu gubitaka nastalih tijekom 2020. godine, dovoljno je pogledati primjer Njemačke, jedne od najrazvijenijih članica EU. Institut njemačkoga gospodarstva u Kölnu (IW) izračunao je da su od ožujka 2020. godine, do istog mjeseca 2021. godine, ukupni gubici njemačke države i građana zbog pandemije korone oko 250 milijardi eura, a 16.000 tvrtki proglasilo je bankrot. Tijekom I. tromjesečja 2020. godine, bruto domaći proizvod je relativno blago pao, da bi zatim u II. kvartalu bio oko 100 milijardi eura manji. U III. kvartalu, posebno u ljetnim mjesecima, razlika je značajno smanjena, ali nije u potpunosti nestala. Ponovnim zatvaranjem od kraja 2020. godine, su se gubici ponovo povećali. (Ulrich, 2021).

Hrvatska je i prije pandemije COVID-19 u pogledu gospodarskog rasta značajno zaostajala za ostalim članicama EU, i pri tome zauzimala pretposljednje mjesto. Kriza hrvatskoga gospodarstva iz ranijeg ali i pandemijskog vremena rezultat je vlastite ekonomske politike iz prethodnih razdoblja. Naime, karakteristika hrvatskog modela je zamjena ciljeva i instrumenata ekonomske politike. U svim tipičnim modelima eko-

nomske politike ciljevi su: povećanje domaće proizvodnje, povećanje zaposlenosti, izvoza, realnog dohotka građana i njegova ravnomjerna distribucija. Mjere, instrumenti i institucije ekonomske politike služe tim ciljevima. Hrvatski model ekonomske politike je “atipičan” jer kao ciljeve naglašava stabilnost tečaja i nulti proračunski deficit, iako su to instrumenti ekonomske politike. Hrvatska politika je na mjesto ciljeva ekonomske politike postavila instrumente i obrnuto. Posljedica atipičnog modela je smanjenje konkurentnosti, što je dovelo do smanjenja proizvodnje i deindustrijalizacije hrvatskoga gospodarstva. Smanjenje hrvatske konkurentnosti na svjetskom tržištu usmjerilo je poduzetnike prema domaćoj potražnji. Porast domaće potražnje dolazio je značajnim dijelom od potražnje države za infrastrukturnim i javnim objektima. Atipični model doveo je Hrvatsku u situaciju da se u Hrvatskoj ne isplati raditi, proizvoditi i izvoziti. Kako ističe uvaženi hrvatski ekonomist prof.dr. Ljubo Jurčić, to nije pitanje mentaliteta ljudi, nego uvjeta koje stvara politika svojim odlukama. (Jurčić, 2020)

Grafikon 2. Godišnje stope rasta u Hrvatskoj na kvartalnoj razini 2004-2020.



Izvor: (Dumančić, 2020)

Prema pokazateljima Državnog zavoda za statistiku RH-e, tromjesečni BDP u drugom tromjesečju 2020. realno je manji za 15,1% u odnosu na isto tromjesečje 2019. To je najveći realni pad tromjesečnog BDP-a od 1995. Realni pad ostvaren je u svim komponentama BDP-a s rashodne strane, osim u potrošnji opće države, na čijem planu je ostvaren blagi porast. Zbog djelomičnoga ili potpunog zatvaranja tvornica i poduzeća u ožujku 2020. godine, došlo je do pada industrijske proizvodnje u gotovo svim područjima. Potrošnja kućanstava pala je za 14,0% u drugom tromjesečju 2020. godine, što je najveći tromjesečni pad dosad. Utjecaj pandemije bolesti COVID-19 na globalno gospodarstvo doveo je do velikog pada trgovinskih tokova između RH-e i drugih država. (DZS, Učinci pandemije bolesti COVID-19 na društveno-ekonomske pokazatelje, 2021). U izlaganju predsjednika vlade RH-e, u Hrvatskom saboru 27.10.2021. godine, isti je istaknuo da su troškovi borbe sa epidemijom bolesti COVID-19, do listopada 2021. godine, u Hrvatskoj dosegli 3,8 milijardi kuna.

PSŽ i prije pandemije COVID-19, (koja je situaciju dodatno usložila) imala je značajno gospodarsko zaostajanje kako za državnim prosjekom, a posebice za EU prosjekom. Naime, Prema BDP-u po stanovniku po PPS-u u 2016. godini, među NUTS

2 regijama EU, kontinentalna Hrvatska nalazila se na 61% prosječne razvijenosti EU, dok je Jadranska Hrvatska nešto razvijenija i nalazila se na 57% prosječne razvijenosti EU. Istovremeno, prema podacima za 2008. godinu, PSŽ nalazila se na 40% prosječne razvijenosti EU, a kako BDP nije vraćen na razinu iz 2008. godine, sada je taj pokazatelj i lošiji, odnosno nalazi se na razini pojedinih regija Rumunjske i Bugarske. Bruto domaći proizvod po stanovniku u tekućim cijenama u 2016. godini, za razinu RH-e iznosio je 84.207 kuna, a za PSŽ 47.778 kuna što čini 57% BDP-a Hrvatske ostvarenog u toj godini. BDP pet gospodarskih najrazvijenijih županija u 2016. godini (Grad Zagreb – 118 milijardi kuna, Primorsko-goranska – 29.181, Splitsko-dalmatinska – 29.455, Istarska – 22.115 i Zagrebačka – 20.339) čini oko 65% ukupnog BDP-a Hrvatske, a BDP gospodarski najslabijih županija Ličko-senjske, Virovitičko-podravске i Požeško-slavonske županije nešto su ispod ili na razini 1% posto ukupnog BDP-a RH. (Matijević, 2020)

AKTIVNOSTI EU NA PLANU OPORAVKA OD KRIZE

Nakon početnog nepovjerenja u zajedničke institucije i njihovu reakciju na krizu izazvanu pandemijom, Europska unija sustavno je prišla planiranju i donošenju mjera kojima bi se zaustavilo negativna kretanja na planu gospodarstva, te osigurao rast.

Nazvavši ih „10 poteza EU-a za gospodarski oporavak od posljedica pandemije koronavirusa“ institucije EU u studenom 2020. godine, donijele su sustavan plan mjera za gospodarski oporavak od posljedica pandemije koronavirusa koji je planiran kroz:

1. *Pružanje ogromnog gospodarskog poticaja.* Kojim je planirano članicama omogućiti 750 milijardi eura poticaja.
2. *Potpora zdravstvenim sustavima i infrastrukturi EU-a.* Koja ima cilj povećanje kapaciteta i jačanje zdravstvenog sustava kao odgovor na trenutnu i buduće krize.
3. *Zaštita malih i srednjih poduzeća.* Opstanak malih i srednjih poduzeća koja čine 99% poduzeća EU-a, ključni su za gospodarski oporavak. Zbog toga je EU iz Europskog fonda za strateška ulaganja oslobodila milijardu eura kako bi potaknula banke i zajmodavce da osiguraju likvidnost za više od 100 tisuća takvih poduzeća.
4. *Ublažavanje rizika od nezaposlenosti.* Kako bi se pomoglo radnicima, uključujući mlade, osigurana je financijska pomoć u iznosu do 100 milijardi eura, kako bi se pokrili troškovi nacionalnih programa rada sa skraćenim radnim vremenom.
5. *Potpora turizmu i kulturi.* EU je uvela niz mjera osmišljenih kako bi se pomoglo oživljavanju turizma i kulturnih događaja.
6. *Paket za bankarstvo za potporu kućanstvima i poduzećima.* Kako bi se osigurala jedna od osnovnih funkcija banaka, a to je pružanje kredita pravnim i fizičkim osobama za što je EU odobrila privremeno ublažavanje bonitetnih pravila za europske banke, s ciljem održavanja povoljnih uvjeta kreditiranja a time osiguranja sredstava za poslovanje.
7. *Potpora poljoprivredi i ribarstvu.* S ciljem izbjegavanja poremećaja u opskrbi i nestašicama prehrambenih proizvoda EU je odobrila mjere za pomoć poljoprivrednicima i ribarima čije je poslovanje ugroženo pandemijom bolesti COVID-19.

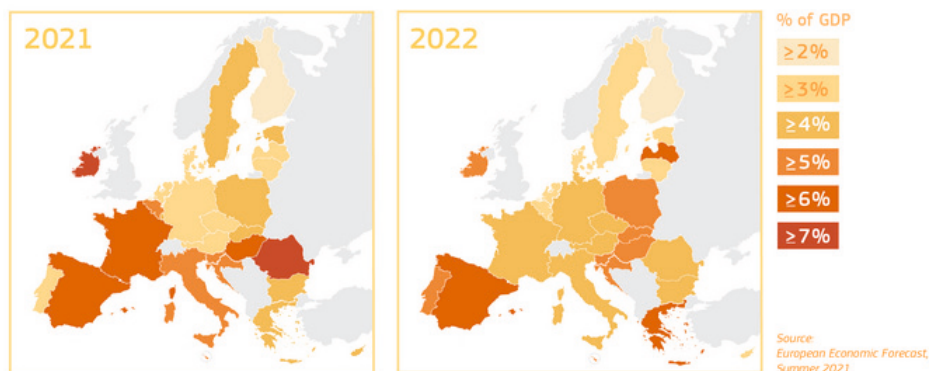
8. *Pomoć zemljama u financiranju njihova odgovora na krizu.* Putem koje je 37 milijardi eura iz strukturnih fondova EU-a usmjereno za neposrednu financijsku potporu članicama koje pomažu građanima i regijama u suočavanju s trenutačnom krizom.
9. *Ublažavanje pravila o državnim potporama.* Kojima se omogućilo kroz privremeni pravni okvir da članice kod hitnih potreba za likvidnošću države mogu poduzećima odobriti do 800 tisuća eura ili zajmove s povoljnim kamatnim stopama.
10. *Zaštita oslabljenih europskih poduzeća od stranih konkurenata.* Kojim se nastoji zaštititi poduzeća EU u odnosu na subvencionirane strane konkurente i poziva na uspostavu jednakih uvjeta za sva poduzeća. (EU P. , 10 poteza EU-a za gospodarski oporavak od posljedica pandemije koronavirusa, 2020)

Nakon prethodno opisanih 10 poteza EU-a za gospodarski oporavak od posljedica pandemije koronavirusa“ iz studenog 2020. godine, u veljači 2021. godine, usuglašen je takozvani *glavni instrument EU-a za oporavak od pandemije COVID-19* vrijedan 672,5 milijardi eura, kojeg EU smatra ključnim alatom u planu oporavka EU-a i njime se podupiru reforme koji su odgovor na korona krizu. Istim se članicama EU pruža potpora za ulaganja i reforme s ciljem ublažavanje gospodarskih i socijalnih posljedica pandemije i pripremu gospodarstava EU-a za održivu i digitalnu budućnost. Planirana je dodjela bespovratnih sredstva od 312,5 milijardi eura, kroz kriterije: broj stanovnika, BDP prije krize, a kasnije će se u obzir uzeti rezultati gospodarstva u 2020. i 2021. Prema projekcijama Europske Komisije, Hrvatska će dobiti 6,3 milijarde eura bespovratnih sredstava iz Fonda za oporavak i otpornost. Sredstva bi zemlje članice trebale koristiti za ublažavanje krize, ali i podupirati dugoročni ciljevi EU-a kao što su zelena tranzicija i digitalizacija.

Mehanizam za oporavak i otpornost koristit će se za šest područja uz prihvatljive planove i to do 2026. godine:

- zelena tranzicija;
- digitalna transformacija;
- pametan, održiv i uključiv rast;
- socijalna i teritorijalna kohezija;
- jačanje otpornosti i pripravnost na krize i
- politike za sljedeću generaciju, uključujući obrazovanje i vještine. (EU P. , Glavni instrument EU-a za oporavak od pandemije COVID-19, 2021).

EU je u srpnju 2021. izašla sa svojim predviđanjima kretanja gospodarstva u 2021. Istim se projicira da će se gospodarstvo članica EU oporavljati nešto brže nego što se očekivalo. Prema prognozama tijekom 2021. godine, očekuje se rast gospodarstva EU-a za 4,8 %, a 2022. za 4,5 %. Predviđa se da će se realni BDP u zadnjem tromjesečju 2021. vratiti na razinu iz razdoblja prije krize. Očekuje se da će planirane i donijete mjere Mehanizama za oporavak i otpornost znatno pridonijeti rastu. Ukupne koristi od Mehanizma tijekom razdoblja obuhvaćenog prognozom trebale bi iznositi približno 1,2 % realnog BDP-a EU-a za 2019. (EU K. , 2021).

Grafikon 3. Projekcije kretanja BDP-a 2021. i 2022.

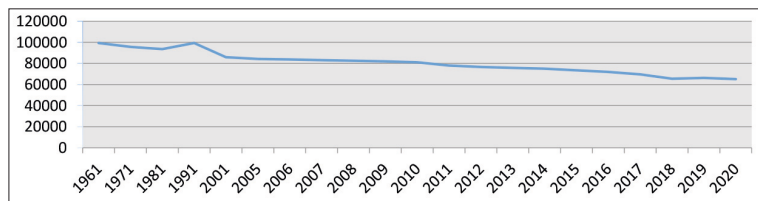
Izvor: (EU K., 2021).

POŽEŠKO-SLAVONSKA ŽUPANIJA I NJENI POKAZATELJI U KRIZI

Demografski pokazatelji

Stanovništvo je najvažniji faktor društveno – ekonomskog razvitka nekog područja. (Husanović, 2010) Stoga se za ocjenu gospodarske i socijalne situacije pojedinog prostora, mogu koristiti i demografski pokazatelji koji nam govore o poželjnosti destinacije za život i rad, posebice sada kada je otvorenost tržišta rada i pristup zemljama EU, neograničen.

1961. i 1991. godine, na ovom prostoru živjelo je oko 100.000 stanovnika, a u periodu između tih dviju godina, te nakon 1991., godine, bilježi se pad broja stanovnika. Nekoliko je čimbenika koji su na to utjecali, a to su prije svega ratni sukob 90-godina prošlog stoljeća, odlazak građana s ovog područja u zemlje Zapadne Europe (posebice 70-godina prošlog stoljeća) i odlazak građana nakon pristupanja Hrvatske u EU, te manji broj novo rođenih. Od ulaska u EU, izražen je pad broja stanovnika, čiji je broj u 2021., godini najmanji u cijelom promatranom području.

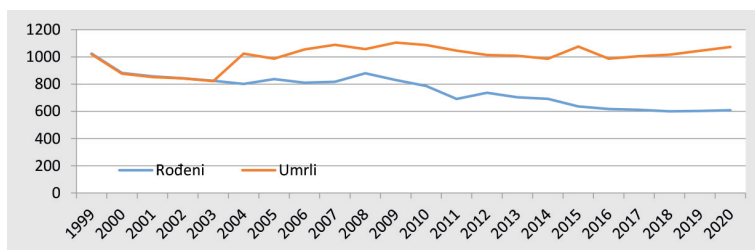
Grafikon 4. Kretanje broja stanovnika PSŽ 1961-2020

Izrada: autor prema podacima Državnog zavoda za statistiku RH. (DZS-RH, 2021)

Tako je primjerice samo u 2017. i 2018. godini, prema podacima portala www.lupiga.com, a na temelju podataka policije 259 osoba prijavilo trajnu odjavu s ovog područja radi iseljenja u inozemstvo, 2402 osobe su prijavile privremeni odlazak, 1108 osoba je odjavljeno jer je provjerom utvrđeno da osobe stvarno nisu živjele na prijavljenoj adresi i 1097 osoba je odjavilo prebivalište s ovog područja i prijavilo se na dru-

ga područja RH. Sve ukupno je tako ovo područje u 2017. i 2018. godini napustilo čak 4866 stanovnika. Broj stanovnika PSŽ u 2020. godini i u vrijeme korona krize manji je za 1122 u odnosu na 2019. godinu, pri čemu je čak 712 građana odselilo u inozemstvo, 554 u drugu županiju i to unatoč globalnoj nesigurnosti i ograničenjima. Uz pokazatelje o doseljenim kojih je u 2020. godini u PSŽ bilo 790, proizlazi negativan saldo ukupne migracije koji iznosi -476. Ovakvoj demografskoj slici doprinosi i veći broj umrlih, te manji broj rođenih. 2020. godine, u vrijeme korona krize na području PSŽ umrlo je 1073 građana, a godinu ranije njih 1045, u 2020. godini, rođenih je 608, a godinu ranije njih 603. Iako se od 2018. godine, kada je novorođenih bilo 600, do 2020. godine (608 novorođenih) bilježi blagi rast, pokazatelji o kretanju broja novorođenih za ukupan prikazan period ukazuju na značajan pad novorođenih, a istovremeno porast umrlih ili okvirno zadržavanje na oko 1000 godišnje. Sve to nameće na zaključak da PSŽ ima negativan prirodni priraštaj.

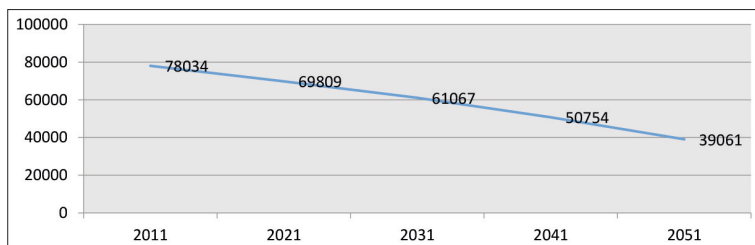
Grafikon 5. Kretanje broja rođenih i umrlih PSŽ 1999-2020



Izrada: autor prema podacima Državnog zavoda za statistiku RH. (DZS-RH, 2021)

Da se ni u budućnosti ne očekuje bolje stanje pokazuje i sljedeći grafikon, temeljem kojeg bi se sve gospodarske, razvojne, socijalne i ostale politike treba planirati i osmišljavati u skladu s iskazanim projekcijama u njemu.

Grafikon 6. Projekcije kretanja broja stanovnika PSŽ do 2051



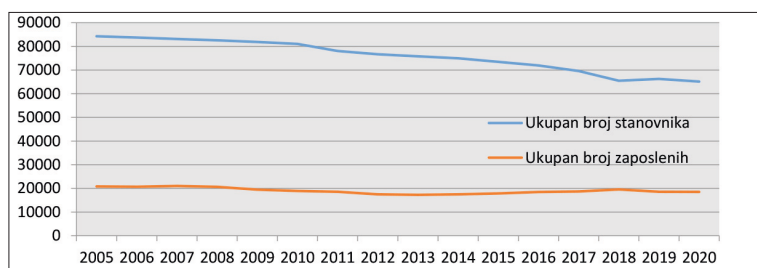
Izrada: autor prema podacima: (Akrap, 2015)

Gospodarstvo

Gospodarstvo PSŽ temelji se na poljoprivredi, te poslovima vezanim uz istu i prerađivačkoj industriji. U okviru prerađivačke industrije najzastupljenije su grane

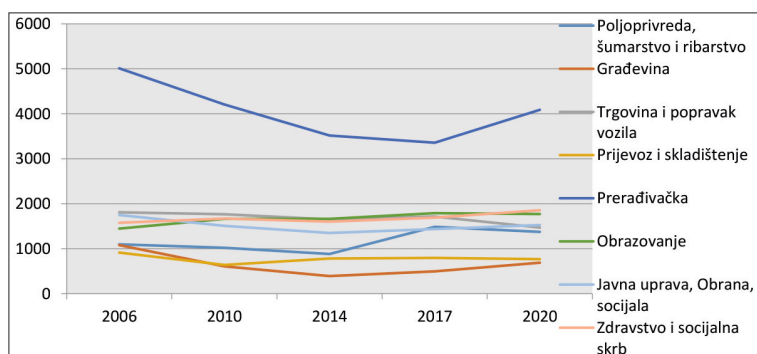
metaloprerađivačka, drvo-prerađivačka i prehrambena industrija, a manji udio čine tekstilna industrija i proizvodnja i prerada nemetalnih mineralnih proizvoda i električne opreme. (Županija, 2013) Većina je tvrtki koje su uspješno poslovale i prije osamostaljenja RH, te svoje proizvode plasirali na mnogobrojna tržišta, a najveći gubitak zabilježile za vrijeme i nakon rata u vidu gubitaka postrojenja i tržišta bivših republika SFRJ. (Matijević, 2020) Prema podacima FINE (FINA, 2020) u 2017. godini, gospodarstvo PSŽ činila su 844 poduzetnika, koji su obveznici poreza na dobit, a u 2020. godini, taj broj je narastao na **979**. Istovremeno kod njih je bilo u 2020. godini zaposleno **8.567 osoba**, što je 4,9% više u odnosu na 2019. godinu. (Ostali zaposleni iskazani u grafikonima do ukupne brojke zaposlenih u 2020. godini, odnose se na individualne poljoprivrednike (2020.-521 i zaposlene u obrtima 2020.-2.800). Prema podacima Državnog zavoda za statistiku RH-e, u 2020. godini, na području PSŽ bilo je zaposleno 18 544 građana, a 2019. godine njih 18.568 što je neznatan pad, pri čemu broj zaposlenih ima određenu konstantu, odnosno ne prati pad broja stanovnika što je vidljivo iz grafikona. (DZS-RH, 2021)

Grafikon 7. Kretanje broja stanovnika i zaposlenih PSŽ 2005-2020



Izrada: autor prema podacima (DZS-RH, 2021)

Grafikon 8. Kretanje broja uposlenih u pojedinim granama



Izrada: autor prema podacima (DZS-RH, 2021)

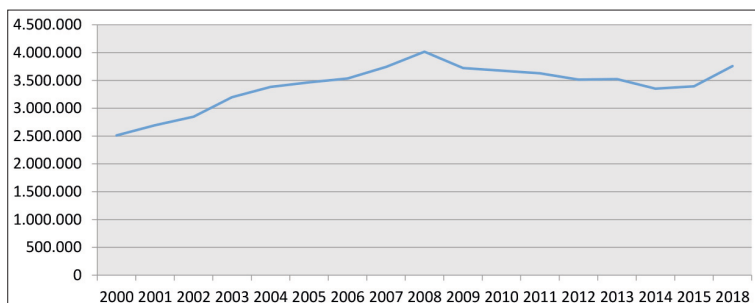
Iz prethodnog grafikona koji prikazuje udjel zaposlenih po pojedinim djelatnostima, vidljivo je da prerađivačka industrija na području PSŽ u 2017. godini, prema

zaposlenosti zauzima prvo mjesto sa 3357 uposlenih, a slijedi je obrazovanje s 1791 uposlenim, trgovina i popravak vozila s 1716 uposlenih, dok je poljoprivreda na četvr-tom mjestu po broju uposlenih. Iz grafikona je također vidljivo, da vodeća djelatnost u županiji – prerađivačka industrija, unatoč korona krizi i u 2020. godini bilježi rast broja zaposlenih, dok je u djelatnosti poljoprivrede broj zaposlenih u 2020. godini, manji u odnosu na 2017. godinu to za 1113 zaposlenih, iako je u 2017. godini, u odnosu na 2006. godinu, bilježio rast (1487/1098). Pokazatelj o broju zaposlenih u prerađivačkoj industriji i njegov rast u 2020. godini, u vrijeme korona krize je značajan, no pad broja zaposlenih u poljoprivredi na području kojim je poljoprivrednim zemljištem prekrive-no 76.233,23 ha ili 41,93% je svakako za daljnje analize, pogotovo na veliku stopu po-ticaja i subvencija, ali očito i neshvaćene potrebe za samo održivosti područja koja se u korona krizi pokazala od izuzetne važnosti. Tu posebice treba uzeti u obzir pokazatelje iz ranijih godina, te mogućnosti za proizvodnju niza proizvoda. (2013. žitaricama za-sađeno 25 840 ha, a 2016., 21 978 ha, ili broj goveda 1975. – 18 500, 2013 – 11 278 i 2016 – 8078. (DZS, Učinci pandemije bolesti COVID-19 na društveno-ekonomske pokazatelje, 2021) (Strbašić, 1977).

Bruto domaći proizvod i plaće

Bruto domaći proizvod (BDP), glavni je makroekonomski pokazatelj, a to je tržišna vrijednost svih finalnih dobara i usluga proizvedenih u jednoj zemlji/području u određenom vremenskom periodu. BDP Hrvatske u 2018. godini, (385.376 milijardi kuna) činio je 0,3% ukupnog BDP-a EU, a BDP PSŽ (3.757 milijarde kuna) nešto je ispod ili na razini 1% posto ukupnog BDP-a RH, što je uz Virovitičko-podravsku i Lič-ko-senjsku županiju najmanji BDP na razini svih županija. Iz grafikona je vidljivo da je nakon relativno povoljnog razdoblja između 2001. i 2008. godine u kojem je BDP rastao, uslijedilo krizno razdoblje u kojem se bilježio pad BDP-a, a potom u vrijeme ulaska u EU također blagi pad, pa oporavak koji još nije na razini iz 2008. godine. (HGK, 2019) Podataka za 2020. godinu i period korone krize kod nadležnih zavoda za statistiku još uvijek nema, a procjene pada i rasta BDP-a u 2019., 2020., i 2021., godini značajno su različite od izvora do izvora, te svakako treba sačekati službene pokazate-lje. No nakon evidentiranog rasta u periodu 2015.-2018. godina, barem je se nadati da pad neće biti ispod 3 milijarde, odnosno isti vratio na razinu 2000. godine.

Grafikon 9. Bruto domaći proizvod u tekućim cijenama u mil. HRK ŽPS

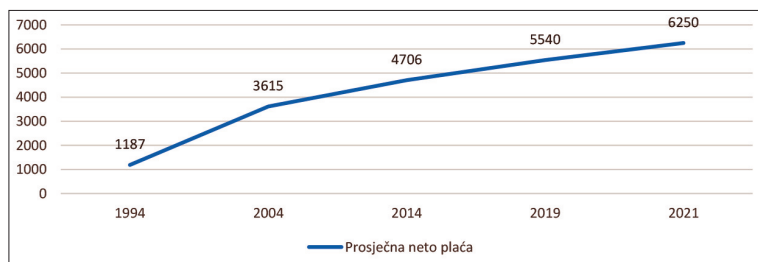


Izrada: autor prema podacima (HGK, 2019)

Prema BDP-u po stanovniku po PPS-u u 2016. godini, među NUTS 2 regijama EU, kontinentalna Hrvatska nalazila se na 61% prosječne razvijenosti EU, dok je Jadranska Hrvatska nešto razvijenija i nalazila se na 57% prosječne razvijenosti EU. Istovremeno prema podacima za 2008. godinu PSŽ nalazila se na 40% prosječne razvijenosti EU, a kako BDP nije vraćen na razinu iz 2008. godine sada je taj pokazatelj i lošiji, odnosno nalazi se na razini pojedinih regija Rumunjske i Bugarske. (HGK, 2019)

Prosječna isplaćena neto plaća zaposlenih u pravnim osobama u 2021. godini, prema pokazateljima Državnog zavoda za statistiku za razinu Republike Hrvatske iznosila je 7.052 kuna, pri čemu je promatrano po županijama najveća isplaćena na području grada Zagreba i iznosi 8.793 kune. Na području PSŽ prosječna isplaćena neto plaća u 2021. godini iznosi 6.250 kuna, što je za 772 kune manje od državnog prosjeka. (DZS-RH, 2021) Od ukupnog broja županija promatrano prema iznosu neto plaća PSŽ se nalazi na dnu ljestvice te su ispod nje sa nižim iznosima neto plaće (neznatno manje) Brodsko-posavska, Bjelovarska i Vukovarsko-srijemska županija.

Grafikon 10. Kretanje prosječne neto plaće uposlenika u PSŽ



Izrada: autor prema podacima (HGK, 2019)

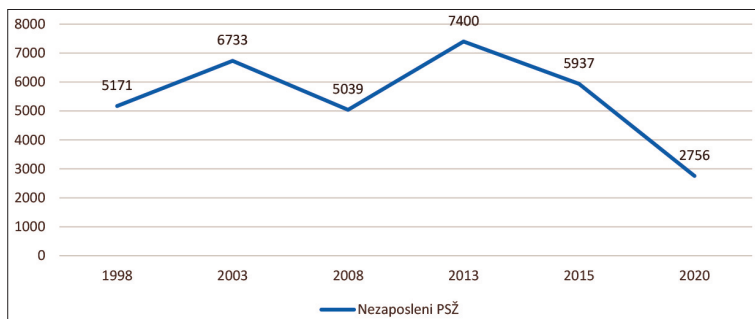
Treba napomenuti da pokazatelji za 2021. godinu, uključuju samo zaposlene kod pravnih osoba, a ranije godine sve zaposlene. Kako su neto iznosi u pravilu viši kod pravnih osoba u odnosu na one kod obrtnika ili individualnih poljoprivrednika, kada DZS u potpunosti obradi podatke, za očekivati je blagu korekciju i pad prosječne neto plaće u 2021. godini, no nije za očekivati veći pad od razine 2019. godine.

Nezaposleni

Kako se moglo i pretpostaviti, s obzirom na ranije iznesene pokazatelje, odnosno okvirno jednak broj umrlih i znatno manje rođenih na području PSŽ u odnosu 2020.-1998. godina, te odljev stanovništva, posebice nakon ulaska u EU, posljedično se bilježi se i pad radno aktivnog stanovništva. Tako je u 2020. godini, taj broj za PSŽ iznosio 21.300, a 1998. godine, 25.581. Istovremeno, za razinu Republike Hrvatske u 2020. godini, prema podacima Državnog zavoda za statistiku evidentirano je 1.617.815 aktivnog stanovništva, a 1998. godine 1.611.167, što čini blago povećanje.

Nezaposlenih je u Republici Hrvatskoj 1998. godine, bilo evidentirano 292.332, a 2020. godine 143.461, što je značajno smanjenje. I za područje PSŽ bilježi se za isti period pad broja nezaposlenih, odnosno 1998. godine evidentirano je 5.171, a 2020. godine, njih 2.756, što je uz ostale godine prikazano u sljedećem grafikonu.

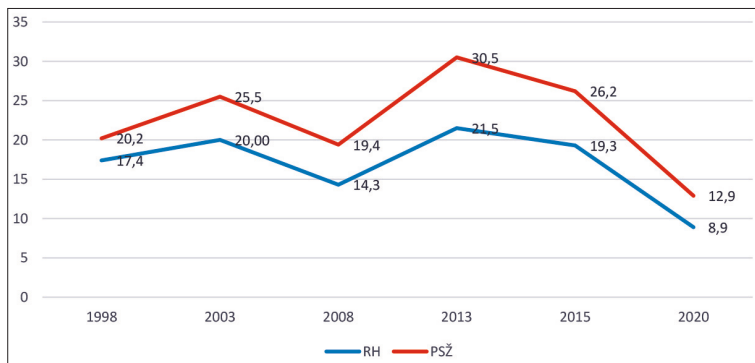
Grafikon 11. Kretanje broja nezaposlenih PSŽ 1998-2020.



Izrada: autor prema podacima (DZS, Zaposlenost i plaće, 2021)

Razloge pada broja nezaposlenih prije svega treba tražiti u odlasku građana u inozemstvo za bolje plaćenim radnim mjestima, ali i pravnoj i drugoj (ne)sigurnosti. Na ovaj način PSŽ će se vrlo brzo suočiti (a i sada se suočava (034, 2020) sa potrebama za radnom snagom, koje nažalost kao prije nekoliko desetljeća više nema na području Balkana, jer i iz tih prostora odlazi u zapadnu Europu također za bolje plaćenim poslovima.

Grafikon 12. Kretanje stope registrirane nezaposlenosti RH-PSŽ



Izrada: autor prema podacima (DZS, Zaposlenost i plaće, 2021)

Iz grafikona se može uočiti da je stopa registrirane nezaposlenosti i dalje u PSŽ unatoč značajnom odljevu radno sposobnog stanovništva iznad republičkog prosjeka, a u odnosu na ostale županije PSŽ se nalazi na sredini ljestvice županija po stopi registrirane nezaposlenosti, dok najmanju stopu ima grad Zagreb i to 3,7%.

INOZEMNA ULAGANJA

U PSŽ nekoliko je lokalnih (gradskih/općinskih) razvojnih agencija koje djeluju na planu rada stvaranje preduvjeta za izradu, izrađuju ili pomažu i potpomažu izvedbu projekata za strana ulaganja i pomoć pravnim i fizičkim osobama u pogledu stranih (ponajprije EU) ulaganja.

Regionalni koordinator razvoja Požeško-slavonske županije je Panora – razvojna agencija PSŽ, koja je kroz razvojne strategije PSŽ postavila ciljeve:

Cilj 1. Povećati konkurentnost Požeško-slavonske županije kroz zeleni i pametni razvoj;

Cilj 2. Povećati kvalitetu življenja kroz održivi regionalni razvoj i

Cilj 3. Unaprijediti upravljanje regionalnim razvojem te očuvati slavonski identitet Multikulturalnost. (PANORA, 2021)

Uz agencije gotovo na području svih općina i gradova ustrojene su poduzetničke zone.

Inozemna izravna ulaganja od 1993. do 2019. godine, na području PSŽ, iznose 50,7 milijuna eura, odnosno 746.4 eura po stanovniku. 2018. godine evidentirano je 3,6 miliona eura stranih ulaganja u PSŽ, a 2019. godine 6,1 milion. Us ljeđećoj tablici prikazani su pokazatelji o najvažnijim zemljama ulagačima i djelatnostima u koje je uloženo.

Tabela 1: Inozemna izravna ulaganja (FDI), najvažnije zemlje ulagači i najvažnije djelatnosti ulaganja (1993. – 2019.)

Požeško-slavonska	ITALIJA	29,3	Proizvodnja ostalih nemetalnih mineralnih proizvoda	27,2
	SLOVENIJA	12,3	Biljna i stočarska proizvodnja, lovstvo i uslužne djelatnosti povezane s njima	9,4
	LUKSEMBURG	7,9	Proizvodnja električne opreme	9,1

Izvor: (HGK, 2019)

Prema podacima Hrvatske gospodarske komore, PSŽ tako bilježi najniža ulaganja u Republici Hrvatskoj i to uz Virovitičko-podravsku i Bjelovarsko-bilogorsku županiju. Iako nema pokazatelja o ulaganjima tijekom 2020. godine, nije za očekivati značajni pomak na ovom planu za koji uistinu ima prostora. Naime, unatoč prepoznatoj potrebi ulaganja u poljoprivredu, odnosno navedeno ulaganje Slovenije, ona bi posebice u doba samo održivosti trebala doći na prvo mjesto posebice s obzirom na pokazatelje o ranije znatno većoj biljnoj i stočnoj proizvodnji. Prostora za strana ulaganja svakako se nalaze i u neriješenom prometnom sektoru. Naime, zastarjela i neobnovljena cestovna i željeznička mreža vapi za obnovom i stranim ulaganjima što je onda preduvjet za razvoj i razvitak bilo kojeg područja tako i PSŽ. (Matijević, 2020)

ZAKLJUČAK

Županija požeško-slavonska, kao i čitava regija u vrijeme korona krize suočila se sa dosada nezabilježenom pojavnošću, koja je uzrokovala poremećaje u svakodnevnom životu i svim sferama društva. Sama bolest relativno je kasno u većem postotku stigla u županiju, što je vjerojatno imalo i utjecaja na rezultate u I. kvartalu 2020. godine, koji nisu lošiji nego ranijih godina. Najveće udare pretrpjele su ugostiteljstvo i turizam. Iako ovo nisu vodeće djelatnosti u županiji, njihov doprinos pogotovo ugostiteljstva i broj uposlenih u toj grani ipak je od značaja. Gubitci nastali ograničenjima i zatvaranjima u tim djelatnostima, nastojali su se ublažiti i nadoknaditi subvencijama koje je država isplaćivala kako bi se spasila radna mjesta. Ostale grane gospodarstva kako je vidljivo nisu doživjele značajniji udar, što se posebice odnosi na prerađivačku industriju, koja ne samo da nije zabilježila pad, već je ostvarila bolji rezultat u 2020. godine, nego ranijih godina, te je broj zaposlenih u istoj djelatnosti rastao, što je dobro.

Poljoprivreda kao djelatnost, nakon 1990. godine i tranzicije, te zatvaranja brojnih jedinica bivšeg kombinata PPK Kutjevo, koji je bio nositelj poljoprivredne aktivnosti i značajan subjekt kooperacije, nikako da se vrati na te razine. (Mnogi će za ovo reći tamo se nikad ne treba vraćati, ali ne zbog ekonomskih razloga već samo njima poznatih). Unatoč brojnim subvencijama i poticajima, koji uglavnom završavaju u novim funkcionalnim strojevima i opremi (za koju u većini obiteljskih gospodarstva nedostaje kapaciteta za rad, a opet s druge strane za koje se ne kaže da nisu neophodni, ali u kooperaciji više gospodarstava) ne dovode do rasta broja hektara pod poljoprivrednim površinama i rastu broja grla stoke, te prerađivačke industrije u pogledu mljekarstva i mesa, što je u krizama od izuzetne važnosti, ali i stvaranja nove vrijednosti. Stoga je ako je igdje moguće napraviti pomak nužno to napraviti u poljoprivredi. Demografski pokazatelji, velik odljev građana iz županije od 2013. godine i ulaska u EU, u 2020. godini i doba korona krize samo se nastavio, te se ne može smatrati rezultatom korona krize, kao niti broj umrlih koji je podjednak, ili broj rođenih koji je u padu, no ipak bilježi se i dolazak građana na ovo područje, pa saldo nije skroz negativan niti se može smatrati da je na njega značajno utjecala korona kriza. Sveukupno možemo zaključiti da poradi malog broja stanovnika, ranije ugovorenih sadržaja, manjeg broja oboljelih, te državnih subvencija i onih iz EU koje trebaju priteći prostor PSŽ nije znatnije osjetio, niti će dugotrajno trajno trpjeti posljedice krize izazvane korona krizom. To je upravo i prilika za budući rast, kvalitetna izrada programa i planova na planu poljoprivrede, zdrave hrane, samo održivosti, zadržavanje postojećih kapaciteta prerađivačke industrije, te rješavanje prometne izoliranosti osuvremenjivanjem cestovne i željezničke mreže, te time i upošljavanje građevinskog sektora.

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THE INFLUENCE OF THE CROWN OF THE CRISIS ON THE ECONOMIES OF SMALL ENVIRONMENTS ON THE EXAMPLE OF POŽEGA-SLAVONIA COUNTY IN THE REPUBLIC OF CROATIA

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Summary: In early 2020, the World Health Organization declared the COVID-19 epidemic a public health threat at the international level. In addition to the public health problem, the corona crisis with prevention and treatment measures, which required physical distance, isolation, travel bans, visits and gatherings, led to a significant blow to the economies of all countries, even the most developed ones. A large number of sectors and citizens have been affected, supply chains have been disrupted, and the European Union and governments have tried or are still helping with subsidies or other measures to maintain employment and protect technology, workers and jobs. Some sectors such as transport or tourism have recorded huge losses and are facing a break-down that is not remembered. The Republic of Croatia (and with it the subject of this

research the area of Požega-Slavonia County) encountered this vicious disease and its impact on the economy. which is Požega-Slavonia County. The subject of this paper was to investigate certain indicators on the basis of which a conclusion can be drawn about the state of the economy and its impact on other areas of society (especially demographic indicators) which, if favorable, are a prerequisite for citizens to stay in an area. clearly indicate that the economy does not provide quality conditions for citizens to stay in an area, especially during the epidemic COVID-19. The result of the research as an achieved goal would ultimately lead to a better understanding of the state of the economy, security and demographic indicators, and could be used as a basis for the development of future plans and guidelines. To obtain the results, the method of content analysis was used and the related statistical method, which analyzed several groups of indicators, then the method of compilation and classification by which the analyzed content is classified into sets.

Key words: *Požega-Slavonia County, economy, employed, unemployed, GDP.*

JEL: *H12*

MONETARNO ISKAZIVANJE EFEKATA PRIMJENE DUHOVNIH TEHNIKA U CILJU PODIZANJA KVALITETA SISTEMA MARKETINGA I MENADŽMENTA U KOMPANIJAMA

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Sažetak: Duhovne tehnike imaju cilj da utiču na pojedince, ukoliko su spremni, da pristupe pozitivnoj promjeni svojih negativnih obrazaca. Ono što je dostupno kroz Nlp tehniku ili neurolongvističko programiranje, danas je dostupno i kroz druge tehnike. Važnost postojanja duhovnih tehnika ogleda se u promjeni stila života u cilju ispunjenijeg življenja kroz sve aspekte života: društvene, ekonomske, poslovne i zdravstvene. Ukoliko bi se duhovne tehnike primijenile u kompanijama i preduzećima, počevši od pojedinaca pa preko grupa, moglo bi se uticati na uspjeh kompanije. Taj uspjeh ogleda se kroz pojedinačne ali i grupne ciljeve kompanije. Poznato je da je uspješna ona kompanija čiji zaposleni zajedno utiču i rade na ostvarenju istih i zajedničkih ciljeva kompanije. Menadžment kompanije koristi sve raspoložive resurse kako bi podigao poslovnu efikasnost, pri čemu se, opravdano, postavlja pitanje monetarnog iskazivanja doprinosa uvođenja duhovnih tehnika u poslovnu svakodnevnicu. Ovaj rad ima za cilj da otvori vidike poslovnog svijeta kada su u pitanju druge strategije pristupa uspješnom poslovanju i to uz prisustvo psihološko-duhovnih pozitivnih tehnika. Ove strategije bi bile novi način pristupa poslovanju, a optimalnu bi bilo opravdano temeljiti na rezultataima igara protiv prirode, ali i građenju zdrave poslovne okoline u internom i eksternom okruženju kompanije.

Ključne riječi: duhovne tehnike, uspjeh, poslovanje, matrične igre, ciljevi kompanije.

Jel klasifikacija: C70, I00, M12, M31

UVOD

Duhovnih tehnika ima dosta. Neke od njih, koje će ovde biti spomenute su: EFT tehnika, Thetahealing® tehnika i Timeline healing tehnika. Takođe, to mogu biti i fizičke aktivnosti, reiki energija, tehnika barsi i mođe druge.

Thetahealing® tehnika je tehnika rada na našim nesvjesnim uvjerenjima. Osnivačica ove tehnike je Vajana Stajbal (Vianna Stibal) koja je osnovala i Institut u Americi. Theta tehnika radi sa uvjerenjima i na negativnim emocijama. Njen cilj je promjena uvjerenja od negativnih ka pozitivnim uvjerenjima. Uvjerjenja su naše misli, ono što mislimo i vjerujemo o nečemu ili nekome. Tehnikom promjene uvjerenja, usklađujemo se sa sobom i otklanjamo blokade koje se nađu na putu naših ciljeva i puta naše duše, puta kojim želimo da idemo. Tehnika poboljšava vrline kod ljudi kao što su hrabrost, zahvalnost, ljubav, mir, upornost, samopouzdanje i mnoge druge.

EFT tehnika je tehnika emocionalne slobode koju drži i prenosi kroz znanje na ljude Karl Dovson (Karl Dawson) iz Velike Britanije, nakon što je izvorno potekla od Garija Krejga (Gary Craig) koji je na Univerzitetu Stanford razvio EFT. EFT tehnika je emocionalna verzija akupunkture bez igala. Ona služi osobama da otpuste duboke teške emocije kao što su tuga, strah, bol, ljutnja i mnoge druge. Jednostavna je tehnika, a bazira se na tapkanju tačaka na licu. Na taj način se dubinski mijenjaju stvari i ličnost se oslobađa stresa i fizičkih bolova. Kada osoba radi ove tehnike, ona postaje bolja prema sebi, prema svojoj radnoj sredini, u privatnom i u socijalnom okruženju. Tehnika oslobađa terete koje nosimo na leđima i omogućuje nam da budemo usklađeni sa sobom, što će doprinijeti većoj usklađenosti u odnosima sa drugima.

Timeline healing je posebna, takođe fenomenalna tehnika pomoću koje se ide u meditaciju i ličnost uči kako da se povezuje sa svojim višim JA, koji je viši dio nas. Kroz meditaciju se osoba povezuje sa svojim vremenskim linijama i osjeća i radi na tome da bude na najboljoj vremenskoj liniji kako bi ostvarila najbolju verziju svoje ličnosti i uticala pozitivno na sebe i na svoju okolinu. Kroz lagan, meditativni proces, moguće je da ličnost živi ispunjen život iscjeljujući negativne obrasce i traume iz prošlosti ili iz genetike.

PRETHODNA ISTRAŽIVANJA

Ići duhovnim putem pretpostavlja potpuno i neopozivo preuzimanje odgovornosti za sebe i svoje postupke, misli, osjećaje, raspoloženja. To zahtijeva beskompromisnu iskrenost prema sebi, otvorenost i spremnost na suočavanje i s tamnom stranom svoga bića (<https://www.branka-jakelic.com/opasnosti-krize-na-duhovnom-putu/>, 2021).

Process odlučivanja u profesionalnom, ali privatnom okruženju moguća je na više načina, ali je prihvatljivija odluka koja je derivat relevantnih faktora koji opredjeljuju ishod upravljačke situacije. Korištenje modela igara protiv prirode omogućava dobru upravljačku praksu u brojnim neizvjesnim okolnostima odlučivanja, kao što su problem:

- Optimalnog izbora redoslijeda realizacije investicionih alternativa u zavisnosti od iznosa raspoloživih investicionih sredstava na primjeru jedne društveno – ekonomske zajednice. (Landika & Mikić, Modeliranje konkurentskog prioriteta investicionih alternativa u funkciji strategije globalnog razvoja, 2011)

- Izbor optimalne strategije zaštite i osiguranja prinosa u voćarstvu kao bi se obezbijedio adekvatan poslovni rezultat (Landika, Sredojević, & Bojanić, Matrični aspekti efekata osiguranja prinosa u voćarstvu kao preduslov međunarodne tržišne konkurentnosti, 2017)
- Izbor optimalne strategije investiranja u turističke projekte (Landika, Šupuković, & Jakupović, Quantitative Models in the Function of Programming an Optimal Investment, 2017)
- Izbor optimalne strategije u (Landika, Sredojević, & Bojanić, Principi matematičke formulacije matrične strukture optimalne marketing strategije u sportu, 2017).

Problemi odlučivanja gdje se upravljačke odluke donose uz neizvjesnost ishoda uz uvažavanje svih relevantnih činjenica efikasno se rješavaju primjenom modela iz oblasti teorije igara i modela igara protiv prirode.

REALIZACIJA NOVIH KONCEPATA U BIH KROZ NOVU STRATEGIJU

Kada je riječ o marketing i menadžment poslovnim sistemima uz primjenu duhovnih tehnika, mogli bi se napraviti novi strateški prijedlozi organizacije unutrašnje strukture kadrovske politike. Prijedlog strukture u formi saradnje i brige o zaposlenima unutar kompanije a u cilju boljeg poslovanja same kompanije i preduzeća, može biti sljedeća:

HR menadžer - jedan ekonomskog obrazovanja- zapošljavanje, kadrovi, regrutacija i/ili jedan pravnog obrazovanja,

HR menadžer – psiholog,

ESTH menadžer- menadžer za edukacije, duhovne tehnike i zdravlje, koji ima znanje iz duhovnih tehnika i radi grupno i individualno sa ljudima, jedna ili dvije osobe (Aleksić-Anđelić, *Psihologija u marketingu i menadžmentu*, 2021).

ESTH menadžer (Education, spiritual technique and health manager) ili menadžer za edukaciju, duhovne tehnike i zdravlje je kreacija autorke koja ima svoje mjesto u novim strategijama pristupa uspješnom poslovanju preduzeća. Uloga ovog menadžera je rad sa zaposlenima na grupnom i individualnom nivou kroz prethodno navedene duhovne tehnike koje se odnose na theta iscjeljenje, Eft tapkanje i iscjeljenje vremenskih linija. Saradnja unutar kompanije dovodi do zadovoljstva, to utiče na zaposlene da budu u dobroj saradnji sa potrošačima, a što sve zajedno doprinosi prosperitetu same kompanije i ostvarivanju njenih ciljeva, misije i vizije preduzeća.

Zdrav pojedinac doprinosi zdravlju cijele kompanije pri čemu se stvara zdrava energetska klima koja može samo slati pozitivnu energiju i potencijalni uspjeh iz unutrašnje klime kompanije u eksternu sredinu u kojoj kompanija egzistira.

IMPLEMENTACIJA NOVIH METODA

Implementacija nove strategije ogleda se u konkretnoj primjeni novih prijedloga u praktičnom smislu unutar kompanije.

Pored stručnjaka koji bi bio taj koji oplemenjuje profesiju i prostor kompanije sa svojim pristupom kroz individualni i grupni rad sa zaposlenima, važno bi bilo promijeniti kroz strategiju i dodatne elemenete unutar kompanije.

Cilj svake kompanije je uspjeh. Kao što je poznato sve kreće iznutra pa prema tome, postoji niz interesantnih prijedloga koji bi doprinijeli da atmosfera unutar kom-

panije bude na zavidnom nivou.

Kako bi radnik bio efektivniji i efikasniji, treba razmisliti o humanizaciji njegovog rada, a da je to u skladu sa obavljanjem ciljeva kompanije. Zadovoljan radnik koji provede 4 do 6 sati kvalitetno na poslu, radnik čiji je vikend slobodan, i koji u petak završava ranije s poslom, sve to, utiče na njegovo zdravlje, porodicu a na kraju i na kompaniju (Aleksić-Andelić, Marketing menadžment odnosa sa javnošću, 2021).

Pored smanjene radne sedmice a u cilju boljeg i efikasnijeg poslovanja kao i zadovoljnih radnika a samim tim i potrošača, potrebno je uvesti i učiniti prostorije unutar kompanije drugačijim:

- Uvesti manji broj radnih sati
- Omogućiti čuvanje djece i povezivanje sa porodicom
- U druženjima koje organizuje kompanija, učestvuje i porodica zaposlenog pod parolom „Čuvajmo porodicu“
- Individualni i grupni tretmani i meditacije
- Joga i lagani treninzi opuštanja
- Kvalitetni obroci ili postojanje kuhinje sa pozivom na zdrav život
- Akcenat na tijelo i duh, um i fizičko tijelo kroz parole kompanije i njene svrhe.

MATRIČNE IGRE KAO OKOSNICA MONETARNOG ISKAZIVANJA EFEKATA DUHOVNIH TEHNIKA NA POSLOVNI REZULTAT

Matrične ili strateške igre predstavljaju matematičku analizu konfliktnih situacija. Konfliktnim situacijama se smatra svaka ona situacija u kojoj se sukobljavaju interesi dvaju ili više učesnika u konfliktu. Matrične igre imaju širok spektar upotrebe, i njima se mogu rješavati brojni upravljački problemi. Matrične igre se dijele na:

- Igre protiv racionalnog protivnika;
- Pregovaračke igre i
- Igre protiv prirode.

Igre protiv prirode predstavljaju kategoriju matričnih igara u kojoj čovjek kao racionalan učesnik u konfliktu ima neracionalnog protivnika. Imajući u vidu da se racionalan protivnik definiše kao onaj koji ulaže sve resurse da ishod igre bude najpovoljniji za njega, a time najnepovoljniji za njegovog protivnika.

U igrama protiv prirode čovjek, kako racionalan učesnik u konfliktu, igra sa protivnikom koji se ponaša na slučajan način, koji nema nikakav interes da zauzme najnepovoljniji stav prema njemu.

Problem matričnih igara rješava se polazeći od matrice plaćanja, pri čemu se za redove matrice plaćanja vezuju strategije čovjeka i označavaju se $A_1, A_2, \dots, A_n$. Kolone matrice plaćanja vezuju se za stanja prirode koja označavamo sa $S_1, S_2, \dots, S_m$. Ishodi svih kombinacija strategije čovjeka i stanja prirode omogućavaju formiranje matrice plaćanja, čiji elementi predstavljaju monetarni izraz ishoda nastalog njihovom kombinacijom a označavamo ga sa a_{ij} . Opšti oblik matrice plaćanja možemo ilustrovati sledećim prikazom:

Tabela 1. Opšti oblik matrice plaćanja

		S_1	...	S_m
A_1		a_{11}	...	a_{1m}
$\vdots$		$\vdots$	$\ddots$	$\vdots$
A_n		a_{n1}	...	a_{nm}

Izvor: (Aleksić & Landika, 2021)

MATRIČNA FORMULACIJA POSLJEDICA UVOĐENJA DUHOVNIH TEHNIKA U KOMPAIJU

Problem odlučivanja može se formulisati na sledeći način. Memadžment može da izabere jednu od tri opcije: (Aleksić & Landika, 2021)

- Da ne uvodi nikakve promjene u svoju poslovnu aktivnost, drugim riječima menadžment ne uvodi nikakvu duhovnu tehniku, niti promjene radne okoline, brige o radnicima i redukcija radne sedmice. Ovu strategiju označavamo kao A_1 ;
- Da angažuje ESTH menadžera (Education, spiritual technique and health manager), čiji bi zadatak bio da radi sa radnicima na poboljšanju njihovog opšteg stanja, a time i poslovne efikasnosti, ovu strategiju označavamo kao A_2 ;
- Da se uvedu promjene koje se odnose na radnu okolinu, brigu o radniku i redukovanu radnu sedmicu. Ovu strategiju označavamo kao A_3 i
- Da se istovremeno uvedu promjene opisane kao strategija A_2 i A_3 .

Reakcija zaposlenika na kandidovane promjene je individualna, u ovom radu posmatračemo je grupno ne pojedinačno, može biti:

- Negativna, u smislu da se desi pad produktivnosti, a time i da poslovni rezultat bude manji za 5 %, ovaj ishod označavamo kao stanje prirode S_1 ,
- Neće biti reakcije, u tome smislu ishod označava da se nije desila nikakva promjena poslovnog rezultata, ovaj ishod označavamo kao stanje prirode S_2 ,
- Blago pozitivna, u smislu da se desi blaži rast produktivnosti, a time i da poslovni rezultat bude veći za 10 %, ovaj ishod označavamo kao stanje prirode S_3 i
- Pozitivna, u smislu da se desi rast produktivnosti koji će za posledicu imati povećanje poslovnog rezultata za 15 %, ovaj ishod označavamo kao stanje prirode S_4 .³

Elementi od kojih polazimo prilikom računanja elemenata matrice plaćanja su: (Aleksić & Landika, 2021)

- Poslovni sistem kojeg analiziramo ostvaruje poslovni rezultat u visini 750.000 KM godišnje;
- Plata ESTH menadžera (Education, spiritual technique and health manager) na mjesečnom nivou iskazana u bruto iznosu iznosi 2.200 KM mjesečno, odnosno 26.400 KM godišnje;
- Troškovi uvođenja paketa mjera koje se odnose na radnu okolinu, brigu o radniku i redukovanu radnu sedmicu, odnose se na fiksni trošak adaptacije postojećeg ili izgradnju novog prostora za čuvanje djece i predviđene fizičke aktivnosti sa radnicima što bi iznosilo 100.000 KM. Imajući u vidu da ek-

sploatacija prostora obuhvata period od 10 godina ovaj trošak na godišnjem nivou iznosi 10.000 KM. Troškovi se odnose na ishranu djece u toku boravka u dnevnom centru, što na mjesečnom nivou iznosi 300 KM, a na godišnjem nivou je 3.600 KM. Zapošljavanje 2 vaspitača, čije bi mjesečne plate iznosile 2.200 KM bruto iskazani na mjesečnom nivou, odnosno 52.800 KM na godišnjem nivou. Ukupni troškovi ove strategije su 66.400;

- Troškovi četvrte strategije jednaki su zbiru troškova druge i treće strategije i iznose 92.800 KM.

Uvrštavanje navedenih pretpostavki u prethodno opisan model dobijamo maticu plaćanja čiji izgled ilustrujemo sledećim prikazom:

Tabela 2. Matrica plaćanja za rešavanje konkretnog upravljačkog problema

		S_1	S_2	S_3	S_4
M=	A_1	-37.500	0	0	0
	A_2	-63.900	-26.400	43.600	78.600
	A_3	-103.900	-52.800	3.600	52.200
	A_4	-130.300	-92.800	-22.800	12.200

Izvor: (Aleksić & Landika, 2021)

Izbor optimalne strategije temelji se na uvažavanju kriterija formulisanih za tu namjenu, a čije rezultate prikazujemo u sledećim tabelama:

Tabela 3. Rezultati primjene Wald – ovog kriterijuma

Strategija	$\min_j a_{ij}$	$\max_i \min_j a_{ij}$	Rang strategije
A_1	-37.500	-37.500	1
A_2	-63.900		2
A_3	-103.900		3
A_4	-130.300		4

Izvor: (Aleksić & Landika, 2021)

Prema rezultatima primjene Wald – ovog kriterija optimalna je strategija A_1 , odnosno zadržati postojeći poslovni pravac.

Tabela 4. Rezultati primjene Laplace – ovog kriterijuma

Strategija	$\frac{1}{4} \sum_{j=1}^4 a_{ij}$	$\max_i \frac{1}{4} \sum_{j=1}^4 a_{ij}$	Rang strategije
A_1	-9.375	7.975	2
A_2	7.975		1
A_3	-25.225		3
A_4	-58.425		4

Izvor: (Aleksić & Landika, 2021)

Prema rezultatima primjene Laplace – ovog kriterija optimalna strategija je A_2 , odnosno angažovanje ESTH menadžera (Education, spiritual technique and health manager).

Tabela 5. Rezultati primjene Hurwitz – ovog kriterijuma

Strategija	$0,8M_j + 0,2m_j$	$\max_i (0,8M_j + 0,2m_j)$	Rang strategije
A_1	-7.500	50.100	3
A_2	50.100		1
A_3	20.980		2
A_4	-16.300		4

Izvor: (Aleksić & Landika, 2021)

Prema rezultatima primjene Hurwitz – ovog kriterijuma optimalna je strategija A_2 , jednako kao u prethodnom slučaju.

Za potrebe primjene Savage – ovog kriterija, potrebno je formirati matricu kajanja, koja u posmatranom slučaju izgleda ovako:

Tabela 6. Matrica kajanja konstruisana za potrebe primjene Savage – ovog kriterija

	S_1	S_2	S_3	S_4
A_1	0	0	-43.600	-78.600
A_2	-26.400	-26.400	0	0
A_3	-66.400	-52.800	-40.000	-26.400
A_4	-92.800	-92.800	-66.400	-66.400

Izvor: (Aleksić & Landika, 2021)

Tabela 7. Rezultati primjene Savage – ovog kriterija

Strategija	$\frac{1}{4} \sum_{j=1}^4 r_{ij}$	$\max_i \frac{1}{4} \sum_{j=1}^4 r_{ij}$	Rang strategije
A_1	-30.550	-13.200	2
A_2	-13.200		1
A_3	-46.400		3
A_4	-79.600		4

Izvor: (Aleksić & Landika, 2021)

Prema rezultatima Savage – ovog kriterija optimalna je strategija A_1 .

Različiti kriteriji daju različite rezultate, što je uobičajeno. Konačna odluka se donosi sagledavanjem rezultata svih kriterija, što se može prikazati u sledećoj tabeli:

Tabela 8. Zbirni rezultati primjene svih kriterija

Kriterijum Strategija	Wald	Laplace	Hurwitz	Savage	Ukupno	Optimalna strategija
A ₁	1	2	2	2	7	A ₂
A ₂	2	1	1	1	5	
A ₃	3	3	3	3	12	
A ₄	4	4	4	4	16	

Izvor: (Aleksić & Landika, 2021)

Najpovoljnija alternativa za posmatrano preduzeće jeste angažovanje ESTH menadžera (Education, spiritual technique and health manager).

Nakon nekog vremena analizu bi bilo dobro ponoviti, jer se mogu promijeniti pokazatelji poslovne uspješnosti, a time i optimalna strategija.

ZAKLJUČAK

Svaki oblik fizičke aktivnosti, kao što je istezanje, joga i tehnike disanja dovode do toga se neke loše emocije i stres otpusti iz tijela. To je dobar način kako se može doprinijeti kvalitetu života. Još jedna od tehnika jeste reiki tehnika. Reiki je tehnika nekonvencionalnog liječenja energijom. Reiki je naša životna energija, koju svi imamo u sebi. Sve ove tehnike pomažu osobi da živi kroz psiho-fizički balans. Ove tehnike su dodatak za rad na sebi uz sve što inače radimo kroz akciju, racionalne metode i sl. Takođe, uvijek treba poduzimati realne korake, biti svjesno u trenutku, kao i preduzimati realne korake i akcije. Ljudi imaju zdrav razum koji uvijek treba koristiti. Kombinacija rada na sebi kroz racionalne, sportsko-zdravstvene i duhovne tehnike može donijeti mnoge benefite za čovjeka i najbolje je kombinovati ove metode stvarajući jedinstveni pristup psiho-fizičkom zdravlju. Svaka osoba treba da napravi svoju kombinaciju, jedinstvenu kombinaciju svih ovih tehnika u skladu sa sobom.

Rezultat rada na sebi su bolji odnosi sa sobom, i bolji odnosi sa drugima kroz veću podršku i razumijevanje. Da bismo živjeli prave vrijednosti, prave definicije ljubavi i da bi se razumjeli sa drugima, potrebno je, prije svega, da budemo blagi prema sebi, da damo sebi podršku i razumijevanje. Ako radimo na unutrašnjem dijalogu, možemo biti uspješniji u dijalogu i komunikaciji sa drugima.

Pokazatelji monetarno izražene poslovne efikasnosti zasnovane na angažovanju ESTH menadžera (Education, spiritual technique and health manager), značajno podiže poslovnu efikasnost. Strateško opredjeljenje nije zasnovano na subjektivnom stavu donosioca odluke, već na naučno fundiranim dokazima.

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MONETARY EXPRESSION OF THE EFFECTS OF THE SPIRITUAL TECHNIQUES APPLICATION IN ORDER TO RAISE THE QUALITY OF MARKETING AND MANAGEMENT SYSTEMS IN COMPANIES

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Abstract: *Spiritual techniques aim to influence individuals, if they are willing to approach a positive change in their negative patterns. What is available through the Nlp technique or neuro-linguistic programming is now available through other techniques as well. The importance of spiritual techniques existence is reflected in the change of lifestyle in order to live more fulfilled through all aspects of life: social, economic, business and health. If spiritual techniques were applied in companies and enterprises, starting from individuals to groups, the success of the company could be influenced. This success is reflected in the individual and group goals of the company. It is known that successful company is the one whose employees influence and work together on achieving the same and common goals of the company. The company's management uses all available resources to raise business efficiency, which, justifiably, raises the question of monetary expression of the spiritual techniques contribution in everyday business.*

This paper aims to open the horizons of the business world when it comes to other strategies for successful business with the use of psychological and spiritual positive techniques. These strategies would be a new way of approaching business, and the optimal one would be sustainably based on the results of games against nature, but also on building a healthy business environment in the internal and external environment of the company. Any form of physical activity such as stretching, yoga and breathing techniques lead to the release of bad emotions and stress from our body, which improves overall quality of life. Another technique is reiki technique. Reiki is an unconventional energy healing technique. It refers to our life energy, which we all have within ourselves. All these techniques help a person to live in psychophysical balance. These techniques complement the work on ourselves through everything we normally do, such as actions, rational methods etc. We should always take real steps and actions, and be aware of the present moment. People have common sense that should be used in every situation. Combining the work on ourselves through rational, sports, health and spiritual techniques can bring many benefits to a person and it is best to combine these methods creating a unique approach to psycho-physical health. Each person should make their own combination, a unique combination of all these techniques in accordance with themselves. Personal growth results in better relationships with ourselves and others through greater support and understanding. In order to live our values, love and to understand each other, it is necessary, above all, to be kind to ourselves, to give ourselves support and understanding. If we work on internal dialogue, we can be more successful in communication with others. Indicators of monetary business efficiency based on the engagement of ESTH managers (Education, Spiritual Technique and Health manager), significantly raises business efficiency. The strategic commitment is not based on the subjective attitude of the decision maker, but on scientifically based evidence.

Keywords: spiritual techniques, success, business, matrix games, company goals.

Jel klasifikacija: C70, I00, M12, M31



PROGNOСТИČKO MODELIRANJE UPRAVLJAČKIH SMJERNICA KAO TEMELJ MEĐUNARODNOG POZICIONIRANJA – IZAZOVI ZA BIH

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Sažetak: Međunarodno tržište zahtijeva jačanje konkurentskih prednosti svih učesnika na njemu. Formulacija strategije pozicioniranja, zahtijeva ulaganje resursa u pribavljanje dodatnog znanja. Navedeni resurs omogućava izbjegavanje “strategijskih promašaja”, koji su često karakterisali pokušaje pristupanja domaćih poslovnih sistema međunarodnom tržištu. Upravljanje međunarodnim razvojem i tržišno pozicioniranje poslovnih sistema u okvirima domaćeg i međunarodnog okruženja, zahtijeva dodatnu upravljačku energiju i dodatno znanje. Digitalizacija poslovanja, značajno redukuje troškove poslovanja, čime se eliminišu brojne prepreke za siromašnije i nerazvijenije zemlje, koje svoju šansu trebaju i moraju iskoristiti kako bi se efikasno uključile u međunarodne ekonomske tokove. Informisanje o cenzurisanom tražnji, kao i njezino prognoziranje u okviru odabranog poslovnog područja, predstavlja priliku koja omogućava siguran i efikasan pristup globalnom tržištu. Cenzurisana tražnja je dio tražnje u okviru poslovnog djelokruga koji nije zabilježen od strane ponuđača, jer je nastala nakon što su ponuđači na odabranom tržišnom segmentu, maksimalno iskoristili vlastite proizvodne kapacitete. Predviđanje cenzurisane tražnje predstavlja oblast kvantitativne analize sa zadatkom prognoziranja vrijednosti promjenljive, koja za istraživača predstavlja poseban izazov, imajući u vidu da ni istorija promjenljive nije poznata.

Ključne riječi: analiza poslovanja, cenzurisana tražnja, ekonometrijska predviđanja, upravljanje razvojem zemlje

JEL klasifikacija: C3, M2, O1

UVOD

Pandemija prouzrokovana virusom COVID – 19, pored ostalog, promijenila je način poslovanja u svjetskim razmjerama. Navedeno se odnosi na potrebu izbjegavanja interakcije i direktnog kontakta ili realizaciju istog uz poštovanje odgovarajućih epidemioloških mjera. Prevazilaženje i saživljavanje sa novonastalom situacijom uzrokovalo je digitalizaciju poslovanja u brojnim oblastima poslovne aktivnosti, koja je u dotadašnjim uslovima bila nezamisliva, posebno je važno naglasiti značajan porast trgovine zasnovane na principu poslovanja na daljinu.

Moguće je primjetiti razvoj segmenta razmjene u procesu društvene reprodukcije posredstvom poštanski preduzeća, čija aktivnost sa lokalnog nivoa prelazi na globalni, a time se za poslovne sisteme otvaraju nova, do sada nedostupna tržišta na globalnom nivou. Diversifikacija poslovne djelatnosti na globalno tržište zahtijeva spoznaju obima i strukture tražnje proizvoda koje su poslovni sistemi u mogućnosti da ponude.

Čest je slučaj da poslovni sistemi izbjegavaju da kandiduju one proizvode koje, u punom kapacitetu, nude lokalne kompanije u okviru odabranog ciljanog tržišnog segmenta, jer činjenica da određena kompanija plasira ukupnu ponudu ne znači da je time ponuda zadovoljena.

Poslovni sistemi koji “vladaju” određenim tržišnim segmentom, iako svjesni postojanja dodatne tražnje nisu u mogućnosti da prošire obim aktivnosti iz objektivnih razloga. Sve navedeno ostavlja prostor tržišnom pozicioniranju poslovnih sistema koji nisu u mogućnosti da posluju lokalno.

Poseban interes mogu da imaju mala i srednja preduzeća iz zemalja kao što je naša, kojima za realizaciju razmjene, u tom slučaju, nije nedostupna infrastruktura koju nisu u mogućnosti da pribave i finansiraju. Uspiješnost realizacije opisanog pristupa dislociranim tržišnim segmentima mora biti temeljeno na pažljivoj analizi poslovnih mogućnosti isporučioaca i mogućnosti tržišne apsorpcije odabranog tržišnog segmenta.

Bitan faktor uspješnosti odnosi se na adekvatnu predikciju cenzurisane tražnje, koja se efikasno rješava modelima matematičke simulacije, čija metodologija primjene će biti prezentovana u ovom istraživačkom projektu. Mogućnosti matematičke simulacije u funkciji prognostike su veoma efikasne, jer se prilagođavaju individualno svakom upravljačkom problem. Aplikacija modela matematičke simulacije nije uslovljena postojanjem realnog poslovnog sistema, već se može primjeniti i na virtualni poslovni sistem.

PREGLED LITERATURE

Poslovna aktivnost u segmentu plasmana i razmjene proizvoda predstavlja fazu procesa društvene reprodukcije kojom se verifikuje efikasnost i efektivnost ukupnog poslovnog procesa. Poslovni sistemi uključuju različite poslovne aktivnosti, ali osnovna misija svakog poslovnog sistema je da uskladi resursne mogućnosti sa tržišnim potrebama.

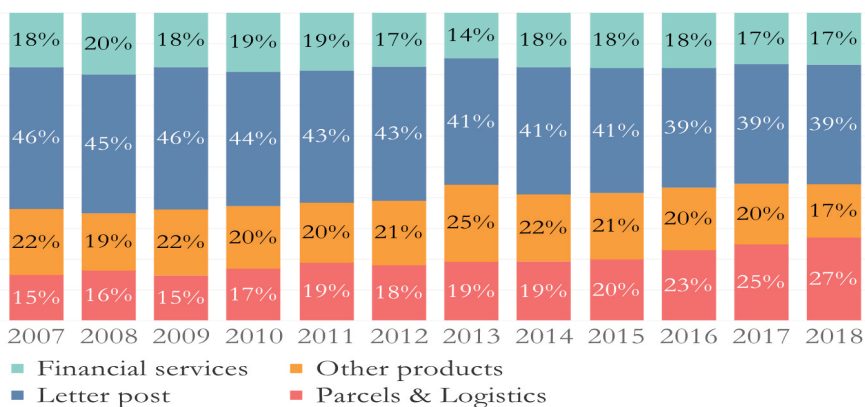
Koncept poslovanja poslovnih sistema uključuje značajno diferentne kategorije, ali njihova svrha odnosi na težnju da angažovanjem materijalnih, monetarnih, nematerijalnih i ostalih potrebnih resursa ostvare tržišnu afirmaciju. Poslovni sistemi su kompleksni, otvoreni i integrisani u globalni ekonomski sistem, tako da svi tokovi jednog sistema tangiraju ostale sisteme. Poseban izazov globalni ekonomski sistem prolazi zbog pandemije uzrokovane virusom COVID – 19.

“Korona virus predstavlja prijetnju cijeloj ekonomiji, te je stoga potrebna brza i efikasna reakcija na potencijalne scenarije, kako bi se optimalno ublažile neizbježne negativne posljedice. Utjecaj na prihode svih velikih kompanija u Bosni i Hercegovini je ekstremno, te već postoje jasni pokazatelji usporavanja globalne privrede.” (Deloitte, 2020)

“Ukupna spoljnotrgovinska razmena, nakon što je u oktobru bila redukovana, u novembru je porasla do apsolutno najveće vrednosti do sada i to zahvaljujući povećanju uvoza. Desezonirani i trendni rast su izraženiji kod izvoza nego kod uvoza, ali je u novembru došlo do izuzetnog skoka desezoniranog uvoza. Pokrivenost uvoza izvozom je smanjena do najmanje vrednosti posle aprila. Međugodišnja stopa rasta vrednosti prometa u trgovini na malo u novembru 2020. je redukovana skoro do vrednosti iz novembra prethodne godine, nema desezoniranog niti trendnog rasta. Mesečna inflacija je u novembru zaustavljena, godišnja je umanjena.” (Stamenković, 2021)

Pored zabilježenih nepovoljnih trendova, jedna poslovno uslužna grana doživljava afirmaciju i ekspanziju u nepovoljnim uslovima života i poslovanja, a to djelatnost poštanskih usluga. “COVID – 19 je nastupio upravo kada se poštanski sektor već suočavao sa značajnim izazovima. Poslednjih godina, kao je digitalna supstitucija bila ubrzana, većina vrsta komunikacija, računa i dokumentacije premještena je u digitalno okruženje. Istovremeno, stvorene su nove mogućnosti za poštanske operatore, zahvaljujući neviđenom rastu e – trgovine. Shodno tome, mnogi poštanski operateri pokušavali su da prilagode svoje poslovne modele, prebacujući fokus sa pisama na pakete, logistiku i finansijske usluge, kao što je prikazano na sledećoj ilustraciji. Tako je udio pismonosne pošte u ukupnim prihodima poštanskih operatera pao sa 45% u 2008, na 39% u 2018. godini, u korist paketa i logistike, koji je u istom period skočio sa 16,3% na 27,2%. (Union, 2021)

Slika 1. Evolucija strukture poštanskih usluga



Source: UPU official statistics.

Notes: Simple average by year at the global level.

Izvor: (United, 2020)

Pokretački potencijal proizvodne djelatnosti u zemljama, skromnih proizvodnih aktivnosti, značajnih resursno – stvaralačkih potencijala i ograničene lokalne tržišne

apsorpcije, sadržan je u traženju dostupnih tržišta. Značajnu pomoć prevazilaženju navedenih poteškoća omogućavaju potencijali istraživanja tržišta sa fokusom na cenzurisanu tražnju. Takođe, prisustvo cenzurisane tražnje, odnosno tražnje koja na određenom tržišnom segmentu nije zabilježena iz razloga što kompanija koja posluje na označenom tržišnom segmentu nakon što plasira vlastitu proizvodnju, u pravilu, ne evidentira tražnju koja nastaje nakon toga.

IZAZOVI METRIKE POTENCIJALA MEĐUNARODNOG TRŽIŠTA

Metrika tržišnog potencijala odnosi se na analizu i kvantitativno izražavanje najvažnijih tržišnih kategorija, a odnosi se, prvenstveno, na ponudu i tražnju, njihovu elastičnost, kao i uslov ravnoteže na tržištu. Kompleksnost i stohastičnost oblika zavisnosti tražnje i ponude od faktora koji utiču na njih, usložnjava njihovo kvantitativno izražavanje, a time i predviđanje njihovih budućih vrijednosti.

Dosljedno i tržišno orijentisano poslovno ponašanje poslovnih sistema podrazumijeva kreiranje upravljačkih odluka zasnovano na kompoziciji adekvatne metrike poslovnih ciljeva. Model odlučivanja treba da se prilagodi nivou realiteta kojeg aproksimira, uz aktivno obuhvatanje komponenti sistema i njegovog okruženja, njihovih međusobnih relacija u smislu oblika, stepena i kvantifikacije istih.

Model odlučivanja ima zadatak da adekvatnom metrikom kontroliše, usmjerava i unapređuje poslovne aktivnosti, uvrštavajući modelirane upravljačke informacije u poslovno ponašanje. Rezultat, odnosno sveukupnost izlaznih kategorija treba biti adekvatno prepoznat i apsorbovan na tržištu.

Poslovni izazovi poslovanja malih i srednjih preduzeća u uslovima pandemije COVID – 19

U uslovima pandemije povezane sa virusom COVID – 19, iskustva preduzetničke aktivnosti u poslovanju malih i srednjih preduzeća iskazuju tendenciju ugroženosti novonastalim poslovnim okolnostima.

“Zabrinjavajućih 61 % poduzetnika u globalnom uzorku prijavljuje ugroženost svojih kompanija zbog velikog pada u obimu poslovanja, dok je otpuštanje radnika zabilježeno u 28 % malih i srednjih preduzeća. Premda je više poduzetnika u BiH iskazalo ozbiljnu ugroženost poslovanja od globalnog prosjeka (njih oko 70 %), interesantno je primijetiti da je oko 22 % izvijestilo otpuštanje radnika, što bosanskohercegovačka mala i srednja preduzeća svrstava u kategoriju onih koji su otpuštali radnike manje od globalnog prosjeka.” (Efendić, 2021)

Poslovanje malih i srednjih preduzeća, na područjima nedovoljno razvijenih ekonomskih sredina, organizuje se tako da se uloga menadžmenta, vlasnika, preduzetnika proširuje na marketing, logistiku i analizu, poslovanja. Razlozi za takav pristup, leže u činjenici da ne postoji organizovana institucionalna podrška, ali ni dostupnost adekvatne konsultantske podrške u poslovnom okruženju. Preduzetnici imaju značajan problem nedostatka početnog kapitala, ograničenog tržišta na lokalnom nivou, nedovoljno vremena za adekvatno angažovanje na svim navedenim područjima.

Koncept funkcionisanja i metrika poslovnog uspjeha MiS preduzeća u BiH

Poslovna djelatnost malih i srednjih preduzeća obuhvata paletu poslovnih opre-

djeljenja, koje prevashodno opredjeljuju koncept funkcionisanja, a time i metriku poslovnog rezultata. Planiranje poslovne aktivnosti na novom tržištu podrazumijeva menadžerske napore u pravcu predikcije tržišnih kapaciteta odabranog teritorijalnog segmenta.

Specifičnosti tržišta moraju biti sagledane po različitim aspektima tržišnih potreba, očekivanja i zahtijeva korisnika, a odnose se najveći dijelom na predikciju tražnje za određenim proizvodnim asortimanom. Poslovne šanse malih i srednjih preduzeća sa područja BiH mogu se tražiti u području ponude tradicionalnih proizvoda iz oblasti ručno izrađenih ili ukrašenih odjevnih predmeta.

Ukoliko bi se planirao plasman takvih proizvoda na tržište Zapadne i Sjeverne Evrope, mogu se imati u vidu komparativne prednosti predloženih strategijskih rješenja, a odnose se na:

- Postojanje kategorije potrošača zainteresovanih za kandidovanu ponudu, a odnosi se na potrošače koji vode porijeklo sa teritorije BiH proizvode ovog tipa povezuju sa porodičnom tradicijom,
- Sklonost domicilnog stanovništva proizvodima koji se planiraju plasirati na navedena tržišta
- Visina ličnih prihoda potrošača na odabranom tržišnom segmentu nije ograničavajući faktor za kupovinu proizvoda koji se planiraju plasirati na odabrani tržišni segment i
- Odabrani tržišni segment trenutno je snabdjeven proizvodima iz posmatrane kategorije koji imaju značajno višu cijenu zbog viših troškova proizvodnje.

Proizvodi ovog tipa mogu ostvariti značajne komparativne prednosti na ciljnom tržištu koje je potrebno iskoristiti, a odnose se na:

- Nedovoljnu pokrivenost tražnje postojećom ponudom,
- Prilagođavanje ponude ličnim zahtjevima kupaca (u pogledu veličine, boje, izgleda odjevnog predmeta),
- Lakoća plasmana putem oglašavanja na internetu i direktne isporuke kupcu, pri čemu je planirani kanal distribucije pošta i
- Cjenovna konkurentnost.

Postojanje tražnje mora biti adekvatno kvantifikovano, a predikcija njezine vrijednosti utemeljena na analizi kojom se očekivane vrijednosti prilagođavaju stvarnim kolebanjima na tržištu proizvoda koji se planiraju plasirati na navedeni tržišni segment. Step en saglasnosti stvarne tražnje sa poslovnim očekivanjem projektovanim kroz predikciju odražava se na predikciju poslovnog rezultata.

Poslovni rezultat predstavlja odnos izlazne kategorije i troškove proizvodnje i snabdijevanja, a uslovljen je stepenom usaglašenosti proizvodnje i plasmana. Ukoliko je obim proizvodnje viši, troškovi proizvodnje i plasmana su niži, ali navedeno ima smisla isključivo ukoliko je proizvedeni asortiman moguće tržišno pozicionirati na adekvatan način.

Predikcija tražnje u funkciji optimizacije obima poslovne aktivnosti MiS preduzeća sa područja BiH

Kreiranje proizvodnog asortimana usklađenog sa tražnjom je osnovni izazov poslovnih sistema, bez obzira na poslovnu orijentaciju, veličinu, starost i druge karak-

teristike. Procjena buduće vrijednosti tražnje mora se zasnivati na opravdanim argumentima, jer se cjelokupni poslovni koncept temelji na njoj. Metoda procjene buduće vrijednosti stvarne tražnje temelji se na: (Cooper, Mellu, & Kleywegt, 2006)

- Zanimarivanju cenzuriranih podataka;
- Evidentiranju podataka o nezadovoljenoj tražnji ili
- Nadogradnji cenzuriranih podataka statističkim metodama.

Pristup temeljen na zanimarivanju cenzuriranih podataka negira realnu sliku pojave koja se analizira, a evidentiranje podataka o stvarnoj tražnji temelji se na prošlim događajima, te se može planirati samo kao buduća aktivnost. Stepennosljednosti prognoziranih vrijednosti uslovljen je korištenom metodom, a za potrebe istraživačkog projekta koriste se:

- Analiza vremenskih serija,
- Regresiona analiza i
- Delfi metoda.

Prve dvije metode su kvantitativnog, a treća je kvalitativnog karaktera. Svaka od korištenih metoda ima svoje prednosti i nedostatke, ali će se prognozirani rezultati komparirati u odabranom vremenskom okviru i kritičkim pristupom odabrati adekvatan model predikcije tražnje za odabrano područje djelovanja.

Istraživačkim projektom obuhvaćeni su podaci o realizaciji unutar pet godina, koje su prethodile 2019.godini (2014 – 2019.godine) na mjesečnom nivou zabilježeni kod preduzetnice koja je svoju poslovnu aktivnost realizovala na način da je ženama koje su vješte u izradi odjevnih predmeta i modnih dodataka od vune (kardigani, džemperi, poluveri, prsluci, suknje, šalovi, kape, rukavice, čarape, grijači za ruke ...) sa područja šire banjalučke regije davala materijal za izradu i modele predmeta, plaćala ih po obavljenoj izradi i gotove proizvode plasirala na području Švicarske, Njemačke i Austrije.

Na bazi prikupljene empirijske građe dobijeni su sledeći teorijski modeli:

- **Jednačina linearnog trenda** glasi: gdje su:

Q_{ti} – prognozirana (teorijska) vrijednost tražnje iskazana brojem asortimana;

X_i – vrijeme iskazano u mjesecima;

2.078,48 – teorijska vrijednost koja odgovara središnjem članu vremenskog perioda, a to je januar mjesec 2016.godine;

27,88 – prosječno mjesečno povećanje tražnje u obuhvaćenom vremenskom intervalu. Ekstrapolisane vrijednosti tražnje koriguju se odgovarajućim sezonskim koeficijentima.

- **Regresioni model** koji odgovara analiziranoj empirijskoj građi ima oblik: gdje su:

Q_{ti} – prognozirana (teorijska) vrijednost tražnje iskazana brojem asortimana;

X_{1i} – prosječna cijena asortimana proizvoda čija tražnja se istražuje;

X_{2i} – prosječna cijena konkurentskog asortimana proizvoda čiju vrijednost tražnje prognoziramo;

2.081,32 – minimalna vrijednost tražnje za asortimanom proizvoda iskazana prosječnom vrijednošću;

(– 1,64) – prosječan prirast tražnje pri jediničnom prirastu cijene asortimana (riječ je o padu tražnje jer je vrijednost negativna);

3,52 – prosječan prirast tražnje pri jediničnom prirastu cijene konkurentskog asortimana.¹

- Predikcija tražnje zasnovana na **Delfi metodi** predstavlja korekciju predviđenih vrijednosti tražnje iskustvom i intuicijom eksperata involviranih u proces proizvodnje, razmjene i promocije proizvoda na odabranom tržišnom segmentu.

Predikcija tražnje u funkciji optimizacije obima poslovne aktivnosti MiS preduzeća sa područja BiH – simulacija monetarnih konsekvenci komparacije stvarne i projektovane tražnje

Efikasnost i efektivnost poslovnog procesa opravdano je iskazati ostvarenim profitom u odgovarajućem vremenskom periodu, koja će u modelu simulacije predstavljati kriterijumsku promjenljivu, a čija vrijednost se određuje korištenjem obrasca:

$$P_f = \begin{cases} Q_{Sti} < Q_{Ti}; 50,87 \cdot Q_{Ti} - 38,15 \cdot (Q_{Sti} - Q_{Ti}) \\ Q_{Sti} \geq Q_{Ti}; 50,87 \cdot Q_{Ti} \end{cases}$$

U prethodnom obrascu oznake imaju sledeća značenja:

P_f – vrijednost ostvarenog profita na mjesečnom nivou;

Q_{Sti} – vrijednost stvarne tražnje – slučajna promjenljiva;

Q_{Ti} – projektovana vrijednost tražnje na bazi svake od prethodne tri prognostičke metode, koja predstavlja vrijednost obima proizvodnje – ulazna promjenljiva;

Izlazna promjenljiva je prodana količina, a njezina vrijednost određuje se kao $\min(Q_{Sti}, Q_{Ti})$.

Vremenski okvir simulacije je 61 mjesec, i to od januara 2014.godine, do februara 2019.godine, a nakon provedenog postupka simulacije vrijednosti kriterijumske promjenljive mogu se prikazati u narednoj tabeli.

Tabela 1. Vrijednost profita dobijena korištenjem matematičke simulacije

Metoda predikcije tražnje	Vrijednost profita: $\sum_{i=1}^{61} P f_i$	Vrijednost profita: $\frac{\sum_{i=1}^{61} P f_i}{\max \sum_{i=1}^{61} P f_i}$
Stvarna tražnja	594.105	100%
Linearni trend	519.129	87,38%
Višestruka linearna regresija	531.546	89,47%
Delfi metoda	547.289	92,12%

Izvor: (Landika, Uremović, & Sredojević, 2020/21)

Modelirane upravljačke informacije ukazuju na činjenicu da je vrijednost stvarne tražnje najusaglašenija sa projekcijom dobijenom Delfi metodom, stoga se preporučuje kao podesna za predikciju stvarne tražnje i planiranje proizvodnje u skladu sa njom.

¹ Predočeni modeli su generisani korištenjem IBM SPSS Statistics 22

ZAKLJUČNA RAZMATRANJA

Faktori koji opredjeljuju poslovni rezultat obuhvataju različite kategorije, među njima je važno razlikovati one koji jesu i nisu pod kontrolom donosioca poslovnih odluka. Ingenioznost menadžmenta poslovnih sistema sadržana je u vjerodostojnosti projektovanih vrijednosti slučajne promjenljive, kao što je vrijednost stvarne tražnje. Činjenica je da se stepen do kojeg se postigne usaglašenost realnosti i modelskih projekcija opredjeljuje poslovni rezultat, opravdava napore u smislu permanentne provjere modela odlučivanja korištenih u te svrhe. Statistički modeli kao što su analize vremenskih serija i regresioni modeli, daju značajan doprinos projekciji vrijednosti slučajnih promjenljivih u budućnosti, ali njihova nadogradnja kvalitativnim doprinosom kroz iskustvo i intuiciju eksperta približava projektovani rezultat njegovoj realizaciji, što je dokazano provedenim istraživačkim projektom. Stepenn saglasnosti projektovanih vrijednosti pojedinih metoda nadogradnje nedostajućih podataka u odnosu na stvarnu vrijednost slučajne promjenljive značajna je kod sve tri korištene metode i kreće se od 87,38% kod metode linearnog trenda relaksiranog sezonskom komponentom, preko 89,47% kod metode višestruke linearne regresije do 92,12%. Svaki od projektovanih rezultata predstavlja značajan doprinos planiranju realizacije poslovnog procesa i opravdava ulaganja u pribavljanje dodatnih informacija baziranih na rezultatima modeliranja. Stepenn prilagođenosti teorijskog modela realnom sistemu čiji se budući ishodi poslovanja projektuju temelji se na dostupnosti i kvalitetu empirijske građe, stepenu obuhvaćenosti ulaznih promjenljivih modelom i brojnim faktorima koje nije moguće predvidjeti ili uočiti i obuhvatiti modelom. Rezultati modeliranja nisu fiksni, niti univerzalni te ih je opravdano permanentno provjeravati, kako bi njihov doprinos poslovnom rezultatu bio optimalan.

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FORECAST MODELING OF MANAGEMENT GUIDELINES AS THE FOUNDATION OF INTERNATIONAL POSITIONING - CHALLENGES FOR BIH

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Summary: *The international market requires the strengthening of the competitive advantages of all participants in it. The formulation of a positioning strategy requires the investment of resources in acquiring additional knowledge. This resource enables the avoidance of “strategic failures”, which often characterized the attempts of domestic business systems to access the international market.*

Managing international development and market positioning of business systems within the domestic and international environment requires additional management energy and additional knowledge. Digitalization of business significantly reduces business costs, thus eliminating numerous obstacles for poorer and less developed countries, which need and must use their chance to effectively integrate into international economic flows. Informing about censored demand, as well as its forecasting within the selected business area, represents an opportunity that enables safe and efficient access to the global market. Censored demand is a part of demand within the business scope that is not recorded by the bidders, because it arose after the bidders in the selected market segment, made the most of their own production capacity. Predicting censored demand is an area of quantitative analysis with the task of predicting the value of a variable, which is a special challenge for the researcher; given that the history of the variable is not known. Diversification of business activities into the global market requires knowledge of the scope and structure of demand for products that business systems are able to offer. Sometimes, business systems avoid applying those products that, in full capacity, are offered by local companies on the selected target market segment, because the fact that a certain company places a total offer does not mean that the offer is satisfied. The business systems who are on the top a certain market segment, although aware of the existence of additional demand are not able to expand the scope of activities for objective reasons. All of the above leaves space for market positioning business systems that are not able to do business locally.

The special interest may have small and medium companies from countries such as ours, who have all the necessary infrastructure to sell in a foreign market. Doing business in a distance market must be based on careful analysis of the factors that affect the success of such a business strategy. Special attention should be paid to the analysis of censored demand because it is one of the most important factors of success in foreign markets. Adequate prediction of censored demand, which is effectively solved by mathematical simulation models, whose application methodology will be presented in this research

project. The possibilities of mathematical simulation in the function of prognostics are very effective because they are adjusted individually to each management problem. The application of the mathematical simulation model does not require a real system and can also be applied to abstract systems.

In relation to how similar the model is to the real system it affects the credibility of the information obtained as a solution of the model.

Key words: *business analysis, censored demand, econometric forecasts, country development management.*

JEL classification: *C3, M2, O1*



GLOBALISATION IN THE ERA OF COVID-19 PANDEMIC AND POST-PANDEMIC PERIOD

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Abstract: *Although Covid-19 pandemic and consequential “lockdowns” resulted in inward orientation of countries, international relations and international cooperation are as important as ever. This paper analyses the impact of Covid-19 on different globalisation aspects, from multilateralism and regional economic integrating, over international trade, global value chains to foreign direct investment and inequality. The aim of the analysis is to provide an overview of globalisation pace in the era of Covid-19 and in the post-pandemic period, due to the fact that pandemic changed and disrupted many globalisation aspects on one hand, and forced countries to implement different policies and activities in order to support their economies in this specific crisis, on the other hand. Functioning of global value chains was aggravated and consequently, different market effects occurred. International institutions also experienced challenges in “leading” the response to Covid-19 pandemic, which could put forward some lessons on the importance of global institutional framework. Understanding the effects of Covid-19 pandemic on different globalisation features is the basis for developing approaches and measures for recovering and improving economic performance and global position of countries, as well as for developing and modifying global institutional framework.*

Keywords: COVID-19, globalisation, global institutions, GVC.

JEL classification: F1, F2, F6

INTRODUCTION

The common point of all pandemics in the history is serious negative effects on global economy (Aday and Aday, 2020). Undoubtedly, the spread of Covid-19 in 2020 has had severe effects on every aspect of human lives. We are witnessing differ-

ent shifts, transitions and changes due to the fact that most of the world was affected (Mengzi, 2020). In order to protect global health, global economy was put into stasis (IMF, 2020).

Projections of global institutions on the economic consequences of the Covid-19 are really pessimistic, both of the International Monetary Fund and World Trade Organisation, due to the fact that many countries were in lockdown (Smith and Wilkinson, 2020).

Covid-19 pandemic is also seen as the most fundamental disruption to economic activity in this century (Enderwick and Buckley, 2020)

Globalization is not a new phenomenon, it has been present for hundreds of years (Stevens, 2007) and represents an intense cross-border mobility of goods and services, people, capital and knowledge (Guinigundo, 2018). The notion of globalization has crept into all pores of life, and the interdependence and interaction of people, companies and states on a global level is visible, regardless of spatial distance (Grgić and Bilas, 2012). Although globalization has undoubtedly brought some negative consequences, such as deepening the income gap between countries, but also within them, it also has undoubtedly positive effects such as accelerated economic growth and technological progress (Grgić and Bilas, 2012). It enables easier connection, communication and cooperation among people, businesses and countries.

Global trade and manufacturing today are increasingly structured around global value chains. If the implementation of a certain activity within a segment of production and / or business is more expensive than the implementation or subcontracting of the same activity in the country or abroad, it is almost certain that production or business will split between different companies, very likely outside national borders, which ultimately leads to the formation of a global value chain (Marcolin, Miroudot and Squicciarini, 2016). The production model through global value chains has changed the paradigm of trade and development policies (UN ESCAP, 2015). Instead of developing an entire domestic industry to engage in exports, economies can now specialize in one segment, such as manufacturing certain components, and engage in global value chains through which they have access to wider international market.

Inevitably, Covid-19 affected globalisation process, no matter what is our position on the role and importance of globalisation. For example, China's growth dropped for 6.8% in the first quarter of 2020. Pandemic, of course, had its severe and important social features, like social distancing. Full awareness of these impacts is present, but these are not the subject of this paper. The paper is focused on economic impact of Covid-19 on different globalisation aspects, from multilateralism and regional economic integrating, over international trade, global value chains to foreign direct investment and inequality.

The paper is organized in four parts. Part 2 refers to literature review on the features and the importance of globalisation in general. Part 3 summarizes the impacts of Covid-19 crisis on the globalisation. The final section presents conclusions.

LITERATURE REVIEW

Economic globalisation definitely improved allocation of resources and welfare (Mengzi, 2020). Although globalization has strengthened global economy and improved welfare in general, there is another side of globalization which underscores

the problem of unequal distribution of welfare effects (Guinigundo, 2018). (Rodrik, 2018) also believes that free trade, that is, freer trade, in whatever form it is, creates losers and winners. The final outcome will depend upon country size, power, political and strategic position and a like.

Globalization 4.0, as a new phase of globalization, is taking shape in the midst of Covid-19 crisis. Development and diffusion of digital technologies has changed the way society and economy preform, and has contributed to the creation of a new form of digital economy. In such an economy data is becoming extremely important for value creation. The development of digital economy is also contributed by global platforms that enable the application or development of technologies on a global level, and include social networks, greater mobility, cloud computing, analysis of large amounts of data and the like (Franc and Dužević, 2020). This new global economy requires new and flexible regulatory framework. For greater efficiency, it is necessary to upgrade the system of global cooperation and domestic governance. For example, all international organizations, whether multilateral or not, should reconsider whether they respect the basic characteristics that help them function more effectively in the context of Globalization 4.0 (WEF, 2019), and those are: outcome orientation; multidimensionality; speed; interoperability (acting within different systems, especially important for multilateral institutions); resilience and sustainability; people orientation and trust; technological strength; and level of integration. The next phase of global economic development has the potential to build on the successes of previous phases, but will require the improvement of institutions, agreements and policy models, as well as better cooperative international and domestic architecture (WEF, 2019). There are many challenges facing the multilateral trading system today. Some of them existed at the time of the creation of the World Trade Organization (WTO), and some are newer.

However, according to (Mengzi, 2020) the world is entering now the period of so called “slowbalisation” due to Covid-19 crisis – many factories shut down, global value chains were disrupted, international migration flows as well. Further liberalisation of the movement of factors of production in practice is questionable. In fact, protectionism trend seems to be resumed although there are sound empirical evidences that it decreases economic growth. It is mostly accepted fact in the scientific literature that protectionist policies influence negatively economic growth. There are some research that weren’t able to prove this hypothesis but other proved that protectionist policies are anti-trade and the costs of protectionism can be large (Smith and Wilkinson, 2020). (De Rugy, 2019) also concludes that historically tariffs have not helped to boost economic growth. (Espitia et al., 2020) conclude that escalating export restrictions would increase the initial shock caused by the pandemic, with the rise of world food prices by up to 18 percent on average. Most affected would be import food dependent countries, which are in mostly developing and least developed countries.

(Potrafke et al., 2020) also analysed the effect of protectionist policies (introducing trade policy instruments) on economic growth. However, in their research they didn’t find evidence that protectionism influenced economic growth, particularly in a sense that raising government revenue from introducing trade policy measures stimulated the increase of government expenditure in a short run.

On the other hand, removal of barriers to international trade resulted in the reduction of costs of cross-border trade, and thus the market prices of exchanged goods

decreased. This has caused fewer positive effects on economic growth and employment in trading countries (Peterson, 2017)

There is almost no doubt that the introduction and increase of tariffs in response to the problems of hyperglobalization, that is rapid and all-encompassing globalization, will result in failure, and create additional problems through potential policies of retaliation among trading partners, increasing economic insecurity, putting additional pressures on workers and consumers and potentially slower growth (UNCTAD, 2018). The new protectionist wave, along with the declining spirit of international cooperation, poses a significant challenge to governments around the world (UNCTAD, 2018).

One of the most important geo-strategic changes of the last half century is positioning of China as the pivotal country in global trade (Lund et al., 2019). From 1995 to 2007, global value chains expanded in almost all manufacturing industries as companies began to use inputs as well as produce in China. Due to its market size, investment in industrial capacity, and growing opportunities, China has an increasing share of world production. Integration in the global economy nowadays is reflected in its participation in GVCs. China is increasingly participating in GVCs but is more included in backward participation and in lower value added activities.

GVCs are now in the process of reconstruction which underscores international division of labor that takes into account both value chain upgrading and value chain governance (Song et al., 2021). Developing countries expect participation in these chains to attract more foreign direct investment (FDI), easier access to export markets, advanced technology and knowledge, the benefits of effective specialization in specific tasks and the like (UNCTAD, 2018). Participation in global value chains is considered particularly important for developing countries with small domestic markets whose firms face different technological and organizational constraints.

FUTURE TRENDS IN GLOBALISATION

As (Baldwin and Mauro, 2020) stated, Covid-19 virus may be as contagious economically as it is medically. Policy measures implemented during Covid-19 crisis can be divided into five categories: (1) public health measures; (2) monetary measures; (3) fiscal measures; (4) travel and human control measures and (5) trade measures.

Covid-19 crisis is transformative in many ways (Ortega, 2020). In some cases, it can be seen as an opportunity. Nevertheless, it had serious negative consequences on investment and trade (Chandra et al., 2020). According to UNCTAD statistics, global foreign direct investment decreased for around 40% in 2020 (Chandra et al., 2020).

In relation to regional versus global cooperation, there are attitudes that regional cooperation is more important than global (Mengzi, 2020). (Smith and Wilkinson, 2020) argue that global cooperation is an important lever out of the economic consequences of the Covid-19. (UN, 2020) also states that redeployment and expansion of international development assistance is vital. (Baldwin and Mauro, 2020) state that monetary policy and fiscal policy actions will be needed and that international coordination is necessary in order to be as efficient as possible. (Baldwin and Evenett, 2020) argue for a global plan to coordinate mass production of medical supplies, for instance.

(Enderwick and Buckley, 2020), however, believe that after Covid-19 recovery it is not so likely to go back to previous wave of globalisation. They predict transfor-

mation to a stronger regional focus since globalisation showed its weaknesses in response to Covid-19 pandemic. They also believe this regional focus would offer better balance of national and international interests, than globalisation.

According to (Gopaldas, 2020), Covid-19 has supercharged nationalism. At the start of Covid-19 crisis many countries actively used international trade policy in order to restrict trade, especially on the export side, in fear of not being able to meet domestic demand and prioritising it on this way (Chandra et al., 2020). These measures were accompanied by loosening restrictions on the import side, especially to medicines and medical products. (FAO, 2020) states that it is very important to have in mind that national policies and activities are compatible with international trade system set by the WTO and commitments of each country. Although most of these measures were introduced as short term measures in the burst of crisis, there is still a risk of hampering trade of small and import dependent countries. One should bear in mind the fact that (FAO, 2020) pointed out, past experiences have shown that avoiding protectionist measures might be as important as direct support of the economy.

However, this crisis has shown that we are interdependent and that external help and international cooperation are crucial as without them the vulnerability of all increases. In that context, one should rethink current global institutional framework. (Albertoni and Wise, 2020) analysed the effect of nationalism and Covid-19 on global trade norms and patterns, and the role of WTO. They concluded that WTO has still not become as a *bona fide* multilateral institution. In relation to this conclusion, they advocate better leadership in WTO. The obvious international institution to lead the crisis response concerning trade was WTO (Smith and Wilkinson, 2020). However, (Smith and Wilkinson, 2020) argue that none of the global institutions took the lead in the situation of the Covid-19 crisis, but in fact they stopped working at all.

(Ortega, 2020) defined three different scenarios of the future under Covid-19 crisis: (1) “everyone for himself”, (2) “collective international intelligence” and (3) “step by step muddling through”. He finds the second scenario as the most advantageous, and the first as the least advantageous. However, the likely outcome is a mix of those scenarios. Most researchers agree on the need for greater multilateral cooperation, especially in the area of trade and global trading system (Chandra et al., 2020). On the other hand, Covid-19 impacted regional economic integration efforts as well, especially the ones in the process of design and development, like the African Continental Free Trade Agreement. In the Southern African Development Community government revenues are estimated to decrease drastically, due to the decrease in economic growth (SADC, 2020).

Recent USA-China trade war and changes in trade flows due to Covid-19 exhibited the retreat of globalisation, the shift closer towards nationalism, and growing dissatisfaction with the inequality problem (Gopaldas, 2020). (Schmucker, 2020) pointed out that Covid-19 pandemic led to increased protectionism and contributed to the intensification of the rivalry between the USA and China.

(OECD, 2020) is emphasizing trade as essential in Covid-19 crisis and international cooperation as the basis for maintaining trade flows. According to this point of view, trade will ensure the supply of essential products and rebuild confidence in the global economy. In order to strengthen trade and cooperation certain level of trust and good will have to exist. There are many challenges in the period when protectionist

trends are occurring within the international trading system, and that is the reason why (OECD, 2020) stresses the necessity of avoiding further trade tensions among countries. (IMF, 2020) pointed out that lack of cooperation makes everyone worse-off, and one should bear this in mind.

(Blanco and Rosales, 2020) claim that Covid-19 will most likely increase global inequality and that international coordination is of great importance, especially to the ones with least policy manoeuvring space. According to them, there is an underlying contradiction between the phenomenon of Covid-19, which doesn't know international borders, and political systems which rely on borders.

(Baldwin and Evenett, 2020) named the previous decade as the decade of defensive nationalism. They found as one of the biggest false dichotomies of this period that international trade undermines national strength and capabilities. Also, they conclude that protectionism didn't work during the Covid-19 crisis. (Aday and Aday, 2020) agree with the fact that lessons from past experiences showed that avoiding trade restriction policies can be as effective as direct support activities to vulnerable sectors. (Giordano and de Mendivil, 2020) also agree that protectionism might magnify the negative economic effects, especially in relation to food security, and that policy makers should be aware of these potential effects.

(Mengzi, 2020) suggests that industrial chain will be longer and larger in more technology-intensive industries where industrial division is more delicate and costs are lower, but in the situations where factories shut down and industrial chain was interrupted, the imperative is to shorten the industrial chain and locate it closer together. There are predictions that some factories will relocate back to home country (Mengzi, 2020). However, we can conclude that it is too early to predict whether Covid-19 will hamper globalisation with divisions and fragmentations of trade and productions after the crisis (Mengzi, 2020).

Covid-19 crisis exposed the vulnerability of global value chains (Smith and Wilkinson, 2020).

(Albertoni and Wise, 2020) presented China's Hubei Province as the example of the first big supply chain shock from the Covid-19 lockdown. This province presents a world center of high-tech production. Around a quarter of the world's optical-fibre cables and devices are in the province and, for example, some projections are that Covid-19 impact in Hubei could alone decreased for 10% global shipments of smart-phones (Baldwin and Mauro, 2020).

Damage that has occurred to global value chains in combination with rising protectionism, especially having in mind trade war between USA and China, increased the risk of unilateralism within global trade regime (Albertoni and Wise, 2020). (Baldwin and Mauro, 2020) pointed out that manufacturing sector is likely to have three negative trends: (1) direct supply disruptions will hinder production, (2) supply-chain contagion will amplify the direct supply shocks and (3) demand disruptions due to macroeconomic drops in aggregate demand, purchase delays by consumers and investment delays by firms.

(Chandra et al., 2020) stress that one of the key activities in the process of recovery is definitely ensuring supply chain connectivity, particularly of essential goods. (FAO, 2020) stresses the fact that following international guidelines on safe travel and trade corridors can help keep agri-food supply chains alive and promote food security.

(Espitia et al., 2020) analyzed food protectionism due to Covid-19 and concluded that export restrictions induce retaliation rather than cooperation. (Aday and Aday, 2020) stress the fact that the food supply chain is representing one of the most important sectors of the economy, and that is influenced by Covid-19 all along the chain, from the farm to the final consumer. They also argue that food protectionist policies might increase food prices and they suggest avoiding such policies. Another issue is to create flexible supply chains which are responsive to changes.

(UN, 2020) points out that axioms of free trade and free movement of factors of production in the era after Covid-19 will be questioned against individual country benefits. In relation to these, (FAO, 2020) advocates that potential activities and measures should aim actual, and not perceived demand and supply disruptions.

Digitalisation is one of the prevailing global trends, and the pandemic actually accelerated digitalisation which became of great importance during the Covid-19 pandemic (Chandra et al., 2020). Companies that trade digitally, such as Alibaba, Alphabet, Amazon, Facebook, Microsoft, Netflix and Spotify, are continuously growing and have numerous opportunities for further growth (WTO, 2018). Yet, not all countries have the same benefits and opportunities from digitalization. Digital divide between developed and developing countries is seen an impediment for integration in global digital economy (WTO, 2018). In order to enable digital trade in all countries, it is necessary to strengthen capacities, provide access to the Internet and to necessary digital skills.

(Stiglitz, 2020) argues that there will not be a “V shape” recovery line of the world economy. There are a few reasons to support this claim. He argues that economy wasn’t so healthy before Covid-19 crisis. This crisis revealed some weaknesses, and in fact Stiglitz is not advocating returning to the pre-Covid-19 period. Also, he doubts in the speed of controlling Covid-19 globally. Finally, he argues that Covid-19 pandemic only accelerated some changes that are in fact inevitable, for instance digitalisation. Also, he puts an accent to possible major structural changes induced by the crisis which might decrease demand for specific types of labor, mostly unskilled labor, which in turn can have an impact on increasing inequalities.

(Stiglitz, 2020) argues setting priorities of government policy: ensuring health and saving lives, protecting the vulnerable, management of aggregate demand, allocating funds for activities that will contribute to the post-pandemic economy that we want to create, and although limited in scope, monetary policy is relevant for long term stability.

CONCLUSION

It is still too early to predict how will Covid-19 change globalisation patterns as well as the form and durability of these changes. Current global pandemic has once again revealed that some social, health, economic and other circumstances or phenomenon are not always predictable and that in time of crisis, clear, transparent, efficient and fast response is necessary. The role and importance of global institutions is evaluated continuously. However, the importance and successfulness of their functioning is best visible during a crisis period. Their purpose of designing, coordinating and implementing necessary global measures and policies is more important than ever. Whether they succeeded or failed to perform in this crisis is left to be evaluated, but this could

be a good basis for reaching a global consensus on the structural reform needs in the global institutional framework. Informatization and digitalization have opened many opportunities and have been especially useful in the conditions of Covid-19. Online meetings, lectures, conferences, and other activities are here to stay to a certain extent, because, in some aspects, we discovered their advantages. Perhaps Covid-19 can be seen as an opportunity for globalisation to modernize in all its features. Throughout the history every crisis has revealed many lessons, as is the case with Covid-19 crisis. It can represent the basis for building a more resilient global economy and society, but we have to be open to advantages and opportunities brought by it, and fully aware of all damages and risks. Further analysis and data will enable bringing more suitable and necessary strategies, policies and measures needed to rebuild, modify and adapt global economy and society in the post-pandemic period.

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ANALIZA I MJERENJE FAKTORA PORESKE EVAZIJE PUTEM KORIŠTENJA UPITNIKA-PRIMJER IZ BOSNE I HERCEGOVINE

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Sažetak: Zbog brojnih problema kod analize i mjerenja poreske evazije ovo pitanje je važno ne samo za poresku administraciju već i za cjelokupni ekonomski i finansijski sistem jedne države. U BiH kao i u drugim zemljama u okruženju i svijetu zbog postojeće finansijske i ekonomske krize još je važnije pitanje analize mjerenja poreske evazije u cilju poboljšanja stanja javnih finansija. Kako mjeriti uticaj pojedinih faktora poreske evazije odnosno koji su u interakciji, korelaciji ili se pretpostavlja da su u korelaciji? Odgovor na pitanje je veoma kompleksan iz više razloga. Faktori poreske evazije se dinamički, mijenjaju se tokom vremena zbog privrednih uslova, inovacija u poslovanju, razvoja e-trgovine, ekonomske krize i danas COVID pandemije, političke stabilnost, raspoloživosti resursa, konkurentske situacije, kvaliteta i sposobnosti državnih institucija, poreske legislativa itd. U ovom radu je primjenom metoda anketiranja putem slanja upitnika, sprovedeno ispitivanje stavova ispitanika po pitanju subjektivnih i objektivnih faktora poreske evazije, kako bi se isti analizirali i mjerili. U vezi s tim, cilj ovog rada je istraživanje mogućnosti mjerenja i analize problema poreske evazije sa naglašavanjem faktora koji određuju poresku evaziju. Nadalje, u skladu sa ekonomskim trendovima, ovaj rad može da doprinese literaturi predstavljanjem rezultata i pokazuje da se upitnikom može spoznati posmatarna pojava.

Ključne riječi: oporezivanje; poreska evazija; upitnici.

JEL klasifikacija: H20, H26, H29.

UVOD

Poznato je da kod upravljanja nekom pojavom prije svega zahtijeva se spoznaja glavnih faktora koji utiču na tu pojavu. Velike promjene i neizvjesnost okruženja potenciraju značaj poreske evazije. Različiti faktori poreske evazije nisu međusob-

no nezavisni, već naprotiv, zbog stalnih promjena okruženja, naročito zbog sve bržeg razvoja i širenja tehnike i tehnologije čvrsto su povezani. U tom smislu za potpuno razumijevanje uticaja pojedinih faktora na poresku evaziju potrebno je postaviti pitanje kakva je njihova korelacija i interakcija? Odgovor na pitanje je veoma kompleksan iz više razloga.

Prvo, osnovni problem kod analize i mjerenja faktora poreske evazije je nedostatak relevantnih, usporedivi i pouzdanih tumačenja i informacija o poštivanju i sprovođenju poreskih zakonskih propisa. Procjena i aktivnost u svakom istraživanju u velikoj je zavisnosti od pristupa kvalitetnim podacima i informacijama, jer ne adekvatni podaci i informacije mogu dovesti do pogrešnih zaključaka. Uostalom, prema Almu, poreska evazija je ilegalna, a pojedinci imaju jak poticaj da prikuju svoje nelegalnosti, s obzirom na finansijske i druge kazne koje su izriču pojedincima koji namjerno izbjegavaju poreske obaveze (Alm, 2012, p. 56).

Drugo, postojeća rješenja po pitanju analize i mjerenja faktora poreske evazije se ne mogu uopštavati i generalizirati, jer svako područje zahtijeva posebna razmatranja i specifična rješenja. Zato se postavlja pitanje kako analizirati i mjeriti koji su faktori specifični za nastanak poreske evazije odnosno koji doprinose i koje treba eventualno razmotriti. Treće, Koji su to najvažniji faktori poreske evazije? Neki faktori su prepoznati. Devos definiše faktore koji su ispitani u modelu pristupa ekonomskog odvracanja uključuju, složenost poreskog sistema, nivo usluga pruženih na osnovu prikupljenih prihoda, informacije iz finansijskih izvještaja, visina odgovornosti radi kazne, vjerovatnoća poreske kontrole, progresivna i stvarna visina poreske stope, visina kazne za poresku evaziju (Devos, 2014, p. 14).

Ovo empirijsko istraživanje je zasnovano na analizama upitnika. Sama priprema upitnika je aktivnost koja zahtijeva razmatranje brojnih pitanja uključujući i slijedeće: (Terzić, 2018, p. 24)

- Podaci koji se prikupe moraju biti u obliku i strukturi u kojoj se mogu analizirati.
- Struktura upitnika treba da ima unutrašnju logiku i slijed u nizu.
- Osigurati u upitniku da se pitanja međusobno prate i šta se želi postići putem odgovora i da li je ta informacija ono što je potrebno.
- Izbjegavati dvosmislenost, osigurati da čitatelj jasno razumije pitanje i sve ponuđene odgovore.

Dakle, rezultati su odgovarajuće komentarisani, jer je od velike važnosti dodati neke opisne komentare kako bi se pomoglo u razumijevanju sadržaja. U svjetlu navedenog, uzimajući u obzir probleme sa kojima se svakodnevno susrećemo, prije svega pošto živimo u svijetu koji se stalno mjenja, danas je teško analizirati faktore poreske evazije, pogotovo i zbog pojave pandemije „COVID 19“ i neizvjesnosti koje donosi. Ta neizvjesnost naziva se i kao „crni labud“ a to je opis nekog događaja kojeg je teško predvidjeti i kakve reperkusije i posljedice može imati.

ANALIZA I MJERENJE FAKTORA PORESKE EVAZIJE

S obzirom da je svijet postao globalan cjelina a i zbog samog značaja poreske evazije za ukupno funkcionisanje jedne države, postoji stalna potreba da se ispituje, analizira i mjeri uticaj pojedinih faktora na poresku evaziju. Uspjeh evazionog poduhvata umnogome zavisi od vrlo bitne pretpostavke, mogućnosti i spremnosti pore-

ske administracije za uspostavu i kreiranje jasnih smjernica da se na vrijeme otkrije poreska evazija. Sistem oporezivanja treba da bude uspostavljen i postavljen na način koji će smanjiti mogućnost poreske evazije, a da sa druge strane, isti da bude relativno jednostavan za primjenu kako od strane poreske administracije tako i od strane poreskih obveznika (Terzić, S., Berger, W., 2020, p. 119). Sama analiza i mjerenje faktora poreske evazije može doprinijeti uspostavi efikasnijeg mehanizma borbe protiv poreske evazije, bilo putem uvođenja preventivnih ili represivnih mjera.

Mnogi autori su u svojim istraživanjima pokušali pojasniti ove probleme. Prvi problem koji se susreće u svakom empirijskom istraživanju je analiza i procjena mjerenja neusklađenosti. Tako u svojoj studiji Feige, E., i Cebula, R. ukazuju da je mjerenje ponašanja koje pojedinci pokušavaju sakriti je inherentno (Feige, E., Cebula, R., 2011, p. 3). Generalno govoreći, pokušaj analize i mjerenja poreske evazije može dovesti i do oportunističkog oblikovanja rezultata. Prema dosadašnjim spoznajama nije moguće precizno kvantificiranje opsega pojedinih faktora na samu pojavu poreske evazije i sama analiza i mjerenje faktora poreske evazije nema jednostavan put i nije jednostavan zadatak. Postoje brojna istraživanja o uticaju pojedini faktora poreske evazije.

Veliki je broj egzogenih faktora, na koje poreski obveznik ima vrlo mali ili nikakav utjecaj, jer se faktori dinamički mijenjaju tokom vremena (privredni uslovi, inovacije u poslovanju, razvoj e-trgovine, ekonomska kriza, politička stabilnost, raspoloživost resursa, infrastruktura, konkurentska situacija, kvalitet i sposobnost državnih institucija, poreska legislativa) a oni istovremeno imaju veoma značaj utjecaj, njihova stabilnost je bitan preduslov i najneposrednije utiču prije svega na finansijsku situaciju poreskog obveznika (Terzić, S., Wolfgang, B., Kljajic, Ž., 2018, p. 323).

Univerzalni model mjerenja i analize poreske evazije ne postoji i uniformna rješenja rijetko mogu da budu najpogodnija u svim okolnostima. U ekonomiji postoji nekoliko metoda procjene razvijenih na principu „mjerenja nemjerljivog“ (Schneider, F., Enste, D., 2000).

Jedan od uslova za analizu i mjerenje poreske evazije je uspostava kvalitetnih, zvaničnih i potpunih statističkih podataka, jer nepotpuni podaci mogu rezultirati da se donose pogrešne ocjene. Kod utvrđivanja stepena i karakteristika poreske evazije odmah se ističu dva problema, jedan je konceptualni a drugi je empirijski. Kod konceptualnog problema ističe se problem kada se tvrdi da je zakonita linija razdvajanja u praksi između poreske evazije i zakonitog načina poreske evazije veoma tanka i ta linija je u praksi često ne vidljiva. Ponekad sam poreski zakon nije jasan, a ponekad je zakon jasan ali poreska administracija zanemaruje određene aktivnosti po tom pitanju. Drugi problem je u tome što po svojoj prirodi poresku evaziju nije lako mjeriti (Slemrod, J., Yitzhaki, S, 2000, pp. 21-22).

Prema Jovašević, D. i Gajić-Glamočlija, M., u standardnoj finansijskoj literaturi uzroci evazije poreza uobičajeno se klasifikuju na; subjektivne faktore i objektivne faktore (Jovašević, D., Gajić-Glamočlija, M., 2008, p. 100). Svi ovi navedeni faktori na jedan način imaju uticaj na poresku evaziju.

Jovašević, D. i Gajić-Glamočlija, M., navode da u u pokretanju, realizaciji i dizajnu tih promjena možemo postići uspjeh samo ako spoznamo o kakvoj se prirodi problema radi (Jovašević, D., Gajić-Glamočlija, M., 2008, p. 100).

- Subjektivne uzroke čine oni elementi koji zavise od ličnosti obveznika. U subjektivne faktore najčešće se ubrajaju:

- Egoizam i težnja za sticanjem profita,
- Poreski moral,
- Nepostojanje svijesti o opravdanosti poreza,
- Shvatanja o pravičnosti poreskog sistema.

Uzimajući u obzir sve spomenuto, istraživači moraju imati na umu da se većina studija koja se bavi pitanjem poreske evazije, mjerenje visine poreske evazije će vjerovatno biti predmet sistemske greške, zato što se govori o predrasudama i zbog toga se ta pitanja „tretiraju oprezno“ (Alm, 2012, p. 65).

U kontekstu dostavljene analize, na kraju, posebno je važno istaknuti da postoji veoma malo istraživanja danas u Bosni i Hercegovini po pitanju analize i mjerenja poreske evazije i faktora koji je determinišu. Namjera ovog rada je da se putem teorijskih argumenta i empirijskim istraživanjem putem upitnika bliže rasvijetli i ukaže na moguće pravce poboljšanja upravo ovog područja i problema.

MATERIJALI I METODE PRIKUPLJANJA PODATAKA IZ UPITNIKA

Pokušaj da se sačini analiza i mjerenje poreske evazije putem upitnika predstavlja izuzetno odgovoran i složen zadatak, pogotovo imajući u vidu kompleksnost zemlje kao što je Bosna i Hercegovina.

Primarni podaci prikupljaju se neposrednim promatranjem svojstava elemenata statističkog skupa u skladu s unaprijed definiranim ciljevima statističkog istraživanja. Prikupljanje ovih podataka zahtijeva definiranje statističkog skupa, izbor obilježja koja se žele istražiti, određivanje modaliteta promatranog obilježja, pripremanje anketnih upitnika i/ili pratećih formulara te organiziranje i sprovođenje samog prikupljanja podataka (Biljan-August, M., Pivac, S., Štambuk, A., 2007). Metode prikupljanja primarnih podataka su ispitivanje i posmatranje, a sredstva za prikupljanje primarnih podataka su anketni upitnici. Za analizu podataka, prikupljenim ovim istraživanjem, pored korištenja metode prikupljanja podataka putema ankete koristit će se komparativna metoda. Prema Rovčaninu, analiza podrazumijeva postupak naučnog istraživanja i objašnjavanja stvarnosti putem raščlanjivanja neke cjeline na sastavne dijelove i razmatranje svakog dijela za sebe i u odnosu na druge dijelove date cjeline (Rovčanin, 2006).

U skladu sa predmetom i problemom istraživanja za potrebe sprovođenja istraživanja, analiziran je upitnik uzorak od 300 ispitanika, s jedne strane 200 poreskih obveznika (66,7%), i sa druge strane 100 poreskih inspektora (33,3%) (prilog 1.) (Terzić, 2018, p. 210). Pitanja su bila koncipirana na način da na njih mogu odgovoriti osobe koja imaju prethodna iskustva sa fenomenom poreske evazije. Također, prilikom postavljanja pitanja ista su prezentirana jednostavnim riječnikom, kako bi se što lakše shvatila suština pitanja.

Da bi se ostvario postavljeni cilj, korišten je i upitnik sproveden od strane Svjetske banke (World Bank Open Data, 2020) (<https://www.enterprisesurveys.org/en/methodology>) i on se sprovodi od 1990-ih u različitim jedinicama u okviru Svjetske banke. Upitnik o preduzećima predstavlja istraživanje na reprezentativnom uzorku privatnog sektora u privredi i ispituje niz posebnih stavova koji pokrivaju širok spektar tema poslovnog okruženja. Na upitnik preduzeća odgovaraju vlasnici preduzeća i top menadžeri ili daju odgovore knjigovođe preduzeća i menadžere ljudskih resursa da odgovore na pitanja. Upitnik o preduzećima se sprovodi na nivou, preduzeća sa upo-

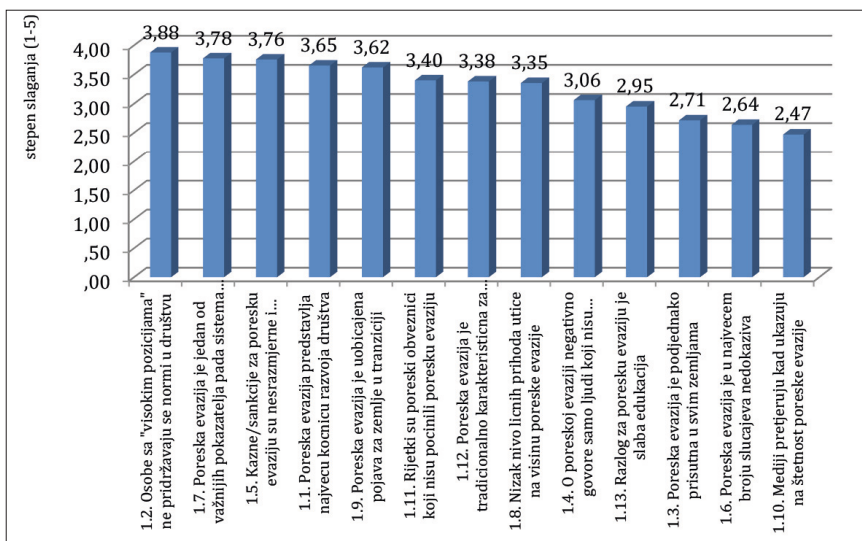
slenim 5-19 (mala), 20-99 (srednja) i više od 100 zaposlenih (velike firme) i obično je to proizvodnja, maloprodaja i ostale usluge.

Kao i svako drugo istraživanje i istraživanje putem upitnika ima svoja moguća ograničenja a najvažnije je tačnost prikupljenih podataka kroz upitnik. Upitnik kao instrument istraživanja upućuje na mogućnost subjektivne procjene stvarne situacije odnosno prikazivanje stvarne situacije ljepšom ili lošijom. Drugo ograničenje, odnosi se na obim i dizajn samog istraživanja odnosno da li se može donijeti drugačiji zaključak koji bi bio zasnovan na širem obimu istraživanja tipa velikog uzorka. Dodatno, tumačenje dobijenih rezultata nije bez uticaja pređubjeđenja.

REZULTATI I DISKUSIJA PO PITANJU STAVOVA PREMA PORESKOJ EVAZIJI

Kroz analizu stepena slaganja ispitanika iz uzorka po pitanju 13 tvrdnji sagledan je opšti stav ispitanika prema poreskoj evaziji. Slaganje je mjereno na Likertovoj skali 1 (uopšte se ne slažem) do 5 (potpuno se slažem). Odgovori ispitanika iz uzorka po pitanju 13 tvrdnji koje izražavaju stav prema poreskoj evaziji prikazani su na grafikonu 1.

Grafikon 1. Poredak tvrdnji koje izražavaju stavove o poreskoj evaziji prema stepenu slaganja ispitanika



Izvor: (Terzić, 2018)

U nastavku će se prikazati rezultati anketnog istraživanja po pitanju poreske evazije. Analiza odgovora na pitanje normi i ponašanja unutar društva sa aspekta poreske evazije jasno govori da trenutno imamo visoko nesređenu situaciju. Prema rezultatima vidimo značajan broj ispitanika da iskazuje zabrinutost za postojeće norme ponašanja. Odgovori po ovom pitanju pokazuju da najveći broj ispitanika 75% ispitanika (onih sa slažem se i potpuno se slažem) ističu da osobe sa „visokim pozicijama“, se ne pridržavaju normi u društvu.

Što se tiče značaja pitanja, da li poreska evazija je jedan od važnijih pokazatelja pada sistema vrijednosti, jako velik broj ispitanika je odgovorio i ukazao (73% ispita-

nika je sa stavom, slažem se i potpuno se slažem) na kompleksnost problema poreske evazije. Ovaj podatak pokazuje da je sistem pada vrijednosti posebno izražen u Bosni i Hercegovini.

Kada je u pitanju visina kazne i da li su kazne/sankcije za poresku evaziju ne-srazmjerne i neefikasne i trebaju li biti daleko strožije, može se konstatovati da ispitanici smatraju da iste moraju biti srazmjerene i efikasne. Prema rezultatima istraživanja, ovakvi stavovi koji se odnose na kazne/sankcije, pokazuju očekivanja ispitanika da se jedna ovako važna oblast uredi 70% ispitanika ima pozitivan stav (slažem se i potpuno se slažem). Time bi se stvorila mogućnost efikasnije borbe protiv poreske evazije.

Na pitanje da li poreska evazija predstavlja najveću kočnicu razvoja društva? Opšta percepcija u odgovoru ispitanika je da poreska evazija predstavlja najveću kočnicu razvoja društva i na takav zaključka ukazuje stav slaganja 71% ispitanika (onih koji se slažu i potpuno se slažu). Iz ovakvog stava ispitanika može se vidjeti koliko su ispitanici svjesni opasnosti koju sa sobom nosi poreska evazija.

Anketirani subjekti smatraju kada je u pitanju da li je poreska evazija uobičajena pojava za zemlje u tranziciji, 56% ispitanika se slaže i potpuno se slaže 13%. Sa ovakvom tvrdnjom i ovakvim stavovima ukazuju na postojanje različitih iskustava u svim državama u tranziciji. Poreska evazija je stalni problem istorijski gledano sa ozbiljnim privrednim posljedicama, ne samo u tranzicijskim zemljama, također i u zemljama sa razvijenim poreskim sistemom.

Kod tvrdnje „da su rijetki poreski obveznici koji nisu počinili poresku evaziju“, imamo jako veliki broj pozitivni odgovora, 58% ispitanika ima pozitivan stav (slažem se i potpuno se slažem), dok pocenat negativnih odgovora im svega 27% ispitanika (ne slaže se i uopšte se ne slaže). Ovakvi odgovori idu u prilog stavu i daju jasan signal da svi poreski obveznici moraju imati jednak tretman i da se nešto mora hitno mjenjati radi stvaranja jednakih uslova za sve, a ne da oni koji su skloniji poreskoj evaziji budu u povoljnijem položaju.

Pitanje sa tvrdnjom „da je poreska evazija tradicionalno karakteristična za naš mentalitet“, pokazuje da se 58% ispitanika slaže. Ispitanici smatraju da je poreska evazija tradicionalna „vrijednost“ našeg mentaliteta, što može značiti da izbjegavaju odgovornost za poduzimanje mjera. Ovo je svakako dovoljan signal da se moraju mjenjati određeni stavovi kao npr. to je „viša sila“, protiv koje se malo šta može uraditi.

Odgovor na pitanje da li nizak nivo ličnih prihoda utiče na visinu poreske evazije, ističe 57% ispitanika (slaže se i potpuno se slaže).

Na pitanje o poreskoj evaziji negativno govore samo ljudi koji nisu direktno odgovorni za njeno suzbijanje? Očito da ispitanici pokazuju da poreska evazija nije samo problem onih koji su u poziciji, već da je to problem cijelog društva. Stavovi i odgovori ispitanika slažem se 28% i ne slažem se 31% potvrđuju koliko je ovo kompleksno pitanje. Razlog za zabrinutost nalazimo u stavovima da 28% ispitanika niti se slaže, niti se ne slaže sa stavom.

Pitanje „razlog za poresku evaziju je slaba edukacija“, pokazuje da su ispitanici značajno podijeljeni, 40% se ne slaže a 33% se slaže. Ako ovaj odgovor gledamo u kontekstu da je edukacija preduslov za borbu protiv poreske evazije svakako da se ovo uklapa u jedan opšti zaključak i čini se da još uvijek nije dovoljno razvijena svijest o značaju edukacije. Zasigurno je da edukacija može povećati nivo poštivanja i sprovođenje poreskih zakonskih propisa.

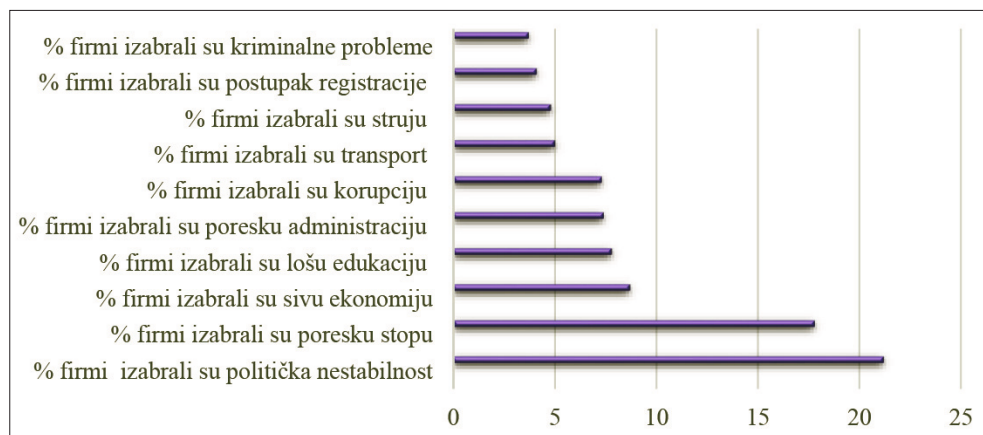
Na pitanje da li je poreska evazija podjednako prisutna u svim zemljama, ističu ispitanici 55% (oni koji se ne slažu i uopšte se ne slažu). S obzirom na navedeno, ispitanici ukazuju da je poreska evazija više posljedica eventualno subjektivnih faktora.

Odgovorom ispitanika da je poreska evazija nedokaziva, 52% ispitanika se ne slaže, pokazuju da je potrebno preduzeti određene mjere i da se moraju naći efikasniji pristupi za efikasniji način procesuiranja poreske evazije.

Shodno pitanju da li mediji pretjeruju kad ukazuju na štetnost poreske evazije, 62% ispitanika se ne slaže (50% se ne slažu ili 12% uopšte se ne slažu) da mediji ne pretjeruju sa ukazivanjem na štetnost poreske evazije. Kroz odgovore na pitanje koje se odnosi na zastupljenost poreske evazije u medijima, kao i ukazivanja na njihovu štetnost, mogli smo utvrditi dosljednost odgovora naših ispitanika koji su shvatali teškoće i značaj borbe protiv poreske evazije.

Dodatno u ovom radu prikazati ćemo istraživanje Svjetske banke, kako su rangirane prepreke koju utiču na poslovno okruženje firmi u Bosni i Hercegovini. Uzimajući u obzir istraživanje Svjetske banke na uzorku od 362 ispitanika iz septembra 2019. godine, isto ukazuje na najveće prepreke s kojima se firme u privatnom sektoru u Bosni i Hercegovini susreću. Dobiveni podaci predstavljeni su grafički. Grafikon 2 sažima ključne činjenične pokazatelje na državnoj razini za svaku od tema poslovnog okruženja (World Bank Open Data).

Grafikon 2. Rangiranje prepreka koju utiču na poslovno okruženje firmi u Bosni i Hercegovini



Izvor: (World Bank Open Data, 2020)

Savremeno poslovno okruženje zauzima jaku ulogu po pitanju nastanka poreske evazije. Kada je u pitanju rangiranje prepreka koju utiču na poslovno okruženje firmi u Bosni i Hercegovini, deskriptivna analiza podatak daje slijedeće rezultate: politička nestabilnost, visoka poreska davanja, siva ekonomija, loša edukacija, slaba poreska administracija i korupcija su glavne osobine slabog poslovnog okruženja u BiH.

BiH kao zemlja u razvoju i tranziciji susreće se s različitim nedostacima a ima i specifične probleme pogotovo po pitanju političke nestabilnosti, što se ističe u grafikonu 2. Shodno dostavljenom podatku u odgovorima od strane ispitanika (21,2%) govori

da je uređenje političkog ambijenta jedan je od glavnih preduslova za bolje poslovno okruženje što može pozitivno uticati na smanjene poreske evazije.

Kada je u pitanju visoka poreska stopa, ona može biti iskazana kao barijera i nepovoljno djelovati na firme i iz (grafikona 2.) da se zaključiti da je ista iskazana kao problem. Na osnovu iznesenog a zbog činjenice da poreski obveznici osjećaju porez relativno kao teret a visoka stopa oporezivanja dodatno podstiče poresku evaziju, može se zaključiti da se poreska evazija može smanjiti ako se smanji visina poreske stope. Pitanje odabira optimalne visine poreske stope predstavljaju značajan element za dizajn same nacionalne politike oporezivanja.

Opšta percepcija ispitanika je da uređenje neformalnog sektora veliki problem i ostaje velika prepreka u BiH. Ovakav nalaz istraživanja je dobra indicija za mjere koje treba preduzimati za poboljšanje i dostizanje standarda.

Odgovor ispitanika po pitanju "loše edukacije" poklapa se sa stavovima iz "ankete" i svakako se uklapa u jedan zaključak da se mora raditi na razvijanju svijesti o značaju edukacije.

Značajan broj ispitanika (7,4%) ispitanika iskazuje da poreska administracija predstavlja prepreku. Odgovori po ovom pitanju vjerovatno ukazuju na problem postojanja više poreskih administracija u BiH.

Na grafikonu (2.) se jasno vidi da korupcija predstavlja problem i prepreku u BiH (7,3% ispitanika).

Dakle, iz prethodno navedenog, a na osnovu podataka sa ova dva grafikona (1. i 2.) može se zaključiti da faktori visina poreske stope i kazne uz političku nestabilnost imaju značajan efekat na poresku evaziju. Dakle, zaključujemo, da uspostava efikasne poreske politike uz zaoštavanje kaznene politike i povećanje političke stabilnosti može doprinijeti efikasnom suzbijanju i suprostavljanju svim oblicima poreske evazije.

ZAKLJUČAK

U današnjoj ekonomskoj situaciji a posebno zbog najnovijih saznanja o COVID-19 pandemiji, država i društvo treba da budu posebno zainteresirani za sagledavanje egzistirajućih faktora poreske evazije i za iznalaženje načina za efikasno suprostavljanje poreskoj evaziji. Poreska evazija je kompleksan fenomen i nijedna država, bez obzira na stepen razvoja, nije pošteđena izazova po pitanju poreske evazije. Ovaj rad je pokušaj da se poreska evazija analizira do sada sa slabo osvijetljene strane putem upitnika a posebno je pitanje kako mogu biti stvoreni uslovi za poboljšanje trenutnog stanja putem uspostavljanja modernog pristupa za borbu protiv poreske evazije. Na osnovu analize rezultata istraživanja dobivenih prije svega primarnim istraživanjem možemo da zaključimo da je visina kazne je jedna od važnijih determinanti poreske evazije. Uvođenje odgovarajućih kazni može povećati poresku disciplinu i unaprijediti poštivanje i sprovođenje poreskih zakonskih propisa. U tom pravcu, potrebno je temeljito poznavanje faktora poreske evazije i ovakvim rješenjima trebalo bi da se postigne preventivno dejstvo, a posljedično i represivno. Na kraju, nužno je podizati nivo političke sigurnosti, jer bez podizanja i povećanja političke sigurnosti unutar države svaka borba protiv poreske evazije je ograničena. Istraživanje sprovedeno u ovom radu opravdava, pokazuje i otvara prostor za nova istraživačka pitanja u vezi analize i mjerenja poreske evazije a to podrazumjeva jedan multidisciplinarni pristup posebno sa aspekta ponašanja poreskog obveznika i njegove odluke da li će poštovati

poreske zakonske propise. S obzirom na kompleksnost predmeta istraživanja smatramo da bi trebalo nastaviti sa daljnim istraživanjima kako bi se u narednom razdoblju došlo do odgovora na pitanja sagledavanja sadržaja i značaja pojedinih faktora neophodnih za razumijevanje poreske evazije. Dakle, jako je bitno poduzimanje mjera i aktivnosti u cilju poboljšanja stanja. Polazeći od prezentiranog u radu, odnosno analizom i mjerenjem faktora poreske evazije, generalno se može izvesti opšti zaključak da prioritet i poseban akcenat treba dati ovim faktorima koji su spomenuti u istraživanju, putem kojih se može uz mjere i aktivnosti brže i efikasnije doći do poboljšanja stanja.

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ANALYSIS AND MEASUREMENT OF TAX EVASION FACTORS USING QUESTIONNAIRE-EXAMPLE FROM BOSNIA AND HERZEGOVINA

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Summary: *Analysis and measurement of tax evasion is a very important issue primarily for the tax administration. The purpose of this article is first to show how to analyze tax evasion via a questionnaire. In Bosnia and Herzegovina, as well as in the EU countries and other countries in the region and the world, ensuring fighting tax evasion has never been important than it is today. Tax evasion can't observe in isolation from the rest of society. Maximising the revenue collected by promoting fighting tax evasion is the main responsibility of a tax administration. According to current knowledge, it is not possible to precisely quantify the range of individual factors on the very occurrence of tax evasion and the analysis and measurement of tax evasion factors does not have an easy path and is not an easy task. There are numerous studies on the influence of certain factors of tax evasion. This study highlighted the importance of factors that determine tax evasion. The objectives of this article are to give how to analyse and measure tax evasion. Due to the financial and economic crisis, the issue of tax evasion in order to improve the state of public finances. The answer to the question is very complex for several reasons. Factors of tax evasion change dynamically over time due to economic conditions, business innovation, e-commerce development, economic crisis and today COVID pandemic, political stability, resource availability, competitive situation, quality and capabilities of state institutions, tax legislation, etc. A survey of respondents' attitudes towards tax evasion was conducted in order to analyze and measure tax evasion factors. The primary research of the respondents has been conducted, in order to analyze and measure the factors of tax evasion. The study adopted a quantitative survey design, convenience sampling technique, and questionnaire as a data collection instrument. We found that the introduction of appropriate penalties can increase tax discipline and improve compliance with and enforcement of tax laws. Such solutions should achieve a preventive effect, and consequently a repressive one. In the end, it is necessary to raise the level of political security, because without raising and increasing political security within the state and fight against tax evasion is limited. A key point is that require legislative change to maximise the suggestions above. Starting from the presented in the paper, ie analysis and measurement of tax evasion factors, a general conclusion can be made that priority and special emphasis should be given to these factors mentioned in the research, through which measures and activities can improve the situation faster and more efficiently. Furthermore, in line accordance with*

economic trends, this paper can contribute to the literature by presenting the results and shows that the questionnaire can be used to recognize the observed phenomenon. Finally, it is worth recognising a need for new research questions regarding the analysis and measurement of tax evasion.

Keywords: taxation; tax evasion; questionnaires.

JEL classification: H20, H26, H29.

PRILOG

Prilog 1. Upitnik

1.1. Poreska evazija predstavlja najveću koccnicu razvoja društva				
	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	7	2,3	2,3	2,3
ne slažem se	58	19,3	19,3	21,7
niti se slažem niti se ne slažem	23	7,7	7,7	29,3
slažem se	156	52,0	52,0	81,3
potpuno se slažem	56	18,7	18,7	100,0
1.2. Osobe sa "visokim pozicijama" ne pridržavaju se normi u društvu				
	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	6	2,0	2,0	2,0
ne slažem se	30	10,0	10,0	12,0
niti se slažem niti se ne slažem	38	12,7	12,7	24,7
slažem se	147	49,0	49,0	73,7
potpuno se slažem	79	26,3	26,3	100,0
1.3. Poreska evazija je podjednako prisutna u svim zemljama				
	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	23	7,7	7,7	7,7
ne slažem se	142	47,3	47,3	55,0
niti se slažem niti se ne slažem	48	16,0	16,0	71,0
slažem se	72	24,0	24,0	95,0
potpuno se slažem	15	5,0	5,0	100,0
1.4. O poreskoj evaziji negativno govore samo ljudi koji nisu direktno odgovorni za njeno suzbijanje				
	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	13	4,3	4,3	4,3
ne slažem se	92	30,7	30,7	35,0
niti se slažem niti se ne slažem	85	28,3	28,3	63,3
slažem se	84	28,0	28,0	91,3
potpuno se slažem	26	8,7	8,7	100,0

1.5. Kazne/sankcije za poresku evaziju su nesrazmjerne i neefikasne i trebaju biti daleko strožije

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	4	1,3	1,3	1,3
ne slažem se	44	14,7	14,7	16,0
niti se slažem niti se ne slažem	41	13,7	13,7	29,7
slažem se	143	47,7	47,7	77,3
potpuno se slažem	68	22,7	22,7	100,0

1.6. Poreska evazija je u najvećem broju slučajeva nedokaziva

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	23	7,7	7,7	7,7
ne slažem se	158	52,7	52,7	60,3
niti se slažem niti se ne slažem	33	11,0	11,0	71,3
slažem se	77	25,7	25,7	97,0
potpuno se slažem	9	3,0	3,0	100,0

1.7. Poreska evazija je jedan od važnijih pokazatelja pada sistema vrijednosti

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	2	,7	,7	,7
ne slažem se	30	10,0	10,0	10,7
niti se slažem niti se ne slažem	48	16,0	16,0	26,7
slažem se	173	57,7	57,7	84,3
potpuno se slažem	47	15,7	15,7	100,0

1.8. Nizak nivo licnih prihoda utice na visinu poreske evazije

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	12	4,0	4,0	4,0
ne slažem se	79	26,3	26,3	30,3
niti se slažem niti se ne slažem	37	12,3	12,3	42,7
slažem se	135	45,0	45,0	87,7
potpuno se slažem	37	12,3	12,3	100,0

1.9. Poreska evazija je uobicaena pojava za zemlje u tranziciji

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	10	3,3	3,3	3,3
ne slažem se	42	14,0	14,0	17,3
niti se slažem niti se ne slažem	40	13,3	13,3	30,7
slažem se	168	56,0	56,0	86,7
potpuno se slažem	40	13,3	13,3	100,0

1.10. Mediji pretjeruju kad ukazuju na štetnost poreske evazije

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	36	12,0	12,0	12,0
ne slažem se	151	50,3	50,3	62,3
niti se slažem niti se ne slažem	60	20,0	20,0	82,3

slažem se	42	14,0	14,0	96,3
potpuno se slažem	11	3,7	3,7	100,0

1.11. Rijetki su poreski obveznici koji nisu pocinili poresku evaziju

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	9	3,0	3,0	3,0
ne slažem se	72	24,0	24,0	27,0
niti se slažem niti se ne slažem	45	15,0	15,0	42,0
slažem se	138	46,0	46,0	88,0
potpuno se slažem	36	12,0	12,0	100,0

1.12. Poreska evazija je tradicionalno karakteristicna za naš mentalitet

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	11	3,7	3,7	3,7
ne slažem se	70	23,3	23,3	27,0
niti se slažem niti se ne slažem	46	15,3	15,3	42,3
slažem se	140	46,7	46,7	89,0
potpuno se slažem	33	11,0	11,0	100,0

1.13. Razlog za poresku evaziju je slaba edukacija

	Frequency	Percent	Valid Percent	Cumulative Percent
uopšte se ne slažem	25	8,3	8,3	8,3
ne slažem se	118	39,3	39,3	47,7
niti se slažem niti se ne slažem	31	10,3	10,3	58,0
slažem se	99	33,0	33,0	91,0
potpuno se slažem	27	9,0	9,0	100,0

Izvor: (Terzić, 2018, p. 348)

THE SIGNIFICANCE OF COMPANY INNOVATIVENESS FOR STOCK PRICE AND VOLATILITY

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Abstract: *The aim of this paper was to determine whether company innovativeness is significant for the price and volatility of stocks. In modern business conditions, innovation is one of the foundations of business success because companies that innovate not only monitor changes in the environment but also generate new revenue, open new markets, and so on, which significantly improves their position in relation to the competition. Exploring the significance of innovation for stock price movements can be important for understanding how the market reacts to innovation, but it can also motivate companies to invest more in innovation processes and the implementation of innovation activities. In the paper, the authors used a quantitative methodology based on a panel regression analysis of data collected from secondary sources for the period from 2005 to 2020. The research included eight of the most innovative companies ranked by the Boston Consulting Group. The results indicate that company innovativeness is statistically significant for average stock price and coefficients of variability. Given the important role that innovativeness plays in a company's business, the results obtained can serve as guidelines for managers in charge of implementing innovation activities in companies, as well as investors and other relevant stakeholders. Recommendations for future research are aimed at expanding the model with additional variables, which could potentially increase the representativeness of the model, and testing existing models on other data sources.*

Keywords: *company innovativeness; stock prices; stock volatility*

JEL classification: *G110, O310*

INTRODUCTION

Innovation is considered a key fundamental element and outcome of entrepreneurial activities (Davidsson, 2004). Although there are many definitions and classifications of innovation that differ in scope, what most definitions have in common is the factor of “novelty” or improvement of a product or service, production process or other function and activity of a company.

Thus Hurley & Hult (1998) point out that innovativeness is the cornerstone of a company’s innovation activities. In modern business conditions, innovativeness is one of the fundamental prerequisites for the success of a company, and this is especially emphasized in companies in high-tech industries (Galović, 2016). Following the above, it can be pointed out that the innovativeness of a company is a key factor in the company’s business and also a significant component of the organizational culture of the company which contributes to business success.

According to Santos-Rodrigues, Figueroa Dorrego, & F-Jardon (2012), innovativeness is a condition for a company’s growth, often rewarded by the market, and develops from the company’s willingness to take risks and accept unconventional ideas, institutions and creativity. Based on the above explanation, and in light of the increased number of innovations, the increased number of innovative activities of companies and increased competition, the question arises: “Does the market reward company innovativeness?” The answer to this question is especially important for company managers because they are under constant pressure to create added value for shareholders and owners (Lehmann, 2004).

The problem of the paper arises from the assumption that innovative activities of companies are recognized by investors and that innovativeness of a company is significant for the price and volatility of stocks because innovative companies create new products and new market niches thus creating new revenues and new market opportunities that the competition cannot keep up with, which gives a long-term perspective of their business and reduces investment risk for investors. Therefore, in this paper it is hypothesized that: Hypothesis 1: “Company innovativeness is significant for stock price” and Hypothesis 2: “Company innovativeness is significant for stock volatility”.

The primary goal of this paper is to prove the significance of innovativeness for the price and volatility of stocks of large global companies. The contribution of the results manifests in a scientific sense in the form of enriching the theory and field of research related to innovation and innovation management, as well as in professional contribution through support and guidance to managers in charge of managing innovation activities in large companies.

The paper is divided into five parts. After the introduction, the second part of the paper presents a theoretical overview of innovativeness, its importance and measurement in companies and the impact on stock price movements. The third part of the paper explains the methodological framework of the research, while the fourth chapter presents the research results and discussion. The paper ends with a conclusion.

THE THEORETICAL FRAMEWORK OF THE RESEARCH CONCEPT

The field of innovation is theoretically a rich field that includes different perspectives and categorizations of definitions and concepts. In order to provide a theoretical overview of terms relevant to the concept of this research, the paper presents

definitions of innovation and innovativeness, measures of company innovativeness and previous contributions in research on the impact of innovativeness in companies on stock price movements.

Innovation and innovativeness

The economic theory presents many definitions of innovation and innovation activities of enterprises. One of the pioneers of research related to innovation and a source of modern innovation theories is certainly Schumpeter (1934) who, according to Lazzarotti, Dalfovo, & Hoffmann (2011), defined innovation as the introduction of new products or services, the development of a new production process, the opening and establishment of new markets, the development of new sources of supply of raw materials or semi-finished products and the establishment of new industrial organizations.

The European Commission defines innovation in a similar way. In the document Green Paper on Innovation, innovation is defined as the improvement and expansion of a range of products, services and related markets. Furthermore, they define innovation as the establishment of new methods of production, procurement and distribution, as well as the introduction of changes in management and organization, working conditions and workforce skills (European Commission, 1996).

Drucker (1992) states that innovation begins with a systematic analysis and study of good opportunities and successful innovators are people who go among their customers and study them to understand their needs and expectations. Also, Drucker (1992) believes that innovation, in order to be successful, should be simple, have a clear direction and purpose (to avoid confusion) and should begin modestly, because the innovation process is complex, and it takes some time for a company to adapt to changes.

According to Eurostat (2021), innovative companies are businesses that introduce new products or services and processes to the market that have been significantly improved, and the result of technological development is the basis for innovation.

Given the different approaches to defining innovation, there are also different divisions and types of innovation. The Organization for Economic Co-operation and Development - OECD (2021) defines four categories of innovation. The first category is product innovation, the second category refers to process innovation, the third is marketing innovation and the fourth is organizational innovation. Product or service innovation includes the introduction of new or significant improvements to existing products or services (these are most often technical specifications, materials, components and software in the product), as well as improvement of user experience and certain functional features. Process innovation refers to the introduction of completely new or improved ways of production and distribution (these can be significant changes in processes, equipment and software). Marketing innovation refers to significant changes in product design or packaging, product pricing or promotion, while organizational innovation is most often related to new organizational approaches in business practice, organization and relationships with external stakeholders (OECD, 2021).

There are typically two types of innovation in the context of the source of innovation: routine and revolutionary (Bilas & Franc, 2018). Continuous market changes and the never-ending struggle to achieve competitiveness are the drivers of constant

reflection on the process of innovation in companies. This is especially true for large companies that have implemented activities and costs related to research and development in their business strategies. As a result, the innovation process becomes a part of a company's business routine. Due to their size, large companies can better take advantage of economies of scale, are more willing to take a risk, which is an integral part of the innovation process, and are financially more stable and stronger (Bilas & Franc, 2018).

The degree of "novelty" in a product, process or production defines innovation as radical or incremental. Radical innovation refers to a completely new product, production process or business model, while incremental innovation includes improving existing products, processes or business models within a company (OECD & Eurostat, 2018).

Innovation as a kind of change is the result of a company's innovativeness. Cresspell & Hansen (2008) define innovativeness as the tendency to adopt or create new products, processes or business systems. Hurley & Hult (1998) define innovativeness as the concept of openness to new ideas, that is, as the orientation of an organization towards innovation. The concept of innovativeness is often associated with the concept of creativity. Levitt (2002) defines creativity as thinking about new ideas and innovativeness as the process of implementing those ideas. According to Jacobs & Snijders (2008), the element of "novelty" in innovation is realized with added value, and it is creativity and innovativeness that contribute to the development of a company's competitive advantage and added value.

The importance of innovativeness in companies

Constant changes, such as increased global competitiveness, shorter product life cycles, faster changes in customer requirements and increased technological capability, highlight the significance of innovation for business operations (Baković & Ledić - Purić, 2011). These business characteristics can sometimes be opportunities and sources of advancement for companies, but they can also be challenges that can jeopardize their business. In times of fierce competition, investment in research, development and implementation of innovation processes become a prerequisite for a successful business (Posavec, Šporčić, Antonić, & Beljan, 2011).

The innovativeness of a company is certainly conditioned by certain characteristics of the company that support the process of innovation. Specific features in innovative companies can be divided into two groups of skills - strategic and organizational (European Commission, 1996). Strategic skills include the ability to identify and anticipate changes in market trends, as well as the willingness to adapt to them and orientation to the future of business, while organizational skills focus on internal cooperation between organizational departments and external cooperation with research institutions, consumers and suppliers (European Commission, 1996).

An innovation process is a resource-intensive project. The process involves numerous organizational units of a company and requires time and sufficient funds. Innovation is not a single event but rather a process that can and must be managed (Tidd, Bessant, & Pavitt, 2009).

Apple is an example that shows how innovativeness can help a business grow into a large and global company. Understanding the needs of their customers and be-

ing able to quickly adapt to customer requirements can help a company come up with innovative solutions (Hausman, 2005).

Cost reduction, increased productivity and increased market share are some of the indicators of a company's innovative activities (Galović, 2016). Since innovativeness is associated with good business results, it is clear how important it is in companies.

Measuring company innovativeness

Company innovativeness is not easy to measure and there are different ways to do it. Nybakk (2012) describes a model which consists of three parts: product innovativeness, process innovativeness and business system innovativeness, and is implemented in the form of a questionnaire.

Mapping a company's capacity for innovation is an important area of business management, and in response to previous patent-based indicators that explained only a portion of the invention in innovation, a need arose during the 1980s to better understand the innovation process and the importance of using research and development as an indicator of innovation (Bilas & Franc, 2018). Over time, a new tool for measuring innovation in companies has developed - innovation surveys, which have become a widely used research method. The Organization for Economic Co-operation and Development - OECD, the European Commission and Eurostat have made a major contribution to the standardization of research based on innovation surveys at the international level by drafting the Oslo Manual, which contains guidelines for conducting innovation research, research and development and collection and interpretation of data (Bilas & Franc, 2018). Oslo Manual (OECD & Eurostat, 2018), in the context of contemporary economic, social and environmental challenges, provides a systematic approach to the definition of innovation, concepts for measuring innovation in the business sector, as well as the non-profit and public sector, measuring capabilities and external influencing factors of business innovation and the goals and results of the innovation process. From the aspect of measuring the innovation activity of a company, eight main types of activities and expenditures important for strengthening a company's innovation capacity have been defined: research and development (R&D) activities; engineering, design and other creative work; marketing activities; intellectual property; employee training; software and database development; acquisition or lease of tangible assets; and innovation management activities (OECD & Eurostat, 2018).

For this paper, as a measure of innovativeness, we used the Boston Consulting Group – BCG (2020) ranking of the world's most innovative companies, based on a sample of 2,500 senior management respondents. The results are based on the number of votes of CEOs from around the world, the number of votes of CEOs from a particular industry, the diversity index (votes between different industries) and the total shareholder return over the past three years.

A review of previous research related to the impact of innovativeness on stock price movements

The impact of innovativeness on stock movements has been proven in publications, but the significance of this impact has not been clearly demonstrated. According to Sood & Tellis (2009), innovation is one of the most important forces in fostering

the growth of new products, maintaining existing ones, creating new markets, transforming industries and promoting the global competitiveness of nations. They claim that it is the research of the relationship between innovation and return on investment in stocks that can be crucial for understanding the way the market reacts to innovation, but also for motivating companies to invest in innovation. They also believe that an above-average return on investment (relative to the market or some of the market indices) in the stocks of innovative companies is one of the best ways to assess the rewards for companies that invest in innovation. Cillo, Griffith & Rubera (2018) researched the correlation between innovativeness and stock selection by investors. They pointed out that, on the one hand, large investors increase the purchase of stocks of innovative companies, which affects the value of these stocks. On the other hand, some large investors have not achieved the expected results based on innovativeness in previous operations, and if a company's innovativeness increases, they are inclined to sell the company's stocks.

In their research, Chaney, Devinney & Winer (1991) observed one part of an innovation project (presentation of a new product) and found a return on investment of 0.25 percent. Sood & Tellis (2009) tried to complement such partial practices, believing that the focus on individual events of an innovation project is precisely what causes market innovations to be underestimated. They calculated that observing the entire innovation project, as opposed to a single event, yields thirteen times higher return on investment. They classified innovation activities into three categories: initiation (events related to partnerships, financing and the expansion of new innovation projects), development (prototypes, patents and announcements) and product commercialization (launch of a new product and product quality award), stating that development activity brings the highest return on investment when viewed independently.

Innovation can also result in a negative return on investment in the stock market, for example, if an innovative product fails to meet expectations or encourages imitators, i.e., competition, and thus lowers expected sales prices, and it is possible that the cost of promoting an innovative product is higher than expected or that the overall cost of the investment is too high (Crawford, 1977).

Rubera & Kirca (2012) concluded in their research that the stock market is willing to reward innovativeness even before product commercialization. They noticed that managers recognize investing in innovativeness as a tool for increasing revenue, but also warn that managers can reduce investment based on innovativeness when it comes to high-tech companies that frequently present innovative solutions (Rubera & Kirca, 2012).

A great deal of research has shown that a company's success in innovation activities is a key factor in long-term sales results, as well as stock market success (Pauwels, Silva-Risso, Srinivasan, & Hanssens, 2004; Drucker, 1973).

Srinivasan, Pauwels, Silva-Risso & Hanssens (2009) concluded that the introduction of a new product has a positive effect on the return on investment in stocks and that this effect is up to seven times greater for a product that is new to the market than for products that are only new to the company that represents them. They also concluded that presenting new products has a greater impact if the product is perceived to be of high quality.

METHODOLOGICAL FRAMEWORK OF RESEARCH ON THE IMPACT OF COMPANY INNOVATIVENESS ON STOCK PRICE AND VOLATILITY

The methodological framework of the paper is based on panel regression analyses of secondary source data.

Different models can be used in the statistical analysis of panel data, which are classified as static (models with a fixed effect and models with a random effect) and dynamic (Jakšić, Erjavec, & Čeh Časni, 2020). Kennedy (2008) according to Jakšić, Erjavec & Čeh Časni (2020) says that the decision to choose a static model can be made based on whether the effects are considered random or fixed (if they apply to the whole population, they can be considered random, and if they refer only to the effects in the model, then they can be considered fixed). In dynamic linear panel models, the present values of the dependent variable are assumed to be dependent on its previous values (Jakšić, Erjavec, & Čeh Časni, 2020).

BCG's ranking of the world's most innovative companies was used for company innovativeness. To obtain the longest possible observation period and to avoid the impact of methodological changes in BCG research that occurred in individual years, only companies that were among the fifty most innovative companies in the world in all of the years in which BCG conducted its research were observed. The data for stock price and volatility, were obtained and calculated from the websites Macrotrends.net and Finance.Yahoo.com. To avoid potential situational and seasonal fluctuations in stock price movements, the average stock price in individual years was used, while stock volatility was observed based on the calculation of coefficients of variability for each stock in a given year.

Based on the information above, the authors used a model with a random effect, believing that the effects apply to the entire population because they were selected based on data availability for all of the observed years in the model. Current values should not depend on previous ones because BCG conducts an annual ranking of the world's most innovative companies.

RESULTS AND DISCUSSION OF THE RESEARCH OF THE IMPACT OF COMPANY INNOVATIVENESS ON STOCK PRICE AND VOLATILITY

Before the panel regression analyses on the observed variables, it is necessary to show their movement in the period covered by the research, as shown in the three tables below.

Table 1 shows the ranking of the world's most innovative companies by year for companies that have been among the top fifty most innovative since the start of BCG's company innovativeness research.

Table 1. The ranking of the world's most innovative companies by year for companies that have been among the top fifty most innovative since the start of BCG's company innovativeness research

	Apple	Alphabet/ Google	Amazon	Microsoft	Samsung	IBM	HP	Toyota
2005	1	11	17	4	11	7	21	14
2006	1	2	21	5	12	10	42	4
2007	1	2	20	5	16	9	32	3
2008	1	2	11	5	26	12	15	3
2009	1	2	11	4	16	6	7	3
2010	1	2	6	3	11	4	16	5
2012	1	2	9	4	3	6	15	11
2013	1	3	7	4	2	6	16	5
2014	1	2	6	4	3	5	11	8
2015	1	2	9	4	5	13	23	6
2016	1	2	5	4	7	10	13	8
2018	1	2	4	3	5	8	15	17
2019	3	1	2	4	5	7	44	37
2020	1	2	3	4	5	8	15	41

Source: Boston Consulting Group – BCG (2020)

According to Table 1 it can be seen that eight companies were among the fifty most innovative companies in the world from 2005 to 2020, across all years studied by BCG. Also, the dominance of Apple and Alphabet / Google in the first two places is clearly visible, as Apple was not in first place for only one year, and Alphabet / Google was not in second place only three times during the observed period. Furthermore, it can be seen that Microsoft has a relatively stable ranking, ranging from third to fifth place over the entire observed period, while HP and Toyota fluctuate the most in rankings.

Table 2 shows average stock price of the world's most innovative companies by year for companies that have been among the top fifty most innovative since the start of BCG's company innovativeness research.

Table 2. Average stock price of the world's most innovative companies by year for companies that have been among the top fifty most innovative since the start of BCG's company innovativeness research (expressed in US Dollars except the stock price of Samsung which is expressed in South Korean Won)

	Apple	Alphabet/ Google	Amazon	Microsoft	Samsung*	IBM	HP	Toyota
2005	1.67	277.76	39.90	25.87	10448.33	83.79	24.31	81.52
2006	2.53	411.19	35.91	26.29	12930.00	83.11	34.51	110.62
2007	4.58	538.75	67.23	30.45	11491.67	105.80	46.11	121.08
2008	5.07	464.85	69.88	26.65	11704.17	110.04	43.34	90.41
2009	5.24	439.69	87.28	22.98	12460.83	109.27	40.40	76.05

2010	9.28	535.62	139.14	27.06	15808.33	131.86	46.19	75.07
2012	20.57	642.82	220.30	29.82	25070.00	196.59	20.40	79.82
2013	16.88	884.24	298.03	32.49	29123.33	194.15	22.74	117.79
2014	23.07	713.97	332.55	42.45	26153.33	182.30	33.88	116.21
2015	30.01	619.98	478.14	46.71	25956.67	155.35	28.83	130.03
2016	26.15	763.21	699.52	55.26	28301.67	150.51	13.16	111.03
2018	47.26	1122.04	1641.73	101.03	47795.00	143.86	23.09	127.66
2019	52.06	1191.22	1789.19	130.38	45995.83	136.99	19.88	128.52
2020	95.35	1478.99	2680.86	193.02	55070.83	124.39	18.84	131.84

Source: Macrotrends (2020) and Yahoo Finance (2020)

* average stock prices for Samsung were not available on Macrotrends.net, so they were obtained from another source, Finance.Yahoo.com, and were calculated as the arithmetic mean of monthly prices

According to Table 2 it can be seen that the average stock price of all observed companies increased from 2005 to 2020, with the difference being in the dynamics of growth.

Table 3 shows coefficients of variability of average stock price of the world's most innovative companies by year for companies that have been among the top fifty most innovative since the start of BCG's company innovativeness research.

Table 3. Coefficients of variability of average stock price of the world's most innovative companies by year for companies that have been among the top fifty most innovative since the start of BCG's company innovativeness research

	Apple	Alphabet/ Google	Amazon	Microsoft	Samsung*	IBM	HP	Toyota
2005	7%	39%	7%	46%	41%	61%	82%	76%
2006	10%	57%	6%	47%	51%	61%	116%	103%
2007	19%	75%	11%	54%	45%	78%	155%	113%
2008	21%	65%	11%	47%	46%	81%	146%	85%
2009	22%	61%	14%	41%	49%	80%	136%	71%
2010	38%	74%	23%	48%	62%	97%	156%	70%
2012	85%	89%	36%	53%	98%	144%	69%	75%
2013	70%	123%	49%	58%	114%	142%	77%	110%
2014	95%	99%	54%	75%	102%	134%	114%	109%
2015	124%	86%	78%	83%	101%	114%	97%	122%
2016	108%	106%	114%	98%	111%	110%	44%	104%
2018	195%	156%	268%	179%	187%	106%	78%	119%
2019	215%	165%	292%	231%	180%	101%	67%	120%
2020	393%	205%	437%	342%	215%	91%	63%	123%

Source: calculated and created by the authors according to data from Macrotrends and Yahoo Finance (2020)

According to Table 3 it can be seen that the coefficients of variability for all observed companies differ between 2005 and 2020.

Based on the presented data, panel regression analyses were made. Table 4 shows results of panel regression analysis for rank of company innovativeness and average stock price.

Table 4. Results of panel regression analysis for rank of company innovativeness and average stock price

Regression model parameters	Rank of innovativeness
	z-value
Average stock price	-2.565*
R2	0.056
Adjusted R2	0.048

Source: authors' calculations

Note: * $p < 0.05$

Table 4 demonstrates that rank of company innovativeness is statistically significant for average stock price, which indicates for companies from the sample that the higher the rank of company innovativeness, the lower their share price. Although the significance of company innovativeness for stock price is proven, hypothesis H1, which assumed the significance of company innovativeness for stock price, cannot be accepted, as a positive correlation between variables was assumed. However, this result is in line with the literature, because Crawford (1977) states that innovation can also lead to negative returns on investment in the stock market, while Cillo, Griffith & Rubera (2018) state that some large investors who have not achieved satisfactory returns in the past based on company innovativeness, sell company's stocks, when company's innovativeness increases.

Table 5 shows results of panel regression analysis for rank of company innovativeness and coefficients of variability.

Table 5. Results of panel regression analysis for rank of company innovativeness and coefficients of variability

Regression model parameters	Rank of innovativeness
	z-value
Coefficient of variability	-2.353*
R2	0.048
Adjusted R2	0.039

Source: authors' calculations

Note: * $p < 0.05$

Table 5 demonstrates that rank of company innovativeness is statistically significant for coefficients of variability, which indicates for companies in the sample that the higher the rank of company innovativeness, the lower their stock volatility.

Hypothesis H2, which assumed the significance of company innovativeness for stock volatility, can be accepted. This result is in line with the assumes that company innovativeness gives a long-term perspective for their business and reduces investment risk for investors.

However, the coefficients of determination of both models are low, which in certain cases may indicate that the model needs to be extended with additional variables or that the data do not explain the majority of the deviation of the variance of the dependent variable relative to the movement of the independent variable (Minitab, 2014). Both situations should be explored further in future research, in which the model could be extended with additional variables to potentially increase its representativeness, and additional data sources could be found to research the observed relationships. Nonetheless, in situations of low values of the coefficient of determination and statistically significant independent variables, important conclusions can still be drawn about how changes in the value of the independent variable affect changes in the value of the dependent variable (Minitab, 2013).

CONCLUSION

Innovation is a key driver of business and a source of competitive advantage for companies. Regardless of the type and “degree of novelty” they provide, they are a response of companies to new consumer and competition demands, as well as to social and economic changes. The development of innovation within a company based on research and development activities is certainly not a result of chance, but it is a systematically managed process. The ability to innovate, theoretically defined as the innovativeness of a company, represents the strength and willingness of the company to take risks, adopt new knowledge and experience and introduce changes in the form of new products, services, processes and functions. The goal of the paper was to study the significance of company innovativeness for stock price and volatility, and it was accomplished. According to the results of the research, the rank of company innovativeness, is statistically significant for average stock price and coefficients of variability. The scientific contribution of the research manifests in the unique selection of variables of research models and the method of their measurement. Given the important role that innovativeness plays in a company’s business, the results obtained can serve as guidelines for managers in charge of implementing innovation activities in companies, as well as investors and other relevant stakeholders. Low coefficients of model determination are limitations of the research, but they are also motivation for future research. Some of the recommendations related to the implementation of future research include extending the model with additional variables to potentially increase its representativeness and testing existing models on other data sources.

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THE IMPACT OF FREE ZONES ON ECONOMIC GROWTH: EVIDENCE FROM DEVELOPING COUNTRIES

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Abstract: *The subject of research in this paper refers to the analysis of the impact of free zones on the economic growth of developing countries. The objective of the research is to explain to the scientific and professional public the way of functioning and the transmission mechanism of free zones in generating economic growth ceteris paribus. The analysis covers free zones in three countries in the development of compatible characteristics: Serbia, Croatia and Belarus. The research problem is sublimated in the question of whether and in what way free zones have an impact on the economic growth of developing countries? The research was conducted by analyzing the relevant literature and by using the panel analysis. The results of the research showed the existence of statistically significant determination of GDP per capita, as an indicator of economic growth, by variations of macroeconomic parameters of the functioning of free zones. That is, the operation of free zones has a statistically significant impact on the economic growth of targeted developing countries ceteris paribus. Whether growth will be inclusive and sustainable in the long run depends on political and economic decision makers and defined economic policy. In this way, the hypothesis was confirmed that the establishment of free zones in developing countries, with the condition of integration of the national economy into the work of zones, creates preconditions for sustainable and inclusive economic growth.*

Keywords: *Free zones, developing countries, economic growth, macroeconomic parameters.*

JEL classification: *F43, F63, O10.*

INTRODUCTION

Free zones represent an instrument for ensuring comprehensive economic growth in terms of achieving industrial competitiveness and attracting foreign and domestic investment. A well-defined subsidy policy, an efficient legislative and regulatory framework, the concept of symbiosis of multinational companies and domestic sub-contractors are the most significant factors influencing the functioning of free zones, in line with sustainable economic growth and development. In today's globalized world,

free zones are a very attractive and important tool, through the effect of investment, for access to modern technologies, innovations, training of the workforce to the requirements of modern markets, know-how and other indirect benefits. That is why the importance of their establishment in developing countries is at the top of economic policy priorities.

The paper investigates the impact of free zones on the economic growth of developing countries, on the example of three countries that are compatible and comparable in many characteristics: Serbia, Croatia and Belarus. The time period of the analysis refers to the period of functioning of free zones in the mentioned countries for which relevant statistical data are available. The paper analyzes whether and in what way free zones have an impact on the economic growth of targeted countries. That is, what is the mechanism of functioning of free zones and generation of economic growth *ceteris paribus*. The analysis of the functioning of free zones will explain the transmission mechanism that creates the preconditions for inclusive and sustainable economic growth. Whether growth will be sustainable and inclusive depends, primarily, on political decision-makers in the countries that establish free zones. Through the transmission mechanism, companies operating in free zones create preconditions for a significant inflow of investments that affect production, exports and employment in free zones and thus GDP growth per capita.

In addition to the analysis of relevant literature, panel analysis was used in the research. The direct implication of the analysis is the determinism of economic growth by variations of free zone functioning indicators, i.e. variations of the independent variable have a statistically significant effect on the dependent variable. The results of the conducted analysis confirmed the hypothesis that the establishment of free zones in developing countries, provided that the national economy is integrated into the work of the zones, creates preconditions for sustainable and inclusive economic growth. The first part of the paper contains an overview of the theoretical framework of free zones and mechanisms of influence on economic growth. In the second part of the paper, the methodological framework of the research is defined and determined. In the third part, the research model was tested, and the research results were explained. The fourth part contains a discussion and comparison of research results with the same and/or similar research. The fifth part sets out the concluding considerations.

THEORETICAL FRAMEWORK OF FREE ZONES

Free zones are defined as enclosed parts of industrial areas that specialize in production for export and that offer companies conditions that facilitate trade and a free regulatory environment (WB, 1992). This definition of free zones has been modified, in line with new future trends and conditions related to domestic trade and the physical demarcation of free zones, which in some cases have become more flexible (Torres, 2007). The only international convention that defined and procedurally regulated the concept of free zones was the International Convention on the Simplification and Harmonization of Customs Procedures, i.e. the Revised Kyoto Convention (RKC) (Akinci & Crittle, 2008; Omi, 2019; Bost, 2019). Annex D, Chapter 2 of the Kyoto Convention defined free zones as a part of the territory of a country where any goods introduced are generally regarded, insofar as import duties and taxes are concerned, as being outside the Customs jurisdiction (WCO, 2008). In addition to the above frame-

work definition, the World Free Zones Organization (WFZO, 2015) has expanded and simplified the terminology of free zones, which are an area designated by one or more government(s)¹ where economic activities are permitted and relieved (totally or partially) from customs duties, taxes, fees or with specific regulatory requirements that would otherwise apply. Based on the above, it can be concluded that free zones represent a geographically defined territory within the national borders of the country, where business rules are different from the rest of the country and where there are certain benefits, primarily in terms of customs and tax policy, administrative procedures, infrastructure and legislative framework.

The characteristic of free zone theory is the permanent lag in relation to the models of free zones that function on a global level and the disagreement regarding the theoretical framework (Johansson, 1994). The theoretical framework of zone functioning has been included in many studies (Grubel, 1982; Warr, 1989; WB, 1992; Chen, 1993; Kaplinsky, 1993; Willmore, 1995; Johansson & Nilsson, 1997; Madani, 1999; Jayanthakumaran, 2003; Monge González, Rosales Tijerino, & Arce Alpízar, 2005; Farole & Akinci, 2011; Farole, 2011; WB, 2017), only since the 1980s, long after the establishment of the first zones. An exception is the analysis of Hamanda (Hamanda, 1974). For a long period of time, the Heckscher-Olin model (Krugman & Obstfeld, 2009) was the driving framework for measuring the functioning of zones (Jayanthakumaran, 2003; Meng, 2005). Since the mid-1980s, the focus of theoretical analysis of free zones has shifted towards emphasizing secondary effects, or catalytic effects (Johansson, 1994). Most modern research on free zones has incorporated catalytic effects and modern zone policies. The new focus in free zone research has linked the processes of structural transformation and development effects of zones, in the sense that zones have become an important instrument of economic policy in eliminating development policy problems.

The development of free zones in the last 40 years has a trend of continuous expansion. During this period, the number of free zones increased from 79 to 5.383, and the number of countries in which the zones operate from 29 to 147 (Akinci & Crittle, 2008; Farole & Akinci, 2011; ILO, 2014; ILO, 2017; Bost, 2019; UNCTAD, 2019). In 2019, the number of active free zones at the global level was 5.383, of which 93% was in developing and transition countries and 7% in developed countries (Bost, 2019; UNCTAD, 2019). According to estimates by the United Nations Conference on Trade and Development (UNCTAD, 2019) more than 500 free zones will be established in the near future. The success of free zone programs represents the supremacy of benefits over costs. The economic justification for the establishment of free zones implies the process of planning and defining the framework of free zones *ex ante* in order to create the preconditions for sustainable and inclusive economic growth and transformation of the national economy *ex post*. Economic growth represents the final phase of the transmission mechanism of economic activities of free zones. That is, free zones through the inflow of investment, growth of production, employment and exports create preconditions for generating economic growth *ceteris paribus*.

¹ There are also cross-border free zones whose purpose is to facilitate trade between the two countries, such as the Kaesong Industrial Complex free zone between North and South Korea (COMCEC, 2017).

FDI inflows to developing countries are one of the most important goals of establishing free zones. Free zones are established for the purpose of attracting greenfield and brownfield investments, and in certain cases portfolio investments. All relevant research (Akinci & Crittle, 2008; Farole & Akinci, 2011; Farole, 2011; Kanungo, 2016; Ciżkowicz, Ciżkowicz-Pękała, Pękała, & Rzońca, 2017; WB, 2017; COMCEC, 2017; ASEAN & UNCTAD, 2017; Alkon, 2018; UNCTAD, 2019) emphasize the importance of free zones in attracting FDI. Also, in the mentioned research, the existence of a strong connection between well-conceived free zone programs and the inflow of FDI has been proven. Free zones in a number of developing countries have played a marginal role in attracting FDI and most investment has been domestic investment. A disincentive business environment, underdeveloped infrastructure, an inefficient regulatory and legislative framework, and corruption have played a major role in the limited inflow of FDI.

Another fundamental goal of establishing free zones is their impact on exports. In addition to exports, free zones play a significant role in export diversification, which is particularly important for many developing countries, which primarily export raw materials and produce lower value added. Free zones, by providing an inflow of investment, increase industrial production, and thus the export *ceteris paribus*. Redefining the economic policy of developing countries, i.e. the transition from import-substitute to export-oriented economy is consistent with the development of free zones. The value of free zone exports in 2015 was 851 billion dollars, or 40.08% of total world exports (Zeng, 2015). Free zones have played a significant role in export growth and improving the export performance of the national economy (Akinci & Crittle, 2008; ADB, 2015; UNCTAD, 2019). Other studies (Johansson & Nilsson, 1997; Aggarwal, Hoppe, & Walkenhorst, 2008) have shown that the impact of free zones on the growth of exports of national economies is not statistically significant.

The third fundamental goal of the development of free zones is the creation of new jobs in developing countries, direct and indirect. Free zones have had significant implications for the labor market in developing countries. In addition to increasing employment, the effect of the development of free zones is reflected in the increase of knowledge and skills of workers, and thus productivity. Many relevant studies (Akinci & Crittle, 2008; Zeng, 2010; Zeng, 2016; WB, 2017; UNCTAD, 2019) have confirmed these claims. In 2019, free zones created between 90 and 100 million direct and up to 200 million indirect jobs (UNCTAD, 2019). The impact of free zones on economic growth is a sublimated result of the impact on these macroeconomic parameters. The establishment of free zones leads to FDI inflows. Investing in capital equipment and the production process of products and/or services creates preconditions for a positive impact on macroeconomic growth parameters. For companies operating in free zones to be operational and functional, a workforce must be hired. Employment creates the preconditions for starting the production process. Manufactured products or services are exported abroad or to the country in which the zones operate, if permitted by law. This channel, through which FDI influences the growth of employment, production and exports, is a transmission mechanism of the impact of free zones on economic growth, measured by GDP per capita. The growth of these macroeconomic indicators leads *de facto* to economic growth.

METHODS AND DATA

The selected research construction requires examination and quantitative expression of the impact of free zones on the economic growth of developing countries. For this purpose, an adequate theoretical model based on the available empirical material has been formulated, where the reactivity of GDP per capita in relation to the economic performance of free zones is expressed, i.e. indicators of the mechanism of influence of free zones. Data processing was performed on the basis of statistical software for social sciences - SPSS (Statistical Package for Social Sciences- SPSS). The dependent variable in the research is the economic growth of targeted developing countries (Serbia, Croatia, Belarus). Economic growth, i.e. increasing the income and well-being of countries (Acocella, 1998) is an indicator of the success of the implementation of economic policies and the inclusiveness and compatibility of the legislative and administrative framework in accordance with economic goals. The value of GDP per capita was taken as a precise, explanatory, comparative and statistically significant indicator of economic growth.

The analysis examined the impact of the independent on the dependent variable and the compatibility of the results in accordance with the conventional macroeconomic model of GDP. The independent variable in the study are free zones in the analyzed developing countries. Measuring indicators of economic performance and the impact of free zones are the number of companies that have business activities in free zones, investments in free zones, exports from free zones and employment in free zones. Investments include FDI and domestic sources of investment. Although statistically the most significant share of FDI in free zones of the countries subject to analysis (in Belarus the share of FDI in total investments is 100% in free zones, and in Serbia and Croatia approximately 90-95%), the analysis also includes domestic investments, due to the accuracy, consistency and compatibility of the analytical procedure and the interpretation of the obtained results.

The subject of the analysis are 32 free zones in 3 countries (15 free zones in Serbia, 11 free zones in Croatia and 6 free zones in Belarus), i.e. their economic performance and examination of the impact on economic growth, measured by GDP per capita. These countries have common characteristics that determine them as compatible for analysis. First of all, similarities in terms of economic (same or similar sectoral structure of industry), geographic (Europe), demographic (without great disparity in terms of population), and socio-political (transition period from central-planned to market-oriented economy) characteristics. These countries have also applied the same or similar economic policies regarding the model and functioning of free zones. The time period of the analysis is different for these countries and is a consequence of the lack of data in a longer period of time, especially in Croatia, despite the legal obligation to submit data to the Government of the Republic of Croatia, which has institutional jurisdiction over free zones. Data on economic indicators of free zones in Belarus are available for the period 2003-2019, in Serbia for the period 2008-2019 and in Croatia for the period 2011-2018.

RESEARCH RESULTS

An unbalanced Panel data model was used in the analysis. Three models were constructed: a model without a predictor, a model with a predictor with a fixed effect,

and a model with a random predictor. In the model without predictor, the mean value of the Intercept estimate, i.e. the free coefficient, is 6796.903295. Calculation of Intra-class Correlation Coefficient (ICC):

$$ICC = \frac{\text{Variability Between groups}}{\text{Variability Between Groups} + \text{Variability Within Groups}} \times 100 \quad [1]$$

$$ICC_{\text{Without predictors}} = 13847656.86 / (13847656.86 + 1475114.602) \times 100 = 90.37\%$$

Table 1 . Estimates of covariance parameters (No predictors in the model)

Parametar	Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Residual	1475114.602078	352645.633301	4.183	.000	923282.891223	2356767.476087
Intercept [subject=Zemlja] Variance	13847656.858717	13990082.561260	.990	.322	1911701.079350	100307314.018956

Source: Author's calculation in SPSS

A strong cluster is present in the model without predictors. The value of the Intraclass Correlation Coefficient (ICC) is 90.37%. The value of the coefficient shows that 90.37% of the total variability arises from variability between countries, i.e. that 90.37% of variability can be explained by variations between countries, i.e. by variations of indicators number of companies and number of employees in the free zone in targeted countries. The fixed predictor model has a mean estimate of 8168.618211. Calculation of Intraclass Correlation Coefficient (ICC):

$$ICC = \frac{\text{Variability Between groups}}{\text{Variability Between Groups} + \text{Variability Within Groups}} \times 100$$

$$ICC_{\text{With fixed predictors}} = 16910738.71 / (16910738.71 + 303360.5181) \times 100 = 98.23\%$$

Table 2. Estimates of covariance parameters (Fixed model)

Parametar	Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Residual	303360.518054	77051.723269	3.937	.000	184399.208053	499067.240504
Intercept [subject =Zemlja]Variance	16910738.711720	16974742.492683	.996	.319	2364500.486021	120944396.275990

Source: Author's calculation in SPSS

A strong cluster is present in the model with fixed predictors. The obtained value of the Intraclass correlation coefficient shows that 98.23% of the total variability comes from variability between countries as an independent variable, i.e. that 98.23%

of variability can be explained by variations in the number of companies and the number of employees in free zones in targeted countries. After calculating the Intraclass correlation coefficient, the procedure of change in ICC_{With fixed predictors} in relation to the basic ICC_{Without predictors} is calculated, using the following formula:

$$\text{Percent Change in ICC} = \frac{\text{Final ICC} - \text{Initial ICC}}{\text{Initial ICC}} \times 100 \quad [2]$$

Percent Change in ICC_{With fixed predictors} = (98.23 % - 90.37 %) / 90.37 % x 100 = 8.69%. The Percent Change explains 8.69% of the cluster improvement. The model with a random predictor is not relevant for the analysis because the phenomenon of redundant covariance parameters is present in it. In order to determine the degree of agreement of the model with fixed predictors in comparison with the model without predictors, it is necessary to compare the values of -2 Restricted Log Likelihood, i.e. testing the quality of the model. In the model without predictors, the value -2 Restricted Log Likelihood is 643.669, and the total number of parameters is 7.

Table 3. Estimates of covariance parameters (Random effects in the model)

Parametar	Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Residual	168565.221979	44626.824457	3.777	.000	100326.693478	283217.088849
Intercept [subject=Country] Variance	23827220.965865	23956050.624517	.995	.320	3321005.155161	170953200.140003
No of companies [subject=Country] Variance	.000000b	.000000	.	.	.	.
Investments [subject= Country]Variance	.000000b	.000000	.	.	.	.
Export [subject= Country]Variance	2.659825E-012b	.000000	.	.	.	.
Employment [subject= Country]Variance	.000000b	.000000	.	.	.	.

Source: Author's calculation in SPSS

In the model with fixed predictors -2 Restricted Log Likelihood is 646,799, and the total number of parameters is 11. The model without predictors is better adjusted because the value -2 Restricted Log Likelihood is closer to zero. To determine whether it is significant to add the following predictors to the model:

$$|df \text{ change}| = 11 - 7 = 4 \quad [3]$$

The tabular value of the chi-square test is 9.49 (p = 0.05, df = 4).

$$|x^2 \text{ change}| = 646.799 - 643.669 = 3.13 \quad [4]$$

The obtained value of $3.13 < 9.49$, i.e. the tabular value is higher than the tested one (calculated), which implies that the model with the added fixed predictor does not make a statistically significant change of the model. That is, the introduction of new indicators is not justified and does not lead to the improvement of the model, despite the expansion of the model, greater robustness and determinism, due to the higher tabular value than the tested one. The obtained model shows that there is a significant impact of the indicators number of companies and the number of employees in the free zone on the GDP per capita of targeted countries. Dependence is expressed by the following model:

$$\begin{aligned} \text{GDP per capita} = & (8168.618211 \pm 138476656.86) - 13.616655 \times \text{number of companies} \\ & - 0.000001 \times \text{investments} + 0.0000000 \times \text{export} + 0.051190 \times \\ & \text{number of employees} \pm 1475114.602 \end{aligned}$$

The defined model shows that free zones have an impact on the GDP per capita of targeted countries. That is, the application of an adequate and functional framework of free zones creates the preconditions for sustainable and inclusive economic growth *ceteris paribus*. Three models were constructed: a model without predictors, a model with fixed predictors, and a model with random predictors. Based on the obtained results, the model with random predictors is inapplicable in the observed case because the covariance parameter is redundant. The Intraclass correlation coefficient was calculated for the model without predictors and for the model with fixed predictors. Based on the obtained results, a model with fixed predictors was chosen as an applicable model. The obtained value of the Intraclass correlation coefficient shows that 98.23% of the total value arises from variability between countries, i.e. that 98.23% of variability can be explained by variations of indicators number of companies and number of employees in the free zone in targeted countries. The model with a random predictor shows the maximum cluster amount.

The percentage change in the Intraclass correlation coefficient explains 8.69% of the cluster, which implies an improvement in the model because a model with fixed predictors was used. However, adding an indicator to the model, according to a previously conducted chi-square test, is not justified, so it is relevant to use a model without predictors.

$$\begin{aligned} \text{GDP per capita} = & 8168.618211 - 13.616655 \times \text{number of companies} - 0.000001 \times \\ & \text{investments} + 0.0000000 \times \text{export} + 0.051190 \times \text{number of employees} \end{aligned}$$

After inclusion of the covariance parameters, the following model is defined:

$$\begin{aligned} \text{GDP per capita} = & (8168.618211 \pm 138476656.86) - 13.616655 \times \text{number of companies} \\ & - 0.000001 \times \text{investments} + 0.0000000 \times \text{export} + 0.051190 \times \\ & \text{number of employees} \pm 1475114.602 \end{aligned}$$

The value of the Intraclass correlation coefficient in the model without predictors implies that the variation between countries, i.e. variation of the indicators number of companies and number of employees in free zones explain 90.37% of variations in GDP per capita of targeted countries. The value of the Intraclass correlation coefficient in the model with fixed predictors implies that 98.23% of the variation in GDP per capita is explained by variations between countries, i.e. variation of the indicators the number of companies and the number of employees in the free zone in the targeted countries. The inclusion of indicators investment in free zones and exports from free zones in the model is not justified because they do not have a statistically significant impact. The impact of the indicator number of companies in free zones on GDP per capita is negative and the impact of the indicator number of employees in free zones on GDP per capita is positive. These indicators have a high statistical significance, of 99.99%. The statistical significance of the coefficient (model parameter) for the free zone investment indicator is 78.5%, but its value is small (0.000000) and thus the contribution to GDP per capita is not statistically significant. Also, the lower value (0.00000000) and statistical significance (18.5%) of the coefficient with the indicator exports from free zones implies that this indicator does not have a statistically significant impact on the value of GDP per capita.

The analysis of the economic performance of free zones and their share in the macroeconomic indicators of the national economies of the countries that are the subject of the analysis showed the existence of the influence and importance of free zones in economic growth. The share of companies that have business activities in free zones, in relation to the total number of companies in these countries is 0.32% (Table 4.). The share of companies in free zones in the total number of companies of the same business activity in Belarus is 0.65%, in Serbia 0.25% and in Croatia 0.06%. Companies that have business activities in free zones have cumulatively invested 2.38%, in relation to the total value of investments in these countries. The largest share of investments in free zones, in relation to the total value of investments, was generated in Serbia, with a share of 3.32%, followed by 2.71% in Belarus and 0.35% in Croatia. The share of exports of companies with business activities in free zones in Serbia, Belarus and Croatia in relation to the total exports of national economies is 11.48%, 9.27% and 3.82%, respectively. The average value of exports from free zones, in relation to the total exports of targeted countries is 8.81%. The share of the number of employees in free zones, in the total number of employees in Belarus, Serbia and Croatia, is 5.32%, 2.58% and 1.74%, respectively. The average value of the number of employees in free zones, in relation to the total number of employees in the targeted countries is 3.56%.

The impact of the indicator number of companies in free zones on the dependent variable is negative. The negative correlation implies the existence of an inversely proportional relationship between the increase in the number of companies having business activities in free zones and GDP growth per capita of countries. Increasing the number of free zones or increasing the capacity of existing free zones, compared to the available capacity of the national economy, reduces the potential for economic growth. The indicator number of employees in free zones has a high statistical significance and the impact on the dependent variable is positive. The positive link between employment and economic growth is consistent and compatible with the macroeconomic model of the share of components in GDP in market-oriented open economies. By de-

composing GDP, according to the first definition, i.e. the sum of net final sales made in a certain territory in a defined period of time (expenditure approach), the components that enter the structure of GDP are determined, namely: absorption (public and private consumption), investments and net exports, i.e. $GDP = C + I + G + (X - Z)$ (Burda & Wyplosz, 2009).

Table 4. Share of free zones economic parameters in macroeconomic parameters of the targeted countries

Country	Year	No. of companies	Investments	Export	Employment
Belarus	2003	-	4.71%	3.08%	-
	2004	-	4.57%	3.62%	-
	2005	-	8.73%	3.63%	1.40%
	2006	-	-	4.20%	2.04%
	2007	-	-	4.11%	2.06%
	2008	-	3.03%	4.94%	2.89%
	2009	-	0.66%	5.48%	2.84%
	2010	-	0.63%	6.90%	3.05%
	2011	0.83%	0.65%	9.37%	7.09%
	2012	0.78%	1.13%	9.96%	7.34%
	2013	0.71%	2.52%	12.63%	7.58%
	2014	0.61%	2.31%	12.04%	7.29%
	2015	0.57%	1.80%	12.67%	6.94%
	2016	0.56%	2.06%	16.07%	6.86%
	2017	0.57%	2.45%	16.23%	7.37%
	2018	0.59%	2.70%	15.37%	7.39%
	2019	0.61%	2.77%	17.35%	7.64%
	2008	0.25%	0.44%	3.28%	0.81%
	2009	0.22%	0.31%	3.82%	0.81%
Serbia	2010	0.25%	1.28%	3.99%	1.37%
	2011	0.19%	6.24%	5.89%	1.40%
	2012	0.20%	11.10%	9.37%	2.61%
	2013	0.26%	3.30%	18.99%	3.32%
	2014	0.30%	3.69%	18.20%	3.53%
	2015	0.28%	2.57%	17.04%	2.74%
	2016	0.29%	3.77%	16.02%	3.03%
	2017	0.26%	3.10%	14.70%	3.28%
	2018	0.23%	2.26%	13.29%	3.91%
	2019	-	1.79%	13.12%	4.11%

Croatia	2011	0.08%	0.19%	5.72%	2.22%
	2012	0.08%	0.22%	5.72%	2.05%
	2013	0.08%	0.38%	4.12%	2.15%
	2014	0.05%	0.49%	5.07%	2.09%
	2015	0.04%	0.32%	4.35%	2.07%
	2016	0.05%	0.35%	3.78%	1.92%
	2017	0.04%	0.59%	0.89%	0.71%
	2018	0.03%	0.28%	0.89%	0.70%

Source: Author's calculation

All relevant and conventional models (Krugman & Obstfeld, 2009; Blanchard, 2009; Burda & Wyplosz, 2009) which quantified the share of these components, show that the largest share in the GDP structure of most countries in the world, in the range of 56-65%, has absorption (private and government consumption), of which approximately 75% refers to private consumption, then investment, from 16 to 30% (of which about 70% refers to non-residential investment), and net exports often have a negative value, with a maximum share of 10 to 20% (the share of exports in net exports is approximately 10-15%) in countries that are export-oriented. The impact of the indicator number of companies in free zones on the dependent variable is negative. The negative correlation implies the existence of an inversely proportional relationship between the increase in the number of companies having business activities in free zones and GDP growth per capita of countries. Increasing the number of free zones or increasing the capacity of existing free zones, compared to the available capacity of the national economy, reduces the potential for economic growth.

The indicator number of employees in free zones has a high statistical significance and the impact on the dependent variable is positive. The positive link between employment and economic growth is consistent and compatible with the macroeconomic model of the share of components in GDP in market-oriented open economies. By decomposing GDP, according to the first definition, i.e. the sum of net final sales made in a certain territory in a defined period of time (expenditure approach), the components that enter the structure of GDP are determined, namely: absorption (public and private consumption), investments and net exports, i.e. $GDP = C + I + G + (X - Z)$ (Burda & Wyplosz, 2009). All relevant and conventional models (Krugman & Obstfeld, 2009; Blanchard, 2009; Burda & Wyplosz, 2009), which quantified the share of these components, show that the largest share in the GDP structure of most countries in the world, in the range of 56-65%, has absorption (private and government consumption), of which approximately 75% refers to private consumption, then investment, from 16 to 30% (of which about 70% refers to non-residential investment), and net exports often have a negative value, with a maximum share of 10 to 20% (the share of exports in net exports is approximately 10-15%) in countries that are export-oriented.

The growth in the number of employees in free zones leads to an increase in the total wage fund, i.e. workers' incomes. The growth of the wage fund does not mean explicare and the growth of the level of real incomes (wages) in the national economy. The level of income of workers is directly related to the level of education,

level of knowledge and skills vice versa (Blanchard, 2009). Since most workers in free zones are of lower qualification in terms of level of education, knowledge and skills, in accordance with the above, they have a lower level of income. An increase in the income fund, based on an increase in the number of employees in free zones, leads to an increase in private consumption, and consequently to an increase in government consumption, and thus to an increase in aggregate demand. Private (personal) consumption is the most significant component of GDP, with a share of 50-65% (Burda & Wyplosz, 2009). The average value of the share of private consumption in the GDP of Serbia, Croatia and Belarus, in the target time period, was 73.6%, 59.3% and 53.5%, respectively (RZS, 2020; DZS, 2020; BELSTAT, 2020). This implies that employment growth in free zones is a significant generator of economic growth, measured by GDP per capita. That is, the growth of the income fund, due to the growth of the number of employees in free zones, has a statistically significant and positive impact on the level of consumption, and thus on the value of GDP per capita. Exports from free zones have a small value and statistical significance of the coefficient (18.5%). Although it has a positive impact, due to the small value and statistical significance of the coefficient, this indicator is not incorporated into the model. Also, the low value of the coefficient with the indicator of investment in free zones, despite the statistical significance (78.5%), eliminates this indicator from the model. The impact of the investment indicator on GDP per capita is negative.

DISCUSSION

By analyzing the obtained results, it was proved that the establishment of free zones has a statistically significant impact on the GDP per capita of targeted countries. Although there are no same studies that have analyzed the same problem, within the same research subject, so the results of the research cannot be ideally compared, partial comparisons can be made. That is, a comparison of the results of this research with research that focused on the partial economic performance of free zones. A World Bank study (WB, 2017) analyzed the impact of free zones on economic growth at the regional and national level but applying other variables and indicators. Other research has focused on the partial economic performance of free zones. That is, examining the relationship between free zones and FDI inflows, exports, employment and the impact on the national economy of the analyzed country or group of countries.

The most significant and relevant research (Akinci & Crittle, 2008; Farole & Akinci, 2011; Farole, 2011; Ciżkowicz, et al., 2017; Kanungo, 2016; WB, 2017; COMCEC, 2017; ASEAN & UNCTAD, 2017; Alkon, 2018; UNCTAD, 2019; Frick & Rodríguez-Poze, 2019)) confirmed the existence of a positive relationship between the establishment of new and expansion of existing free zone capacities, the arrival of foreign companies in free zones and economic growth, at the regional and national level. Analyzing the impact of free zones on labor market fluctuations, many studies (Akinci & Crittle, 2008; Zeng, 2010; Farole, 2011; Zeng, 2016; COMCEC, 2017; WB, 2017; UNCTAD, 2019) found the existence of a statistically significant impact of free zones on the employment rate. The establishment of free zones creates preconditions for increasing the number of employees, and thus for more significant implications for economic growth, through mechanisms that affect the increase in aggregate demand, i.e. consumption, at the national level. The results of the mentioned research are in ac-

cordance with the results of the research in this paper. Free zones, through their impact on the labor market, create the preconditions for inclusive and sustainable economic growth *ceteris paribus*, which is a fundamental goal of economic policy in developing countries. In this way, by accelerating economic growth in the long run, positive implications are created for the growth of living standards (Krugman, Wells, & Graddy, 2014).

CONCLUSION

This paper investigates the impact of free zones on the economic growth of developing countries. The research sought an answer as to whether, and in what way, free zones have an impact on the economic growth of developing countries. The choice of research variables deviated from the formal assumptions of the stated theoretical approaches. The choice of free zone economic performance indicators sought to investigate the fundamental factors that reflect the success of the free zone framework. Also, the existence of connection and determination of economic growth of targeted developing countries and economic performance of free zones was examined. The limitation of the research was the availability of relevant statistical data and the choice of an adequate way of searching and using the available databases. Also, shortcomings regarding the use of older sources, especially in the theoretical aspect, and insufficient, irrelevant and inadequate analyzes, on the example of one or a group of countries, represented additional limitations in the research. Econometric calculations of the research model identified indicators that had a statistically significant impact on the dependent variable and omitted those whose statistical significance was low. The research results are compatible with macroeconomic interpretations of GDP. In the structure of GDP, calculated as the sum of net final sales realized in a certain territory in a certain period of time, the dominant position is occupied by absorption, i.e. the sum of private and government consumption. After absorption, investments have the statistically most significant share, followed by net exports. By analyzing the research results and comparing it with the macroeconomic model of the GDP structure, the statistical significance of the indicator that has the largest share in the GDP structure was proven. Namely, the transmission mechanism of free zones refers to the existence of transmission channels through which free zones provide an impact on economic growth. By establishing new and/or increasing the capacity of existing free zones, the number of companies that have business activities in free zones increases, and thus the total investment. The multiplier effect of investments leads to an increase in the production of products and services, exports and employment in free zones. As the stock of investments in free zones in the targeted countries is higher than the proportional increase in the number of employees, the returns on investments are declining. However, investment is a significant generator of increased employment in free zones in targeted countries. The increase in the number of employees resulted in an increase in real income funds, and thus aggregate demand and absorption. Since personal consumption has the statistically most significant share in the structure of GDP, the increase in the number of employees in free zones, and thus the income fund, had a statistically significant impact on the GDP per capita of targeted countries. This confirms the hypothesis that the establishment of free zones in developing countries, provided that the national economy is integrated into the work of the zones, creates the preconditions

for sustainable and inclusive economic growth. Free zones represent an important instrument of the policy of reindustrialization of developing countries that has an impact on economic growth *ceteris paribus*. Whether growth will be inclusive and sustainable in the long run is a direct implication of political and economic decision makers in developing countries and well-conceived, consistent and effective economic policies. The research conducted is a good starting point for further research in this direction. In order to obtain an extended and more robust model, which will confirm the results of this research and further expand them, with a greater degree of accuracy and reliability, it is necessary to upgrade the existing model. The inclusion of additional parameters of economic performance of free zones and the number of developing countries in the model and a longer period of observation, provides prerequisites for new insights into the mechanism of influence of free zones on economic growth *ceteris paribus*.

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INNOVATION AS A PROCESS

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Abstract: *The theme of this paper is innovation as a continuous process that drives the global economy of today. The goal of this paper is to theoretically and practically explore the definition of innovation as the basis of business for solving existing problems of the organizations and/or people in a radically different way that generates high utility for all stakeholders in the process of innovating and placing a particular innovation on the market. Relevant scientific and professional literature in the field of economics is used to cover the topic. The research is expanded with various publications, professional journals, scientific articles, and of course, the Internet. Also, various general scientific methods are used such as: methods of analysis and synthesis, induction and deduction, methods of abstraction and concretization, method of explication, methods of description and compilation and others. To survive in today's dynamic market environment, it is of the utmost importance for all organizations to keep up with economic trends and reexamine existing business postulates. The key to success in today's world is rapid development based on continuous innovation. Although the impact of digitalization is not new, the digital economy is entering a new era that presents unprecedented challenges for businesses in the EU and globally. Disruptive innovations and digital tools are rapidly entering the business environment, causing significant changes in our way of life. This has created new opportunities and challenges and triggered the digital transformation of the economy. Innovations have become the cornerstone of Industry 4.0. In summary, the relentless shift from simple innovation and digitization to disruptive innovations based on combinations of modern technologies is forcing organizations to rethink their business practices. The bottom line, however, is the same: business and political leaders must understand an ever-changing economic environment and support those who will relentlessly and continuously innovate.*

Keywords: innovation; digital economy; digital transformation; industry 4.0; competitiveness.

JEL classification: O30, O31, O33, O39.

INTRODUCTION

The theme of this paper is innovation as a continuous process that drives the global economy of today. The goal of this paper is to theoretically and practically explore the definition of innovation as the basis of business for solving existing problems of the organizations and/or people in a radically different way that generates high utility for all stakeholders in the process of innovating and placing a particular innovation on the market. On the basis of the topic and purpose of this paper, a working hypothesis has been set - It is possible to prove that innovation is a continuous process that never stops and is necessary to drive the global economy of today.

We live in an ever-changing world fueled by constant innovations where science fiction often becomes science fact. The greatest changes in recent human history are happening in the last few decades. Innovations, technology and digitization have already altered society and continue impacting not just our lives but virtually all business functions and industries. It is partially what innovation is all about – exponentially changing the world we live in. It is important to emphasize that innovations are not about predicting future, but rather about shaping it. Innovations are profoundly changing the ways we do business, buy, work and live. And beyond that, it is a continuous process that drives the global economy of today.

Innovation is a broad and complex term and there are many definitions of innovation, but none of them is unique enough to define exactly what the process of innovation is. The word innovation comes from the Latin word *innovatus* which actually means something new, novelty, or a change in an existing thing. In the broadest sense, innovation means new products and services, but also new technologies, new production processes, new marketing methods, and new management models. What is common to all definitions is that innovation is a novelty, whether it is a novelty in the world, in the market or in a company, emphasizing that it must be economically profitable. In its core, innovation is actually the basis for solving existing problems of the organizations and/or people in a radically different way that generates high utility for all stakeholders in the process of innovating.

According to the OECD's Oslo Manual¹ definition "Innovation is the implementation of new or significantly improved products (goods or services) or processes, a new marketing method or a new organizational method in business, a new organization in the workplace or in external relations" (Grčić Fabić, 2015). The beginnings of the development of the concept of innovation in the field of economics are connected with the analysis of Joseph Schumpeter in the first half of the 20th century, which marked innovations as the basic factor of technological progress and economic development. The first significant use of the term innovation itself began in the field of sociology, and it meant a major change. Change has been intensively studied in economics, primarily as technological change, and as part of research about technology as a factor of economic growth. Joseph Schumpeter significantly influenced the theory of innovation. According to him innovation represents a dynamic process in which new technologies replace the old, a process that he calls "creative destruction", and it

¹ OECD Oslo Manual is a manual developed to make comparative analysis to compare manufacturing innovation between two different companies or even different countries. According to it, innovation can be divided into three categories: product innovation, process innovation, and organizational / managerial innovation.

becomes an important driver of economic growth and development. He emphasized the importance of technological innovation for the economic development. The economic system is characterized by constant changes and those who do not adapt cannot survive (Grčić Fabić, 2015). Almost a century later we can see the full impact of his definitions. Today, more than ever innovations are in deep correlation with technology, digitization, competitiveness and consequently further economic growth.

The fact is that disruptive technology and innovative business models are forces behind digital economy of today. One of the changes that we see in recent years is the speed at innovations are happening. The doubling of computer processing speeds every 18 months, known as Moore's Law, is just one manifestation. Innovations and technology bring upon changes that are accelerating fast, displaying exponential growth – and consequences. While a range of technologies have accelerated disruption, business innovation and changes in human behavior, the exponential growth and pace of change is just a fraction of what is yet to come. That is why we need to ask ourselves a question: what will our lives and economy look like in 5 years? It is actually the question we must answer today, because these 5 years are going to happen in 2 years or even sooner, much quicker than we think (Tolić, Sabljčić, & Tolić, 2018).

Therefore, to survive in today's dynamic market environment, it is of the utmost importance for all organizations to keep up with economic trends and reexamine existing business postulates. The key to success in today's world is rapid development based on continuous innovation. Disruptive innovations and digital tools are rapidly entering the business environment, causing significant changes in our way of working. They are solving existing problems of the organizations and/or people in a radically different way that generates high utility for all stakeholders in the process of innovating and placing a particular innovation on the market. This has created new opportunities and challenges and triggered the digital transformation of the business.

Innovations are generally considered to be a key aspect of competitive advantage, especially in an environment that is subject to a constant change. The research conducted in this paper is looking for opportunities to prove that continuous growth and further economic development of global economy is driven by continuous innovations and consequently increased competitiveness, having a root in unlimited human creativity. Theories of endogenous growth give a key role of economic growth to human creativity, R&D and, consequently, innovation.

INNOVATIONS AND INDUSTRY 4.0 – THE WHEEL THAT NEVER STOPS

The whole world is being digitized and economic development continues to accelerate. Digital companies and smart cities are new leverages of global development, both economic and social. The key to success in such world is rapid development based on constant innovations. We stand on the brink of a new industrial revolution, driven by new-generation information technologies. The possibilities of billions of people connected by mobile devices, with unprecedented processing power, storage capacity, and access to knowledge, are unlimited. And these possibilities will be multiplied by emerging technology breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing. All of this will open new horizons for industry to become more adven-

turous, more efficient, to improve processes and to develop innovative products and services (Schwab, 2016).

If we go way back through the human history, we can say that the First Industrial Revolution was based on the use of water and steam in the mechanization of production. The Second Industrial Revolution was based on the use of electricity in the creation of mass production, while the Third Industrial Revolution was based on electronics and information technology to automate production. Currently, the Fourth Industrial Revolution² is actually building on the Third Industrial Revolution. Fourth Industrial Revolution or Industry 4.0 is a digital revolution that began to emerge in the last few decades and is characterized by the fusion of different technologies. There are three reasons why today's transformations represent not merely a prolongation of the Third Industrial Revolution but rather the arrival of a Fourth and distinct one: velocity, scope, and systems impact. The speed of current breakthroughs has no historical precedent. When compared with previous industrial revolutions, the Fourth is evolving at an exponential rather than a linear pace. Moreover, it is disrupting almost every industry in every country. And the breadth and depth of these changes herald the transformation of entire systems of production, management, and governance (Schwab, 2016).

Like the revolutions that preceded it, Industry 4.0 has the potential to raise global income levels and improve the quality of life for the entire global population. To date, those who have gained the most from it have been consumers able to afford and access the digital world driven by constant and radical innovations; technology has made possible new products and services that increase the efficiency and pleasure of our personal lives. Ordering a cab, booking a flight, buying a product, making a payment, listening to music, watching a film, or playing a game - any of these can now be done remotely (Schwab, 2016). In the future, innovations will also lead to further digitization of all kinds of business areas and consequently our lives. Moreover, innovations are and will be one constant variable in the equation called competitiveness in digital economy. The role that innovations based on digital technologies are crucial in the Industry 4.0 – they represent an inexorable shift from being uncompetitive to being competitive in the digital age.

The acceleration of innovation and the velocity of disruption are hard to comprehend or anticipate and these drivers constitute a source of constant surprise. Indeed, across all industries, there is clear evidence that the technologies that underpin the Industry 4.0 are having a major impact on businesses. It is safe to say that innovation has become the cornerstone and second name of the digital economy and Industry 4.0 (Schwab, 2016).

One of the key innovators and disruptors in digital economy are platform companies. Actually, Industry 4.0 has made it possible to develop platform-based companies. These are flexible, mobile and transformational organizational structures that, as such, may not necessarily be completely digital, they may have physical elements, but their essence is to use the Internet as a major tool through which they reach their users, anywhere, anytime. Platforms generally work in many ways, one of them being a transaction business that aims to facilitate transactions between different organizations and types of individuals who might not otherwise be able to cooperate. Some examples

² Fourth Industrial Revolution is also widely known as the Industry 4.0

of such platforms are: Airbnb, Uber, eBay, etc. In addition to transactional, there are innovation companies that provide a platform for creating new products and services. One such example is the Application Programming Interface (API), a developer platform that allows users to create new applications that can later be downloaded from the App Store or Google Play and used by millions of users of mobile devices. This whole innovation process creates a single circle that constantly connects users and thus attracts new ones, which ultimately provides this platform with increasing growth. Finally, we can say that Google and Apple are an integration platform because on the one hand it has an App or Play Store that acts as a transaction platform, while on the other it has an “API” that acts as an innovation platform (Evans & Gawer, 2016).

The difference between platforms and conventional companies is that platforms are not based on buying raw materials from which they later create their products and do not make a living from selling them. Instead, they (platforms) recruit participants, and then sell to each group of participants, i.e. users, access to another group of users. In this case, users are the entry units used by the platforms to create the intermediary service they provide. Some of the richest companies are making profits by connecting different groups of users, such as developers and end users, as noted in the case of Apple and Google. The most important thing in a business like this is to connect customers who provide a service or product to that group of users who want to buy a particular product. Another important difference is that platform organizations often know how to sell their services below market price or provide them for free. There is no such practice in the classical business, because it is inconceivable that anything is given free of charge to customers. The platforms themselves are increasingly intertwined with each other, which we can see in the example of Android and Uber. Uber connects drivers and travelers, all through app available to travelers and drivers on the Google Play Store and the App Store. Therefore, we can conclude that platform-based companies will only grow as the number of companies operating on the same principle increases every day, thus creating an even stronger connection of companies in the market. Also, we must not neglect the fact that the number of Internet users and mobile devices user are constantly growing in the world. Ultimately, the constant development of platform companies creates various opportunities and challenges for regions, nations, industries, companies and individual innovators.

All of this is actually in the core of Industry 4.0 – digital economy is growing and evolving through the development of platform companies, thus creating numerous opportunities for new and further innovations that will improve our lives. It is the wheel that never stops. Moreover, further economic development will be based on boosting competitiveness through constant innovations, which proves that innovation as a continuous process is necessary to drive the global economy of today.

INNOVATIONS AS THE DRIVER BEHIND DIGITAL ECONOMY AND ECONOMIC GROWTH

Global economic growth appears to be losing momentum relative to last year. Productivity growth is at a record low. Trade battles are brewing. Economic uncertainty is high. To survive in today’s dynamic digital economy, all organizations must follow trends and reexamine their existing business postulates. Despite this gloomy perspective, innovation is blossoming around the world. In developed and developing

economies alike, formal innovation and less formal modes of innovation are thriving. Today, developed and developing economies of all types promote innovation to achieve economic and social development. It is now also better understood that innovation is taking place in all realms of the economy, not only in high-tech companies and technology sectors (Schwab, 2016). Disruptive innovations and digital tools are rapidly entering the business environment, causing significant changes in the way we live and work. Thanks to innovations, many new opportunities have emerged which triggered the digital transformation of business that consequently leads to global economy growth.

Innovation is the most important driver of national economic well-being. It is the cause of an increase in global competitiveness and a key in creating competitive organizations and overall economies. This is why a large number of nations are engaged in achieving innovation advantages (Božić, 2017). The digital economy is entering a new era that presents unprecedented challenges for organizations around the world, and innovation is the key to their competitive advantage.

Innovation is considered today to be a key factor in the growth and development of modern businesses and is the driving force behind today's economy in many countries. In the complex conditions of fierce competition in business, all businesses are forced to invest in development and innovate if they are to survive and succeed. Otherwise, if neglected, businesses are doomed to poor business results, lack of development and fight for survival (Dereli, 2015). Such businesses are ultimately destroyed by environment and competition that innovates effectively, constantly and relentlessly.

Globalization, rapid development of technology and frequent changes in the market create the need for continuous development of technological innovations, application of which strengthens competitiveness in the global market. Considering that organizations today face global competition, it is not enough to be competitive only on the domestic market. Organizations no matter where they do business have to compete with foreign competition in order to secure their market share and ultimately to survive in the global market. In order to do so, disruptive innovation is often the key to success. The key components of the successful innovation process that bring disruptive changes to the market are primarily focus on (digital) user experience, continuous innovation of the products/services and adequate regulatory framework to enable new business models. When innovation process is set up in such a way, then it becomes a major driver of development and economic growth. However, it is also important to understand innovation as one of the imperatives for survival in today's increasingly competitive world. Innovation as a process aims to boost productivity and, in addition to that, it brings a lot of other benefits to all stakeholders in that process.

Innovation is a continuous process that never stops. It is the wheel that just keeps on turning, an inexorable force to be reckoned with and it is driving the digital economy of today. The role and the impact of innovation in digital economy is crucial. Moreover, the changes we are witnessing and the changes it brings in the years to come will likely be the engine of the future economic growth. Consequently, the main resources in the digital economy are knowledge and innovation. Both of them are major drivers of economic development but also credible indicators of the competitiveness of countries. This is proven by the fact that today's most competitive economies are also the most innovative countries in the world, which will be further addressed in the next chapter.

INNOVATION IS THE KEY TO BOOST COMPETITIVENESS IN THE EU

Different indexes exist to determine the innovation potential and level of innovation of each country as well as its correlation with competitiveness. The most important of these are: The Global Innovation Index, The INSEAD Global Innovation Index and The INSEAD Innovation Efficacy Index. In this paper we will focus on the Global Innovation Index³ (GII) by the World Intellectual Property Organization (WIPO). It is the most reliable source to measure the innovation of countries in the world. It is created in collaboration of two business schools - Cornell - SC Johnson College of Business and INSEAD - The Business School for the World and the UN Intellectual Property Organization (WIPO).

The global reports say that innovation still remains concentrated in a few economies, while some others show potential to catch up. For years, there is a positive correlation between an economy's level of development (measured by GDP per capita) and innovation performance. In other words, wealthier economies perform better on innovation (Global Innovation Index, 2019).

But slowly, the geography of innovation is changing. In the top echelon, Switzerland, Sweden, and the United States of America lead the innovation rankings, with the latter two moving up in GII 2019. Switzerland remains the world's leader in innovation in 2019. It ranks first in the GII for the ninth consecutive year. Other European nations, such as the Netherlands and Germany, along with Singapore in Asia, remain consistent members of the GII top 10. This year, Israel moves up to the 10th position, marking the first time an economy from the Northern Africa and Western Asia region cracks the top 10 rankings. Croatian economy has a solid result in this year's report, placing it on 44. place in innovation performance among 129 countries (Global Innovation Index, 2019).

The global innovation landscape is changing. Innovation expenditures and innovation efforts, including the number of researchers and entrepreneurs who actively drive innovation efforts, have been scaled up massively. The world witnessed an increase in innovation investments over recent years, as measured by the average investments of economies across all levels of development. Despite economic uncertainty, innovation expenditures have been growing and seem resilient in light of the current economic cycle (Global Innovation Index, 2019). The use of intellectual property (IP) reached record highs in 2017 and 2018. Yet innovation remains relatively "*spiky*", concentrated in a few countries and regions only. This is reflected in other key innovation indicators, such as R&D, researchers, and intellectual property (IP). From a historic perspective, the global landscape of science and technology investment, and investments in education and human capital, have undergone important shifts over the last three decades. Global R&D expenditures have continued to rise, more than doubling between 1996 and 2017. Today, it is not only high-income economies carrying out R&D in earnest. While in 1996 high-income economies accounted for 87% of global R&D, in 2017, they only represented 64% of total investments—the lowest share registered in the last 30 years (Global Innovation Index, 2019).

When it comes to competitiveness, it is a multidimensional category that can

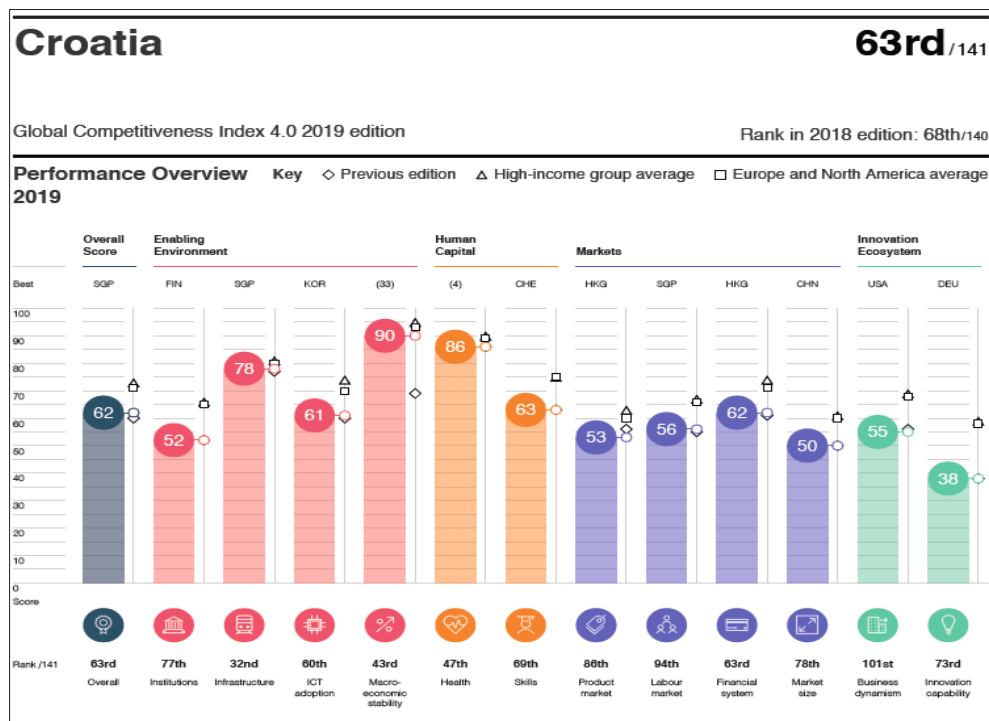
³ The Global Innovation Index (GII) 2019 ranks and breaks down the innovation performance of 129 countries and economies around the world.

be viewed from the level of the whole economy, individual branches, industries, sectors or enterprises. The definitions of competitiveness itself are numerous, but there is no complete agreement on the definition at the microeconomic and macroeconomic levels. Competitiveness is the ability of a country to achieve success in the global economy which results in a better life standard for its citizens. It is the result of many factors, especially competitiveness at the company level and favorable business environment that encourages the investments, innovations and introduction of new products and processes. Interaction of all these factors lead to increased productivity, economic growth and development. Increasing competitiveness in the long run also involves increasing innovation and is only possible through the cooperation of the business community, government and society (Šokčević, Šlogar, & Rudančić, 2018), i.e. the Triple Helix model. The competitive advantages of a country are major factors in its involvement in international trade, and thereby increasing the export capacity of the entire economy. Today, the competitive advantages of certain countries are viewed by their innovation potential and the level of digital economy development. Different analysis of competitiveness and innovation tend to show that the most competitive countries are also the countries with the highest innovation impact. The competitiveness of a national economy can also increase as a result of a properly defined and implemented trade, technological and industrial strategies. Once achieved high level of competitiveness in the global economy is not a perpetual category, which emphasizes the need for continuous improvement, technical and technological innovations, as well as adaptation and high flexibility of the entire economic system.

There are also different indexes that determine competitiveness of certain economy, such as IMD World Competitiveness Ranking, KOF Globalization Index⁴ and the Global Competitiveness Index (GCI) issued by the World Economic Forum. The GCI issued by World Economic Forum is one of the most well-known indicators of a country's competitiveness. Globalization and the Fourth Industrial Revolution have created new opportunities but also disruption and polarization within and between economies and societies. In this context, the World Economic Forum introduced last year the new Global Competitiveness Index 4.0. (GCI 4.0). The GCI 4.0 puts the spotlight on the Fourth Industrial Revolution (Industry 4.0) and innovation that promotes new business models and accelerates economic growth. The Industry 4.0 captures and reflects the changes that have come under the influence of advanced information and communication technologies and have created a leap forward in the development of a new industrial paradigm. In order to prosper, economies need to be open to new ideas, effective in embracing change, determined to build an innovation ecosystem where innovation is present at all levels and invest in people as a key factor of their success. The GCI 4.0 index identifies the strengths and weaknesses of each individual economy and helps identify important areas for improvement and track progress (Schwab Klaus, 2019).

⁴ The KOF Globalization Index measures the economic, social and political dimensions of globalization.

Graph 1. Croatia's pillars of competitiveness



Source: (Schwab Klaus, 2019)

The GCI 4.0 is the product of an aggregation of 103 individual indicators, derived from a combination of data from international organizations as well as from the World Economic Forum's Executive Opinion Survey. Indicators are organized into 12 'pillars': Institutions; Infrastructure; ICT adoption; Macroeconomic stability; Health; Skills; Product market; Labor market; Financial system; Market size; Business dynamism; and Innovation capability (Schwab Klaus, 2019).

In this year's GCI Report, Singapore is the most competitive country in the world this year, followed by the United States, Hong Kong, the Netherlands, Switzerland, Japan, Germany Sweden, the United Kingdom and Denmark. Croatia is ranked 63rd among 141 economies in the world and has improved its position by 5 places compared to last year, which makes it the most improved country in the region (Graph 1).

Table 1. Croatia and other referent countries

Country	2019 Ranking	Change from 2018 ranking
Czech Republic	32	-3
Slovenia	35	0
Poland	37	+1
Slovakia	42	-1
Hungary	47	+1
Bulgaria	49	0
Romania	52	+2
Greece	59	-2
Croatia	63	+5
Serbia	72	-7
Montenegro	73	-2
Albania	81	-5

Source: (Schwab Klaus, 2019)

When compared to similar transitional countries, Croatia still lags behind Czech Republic, Slovenia, Poland, Slovakia and Hungary, but is in front of its neighbors like Serbia, Montenegro and others (Table 1). Report also shows the correlation between innovation capacity and competitiveness. All of the most competitive countries had great results when it comes to innovation capacity. This goes to show the importance of innovation in driving global digital economy. Innovations and digital transformation are the next engine of growth, not just for this region, but for the whole EU and globally as well. When comparing different innovation and competitiveness indexes, we can see a clear correlation between innovation, competitiveness and economic growth. The better the innovation performance of economy the greater its competitiveness and higher the economy growth.

By analyzing the data from these reports regarding the competitiveness and innovation of the observed countries, it is possible to find the clear correlation between these two terms. Most countries that have better ranking on the competitiveness ladder also have better positions on the innovation ladder.

The role and importance of innovation are also recognized at the level of the common European policy. Innovation policy is a key factor in the European Union (EU) 'Lisbon Strategy', which incorporates EU economic development and policy (European Commission, 2016). At European Union policy level, innovation has been recognized as a crucial factor in creating economic growth and employment in EU countries. The European Union seeks to strengthen competitiveness among other players in the global economy by enhancing the innovative activities of European businesses.

The aforementioned GCI 4.0 report also show that by abolishing administrative procedures, creating an atmosphere of legal certainty, governments can improve the business and investment climate. In order to strengthen the innovation ecosystem, policies must encourage the transfer of technology and knowledge in order to strengthen

the technological readiness of the economy to apply new knowledge to the creation of innovative products and services by developing a scientific and educational system (Schwab Klaus, 2019).

REGULATORY FRAMEWORK FOR INNOVATORS AND DIGITAL ECONOMY

Current systems of public policy and decision-making evolved alongside the Second Industrial Revolution, when decision-makers had time to study a specific issue and develop the necessary response or appropriate regulatory framework. The whole process was designed to be linear and mechanistic, following a strict “top down” approach. But such an approach is no longer feasible. Given the Fourth Industrial Revolution’s rapid pace of change and broad impacts, legislators and regulators are being challenged to an unprecedented degree and for the most part are proving unable to cope (Schwab, 2016).

How, then, can they preserve the interest of the consumers and the public at large while continuing to support innovation and technological development? By embracing “agile” governance, just as the private sector has increasingly adopted agile responses to software development and business operations more generally. This means regulators must continuously adapt to a new, fast-changing environment, reinventing themselves so they can truly understand what it is they are regulating. To do so, governments and regulatory agencies will need to collaborate closely with business and civil society (Schwab, 2016).

Besides this, it is of the utmost importance for countries to improve the ecosystem for startups and innovators. This is an important part of reforms of public sector and making it suitable for digital age. Policy makers should strive to develop an entrepreneurial talent pool by embedding entrepreneurship firmly in formal education. Policy makers can also expand the entrepreneurial talent pool by attracting creative, entrepreneurial individuals from abroad. Furthermore, the ecosystem can be improved by strengthening major cities as startup hubs.

Creating testing grounds for new business models would also boost the attractiveness of EU countries for digital entrepreneurs. This could be done by means of “regulatory sandboxes”, for example, enabling entrepreneurs to try out their innovations in real-life market conditions. Some CEE countries are already doing this; for example, the Bank of Lithuania is introducing a regulatory and technological sandbox platform for blockchain solutions (Digital McKinsey, 2018).

Innovations based on digital technologies are developing so fast that the legal framework needs to be monitored constantly to make sure it remains in line with the technological development. The fast development and wider use of digital technologies may require further modernization of the current regulatory framework. Clarifying and possibly adjusting the legislative framework is important to establish the necessary trust and legal certainty for industry in Europe and will be taken forward as part of the European Commission’s Better Regulation REFIT program (European Commission, 2019). Also, unnecessary restrictions should be removed and national systems should be better aligned to allow a smoother flow of data within the EU, as well as to stimulate the development of new technologies such as cloud computing and platform companies like Uber, Airbnb and others. EU Commission and national

governments across Europe need to assess the different legal and technical obstacles and then define measures to address them. One of the plans of the EU is to set the regulatory framework to attract, maintain and encourage new innovators and business models. Great number of platform companies are already launched in the Europe and they represent more than 4% of the total market capital (European Commission, 2019). This fact certainly serves as an incentive for the creation of the mentioned regulatory framework. In order to achieve this, it is necessary to create a functional, digital single market that will bring down the barriers to enable these companies to enter the market and to enable their rapid growth. The European Commission has identified the completion of the Digital Single Market (DSM) strategy as one of its 10 political priorities (European Commission, 2019), thus it was adopted back in 2015. In the forthcoming period we can expect that EU Commission will provide further assistance and recommendations to Member States in order to support the balanced development of digital economy. There is already a large number of initiatives and specific actions of aid that are trying to support the creation of an innovative regulatory environment based on platform companies. Because these platform companies are promoting innovations and digital transformation that will generate economic growth across Europe. Creating and establishing these platform companies that will be based in the EU is set to become economical and strategical imperative for Europe. Another, very important plan for the EU is the creation of a balanced regulatory framework for platform companies in the single digital market. A proper regulatory framework for the digital economy should be conducive for the improvement of sustainable development for digital companies and innovative business models in Europe (European Commission, 2016).

Reforms in the public sector, i.e. national and sectoral policies, regulations and economic development play a key role in shaping the digital age economy. For example, China, which has the largest population of Internet users in the world at 721 million, is constantly adapting its regulatory framework quickly and effectively. India, with 462 million Internet users, is the digital economy with probably the greatest potential which seeks to boost its economic competitiveness. Last but not least, and still the most developed economy in the world, USA - in collaboration with its leading corporations, is constantly improving administrative procedures and regulations. Unfortunately, the European Union is adapting to the digital age in a slower pace and is not sufficiently exploiting the market of its 412 million internet users. Although it is in the process of creating a “digital single market”, the European Union’s economic development strategy is based on digitization and the development and application of new business models. The European Union is currently in the period of the EU eGovernment Action Plan, which as a result have more and more EU-co-financed projects with a strong component of digitalization to drive the digital transformation of the economy and economic adaptation to the digital age (Antoljak, 2018).

The rise of digital companies worldwide is triggering reactions from governments both at the international and national level. In many cases, governments see these companies as vehicles for positive change and innovations, driving greater productivity captured through better asset utilization and the overall idea of the “sharing economy” (Tolić, Sabljčić, & Tolić, 2018). However, in other cases, namely Europe (Croatia as well) they are creating challenges across a range of policy issues including labor rights, tax legislations, competition and disparities in insurance coverage.

These global economic trends are inevitable, innovation is an ongoing process and we need to adapt in the new digital economy. In order to embrace changes and opportunities that lie ahead, governments need to create good public policies and strategies that enable improvement of the regulatory and business environment for the adoption of these innovative business models as part of digital transformation of economy.

CONCLUSION

Innovation and digital transformation are poised to become the new engine of economic growth. The key to success in today's world is rapid development based on continuous innovation. Business and political leaders need to understand the ever-changing economic environment and support those who will relentlessly and continuously innovate. Empirical research has shown that to achieve long-term economic growth it is crucial to have a stable and stimulating regulatory framework. Hence, governments need to create a socio-economic-legal environment suitable for innovations and further business development based on digital technology. Innovation is the most important driver of national economic well-being. It is the cause of an increase in global competitiveness and a key in creating competitive organizations and overall economies. This is why a large number of nations are engaged in achieving innovation advantages. The global reports say that innovation still remains concentrated in a few economies, while some others show potential to catch up. For years, there is a positive correlation between an economy's level of development (measured by GDP per capita) and innovation performance. In other words, wealthier economies perform better on innovation. According to GII, Switzerland is the world's most innovative country followed by Sweden, the United States of America, the Netherlands and the United Kingdom (Global Innovation Index, 2019). Croatian economy has a solid result in this year's report, placing it on 44. place in innovation performance among 129 countries. By analyzing the data from global reports on competitiveness and innovation of the observed countries, it is possible to find the correlation between these two terms. Most countries that are more ranked on the competitiveness ladder also have better positions on the innovation ladder. The results and information obtained from the theoretical research and conducted analysis provide a great insight about the impact of continuous innovations as a driver of economic growth in digital economy. Therefore, it is clear that the hypothesis of this paper can be accepted as follows: *it is possible to prove that innovation is a continuous process that never stops and is necessary to drive the global economy of today.* The research conducted in this paper has shown us the possibility of continuous growth and development, precisely thanks to innovation and global competitiveness. They have found a foothold in unlimited human creativity, which is one of the key factors of bringing innovations to life. Different analysis of competitiveness and innovation conducted in this paper tend to show that the most competitive countries are also the countries with the highest innovation impact. The competitiveness of a national economy depends largely on its innovation performance. Also, when a country once achieves the high level of competitiveness, it is important to know that it is not a perpetual category. That clearly emphasizes the need for continuous innovation process, to boost further economic growth and thus keep the high level of competitiveness. In conclusion, to increase competitiveness, accelerate GDP and economic growth, countries have to focus on few variables. Namely, increase in-

novation performance through investments in R&D, in human capital and through direct foreign investments, all of which will contribute to more innovative and a more technologically intensive structure of their economy. Also, they need to improve their regulatory framework and business environment to be more in line with digital economy, i.e. to improve the ecosystem for startups and innovators, for platform companies and other, which will directly contribute to a better competitiveness of their economy.

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COVID 19 RAMIFICATIONS ON TOURISTIC RESULTS IN 2020

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Abstract: *The number of COVID 19 infections worldwide by the end of September 2020 rose to more than 34 million cases. At the same time number of fatalities caused by the same virus exceeds one million. In the year 2020 about ten per cent drop of economic growth was experienced compared to the previous year due to COVID 19 crisis and with probably the biggest impact on tourism industry. The results of global tourist international arrivals in April, May and June 2020 with drop of 95-98 per cent are self-explanatory. Thus, stabile and continuing growth from the beginning of 21st century has been suddenly brutally interrupted returning the tourism industry on level of at least 30-40 years back, maybe even more. The consequences of COVID 19 on touristic results have been analysed in the paper. The analysis is based on four different geographical areas – global, European, Southeast European and Croatian, based on the last 20 years of tourism results. Since similar dramatic situation has also affected air transport industry, the correlation between the tourism and air carriers' results in the last two decades is also considered in this paper. Different scenarios of the future recovery of tourism industry are considered in the paper.*

Keywords: COVID 19; tourism industry; air transport industry.

JEL classification: L83, L93, O18, Z32.

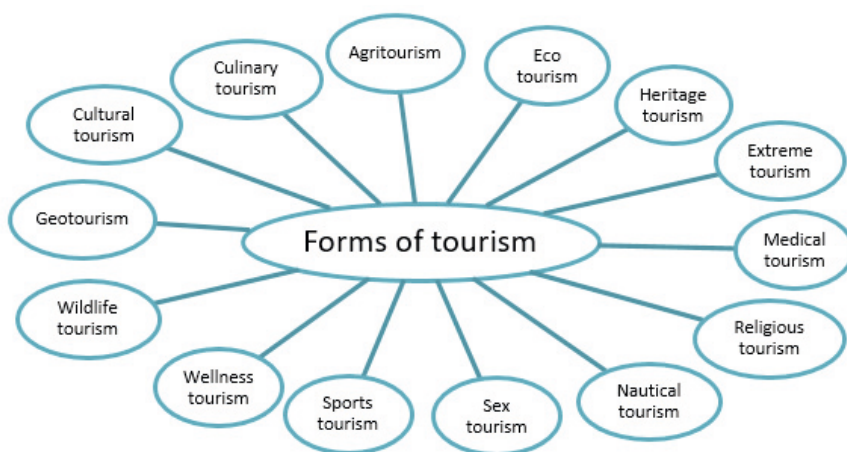
INTRODUCTION

The term tourism is formed from a word *tour* deriving from an ancient Greek word *tornos* (τόρνος), meaning “tool for drawing circles” (Harper, 2020). That meaning is possible to interpret as a vague definition of tourism – going away with the intention to return home. But the simplest definition is that tourism is leisure travel. There are numerous more complex and detailed definitions of tourism. The United Nations World Tourism Organization (UNWTO, 2020 a) defines tourism as a social, cultur-

al, and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, involving tourism expenditure. The term tourism is used to characterize a sociocultural phenomenon that involves transport, motivations, accommodation, hospitality, impacts and the economic, cultural, social and environmental sectors affected and fuelled by the movement of people around the world (Lohmann & Panosso Netto, 2016, p. 26). Another definition describes tourism as a system of technical, technological, organizational, economic, and legal elements with an intention of providing accommodation, catering, transport, agency brokering and other services connected with the travel purpose (Mrnjavac, 2002, p. 242).

Tourism became an important source of income for many countries, since it brings large amounts of income into a local economy – in a form of revenue from goods and services and employment opportunities in tourist sector (UNWTO, 2020 b). UNWTO (UNWTO, 2020 a) defines basic types of tourism: domestic and international. International tourism can be divided into inbound and outbound. Foundations of tourism are mainly cultural assets and biodiversity of the location. Tourism travels (where tourist bear the cost of the trips by themselves) can be divided to: group touristic travel, individual touristic travel, honeymoon trips, sporting events, adventurist trips, ecocultural trips (Tatalović, Mišetić, & Bajić, 2012, p. 472).

Figure 1. Forms of tourism



Source: Prepared by authors according to (Lew, 2010)

Numerous specialty forms of tourism have emerged over the years, each with its own adjective. Figure 1 represents most common forms of tourism.

Object of the paper is comparison of touristic results before and after the COVID 19 pandemic on global, regional, and national level. The ramifications of the pandemic had an utter effect on touristic results, and the recovery of touristic arrivals on all levels

is hard to predict. In a way, since tourism and air transport have a close relationship, it is possible to compare the recovery scenarios and have an idea of a period in which the touristic results will return to levels prior to COVID 19 pandemic.

The paper is organized as follows. Section 2 reviews the literature on tourism, tourism recovery after shocks, relations between tourism and air transport. Section 3 describes the data and methodology, while sections 4 to 7 include touristic results on global, regional (Europe and southeast Europe) and national (Croatia) levels, respectively. Section 8 includes concluding remarks.

LITERATURE OVERVIEW

There isn't a lot of literature on conclusive COVID 19 effects on tourism, or any other branch of the economy, or air travel, at the time of writing this paper. However, certain implications can be drawn from the research on prior global and regional crises and pandemics,, and existing literature on tourism such as (Lew, 2010), (Lohmann & Panosso Netto, 2016) and (Mrnjavac, 2002).

Pandemics like this one have a direct impact on industries like tourism and retail service. The economic ramifications of this pandemic will be severe, especially damaging not only in tourist destinations and there is a high percentage of cases, but also globally. The SARS outbreak in 2002 is a case in point (Lee & McKibbin, 2004).

One of the most important findings of pandemic research is that travel, and consequently tourism, is crucial to epidemiology and disease control. This also entails understanding that travel and tourism are both drivers to disease spread and economic ramifications, being significantly impacted by Nonpharmaceutical Interventions (NPIs) (Nicolaidis, Avraam, Cueto-Felgueroso, González, & Juanes, 2019).

METHODOLOGY

For the scope of the research data was gathered on domestic and international touristic arrivals, tourism receipts, scheduled passengers carried, COVID-19 cases, fatalities, and real gross domestic product. All the data were collected for global, regional, and national level. The region chosen for research is Europe, and southeast Europe, since Croatia, also a country considered in the research, is a part of European union, and geographically a part of a southeast Europe, so the comparison of the gathered results can be comparable with other south-eastern countries due to socioeconomic and cultural similarities.

The data were collected from different sources such as UN World Tourism Organisation, International Monetary Fund (IMF), World Bank, International Air Transport Association (IATA), Eurostat, World of Meter, Croatian Bureau of Statistics, etc.

Year on year data on international tourist arrivals and scheduled air transport passengers carried were compared using Pearson Product Moment Correlation (PPMC). The PPMC is not able to tell the difference between dependent variables and independent variables, but it shows the linear relationship between two sets of data.

Comparison of touristic results for different geographical areas: global, regional (Europe and southeast Europe) and national (Croatia) levels, respectively, were made in the paper, including graphical and tabular data display.

GLOBAL TOURISTIC RESULTS

Until the year 2020, the international tourist arrivals grew at a steady pace driven by relatively strong economy, technological progress, new business models and more affordable travel costs. Both emerging and advanced economies are benefiting from tourism income.

Figure 2. International tourist arrivals and tourism receipts (2000 - 2019)



Source: Prepared by authors from (UNWTO, 2020 c), (International Monetary Fund, 2020 b)

From the figure 2 it is evident that the average annual growth rate (AAGR) of international touristic arrivals (4.2 per cent) and tourist receipts (6.1 per cent) are very solid and stable. According to data in 2020, global tourist arrivals have plummeted due to pandemic of Covid-19. The negative Covid-19 effects reflects on AAGR which is unfortunately quite negative in all scenarios.

Worldwide, the domestic tourism market is over six times larger than the international tourism market. Domestic tourism comprises the activities of a resident visitor within the country of reference. The size of domestic tourism markets is usually the result of several factors including demographics, income levels, transport and hospitality infrastructures (UNWTO, 2020 d). According to available data (table 1), the world's largest domestic tourism markets in terms of tourist trips are India, China and the United States of America, mostly due to of their large populations and geographical size. An estimated 9 billion domestic tourist trips (overnight visitors) were recorded around the world in 2018, over 50 per cent in Asia and the Pacific (UNWTO, 2020 d). Other large domestic tourism markets include Japan, Brazil, France and Spain. Besides, it should be emphasised that countries with higher shares of domestic tourism are likely to recover earlier and faster from consequence of COVID-19 than countries dominantly related to international travel.

Table 1. World's major domestic tourism markets in 2018

Country	Domestic tourist arrivals (mil)
India	1 855
China	5 539*
USA	1 659
Japan	291
Brazil	191
France	190
Spain	170
Russia	48*
S. Korea	163
Germany	159

*domestic tourist hotel arrivals

Source: Prepared by authors from (UNWTO, 2020 d)

Initiatives to promote domestic tourism due to Covid-19 in 2020 include:

1. Financial incentives;
2. Marketing and promotion;
3. Product development;
4. Partnerships;
5. Market intelligence; and
6. Capacity building and training (UNWTO, 2020 d).

From the above mentioned promotional incentives some regional initiatives are subject of special interest like Romania – Tourist Pass Holiday voucher, Serbia - 560,000 tourist vouchers intended for citizens of Serbia who wish to spend their vacation in the country, Slovenia – grant of EUR 200 voucher for every adult and EUR 50 for every child to spend in any accommodation units registered in Slovenia (UNWTO, 2020 d).

Covid-19 pandemic had negative effects on global business and industrial development. According to WHO (World Health Organization, 2020) on November 10, 2020, the overall number of Covid-19 confirmed cases was 50.5 million cases worldwide, with the share of 43.1 per cent in Americas, 26.5 per cent in Europe and 19.2 per cent in Southeast Asia. Real global annual growth rate of GDP for 2020 is predicted on the level of -4.4 per cent, Euro zone drop of GDP is predicted to be 8.3 per cent with higher negative rate on European dominant touristic countries (Spain 12.8 per cent drop, Italy 10.6 per cent drop, France and Great Britain both 9.8 per cent drop) (International Monetary Fund, 2020 a). The world trends in China recovery of GDP is quite opposite from the world trend: in the second quarter 3.2 per cent growth rate and in third quarter 4.9 per cent growth rate (UNWTO, 2020 c). Broadly speaking, air travel grew each year on average, one-and-a-half to two times as fast as world GDP (Doganis, 2019, p. 178). In the case of such a huge pandemic effect this rule is obviously not realistic. Drop of 5 per cent GDP would assume a drop of air travel for approximately 10 per cent, but it will be closer to the drop of 70 per cent. It is also predicted that

Covid-19 will generate over 100 million job losses (World Travel and Tourism Council, 2020) in travel and tourism sector.

The development of global tourism is one of the most important drivers of the passenger air transport growth. With more vacation time, along with the trends of multiple use of vacation during the year, further stimulate the mobility of tourists, with airlines allowing the availability of even the most remote destinations in a relatively short time (Tatalović, Mišetić, & Bajić, 2017, p. 11). Some authors identify major areas that are ripe for change:

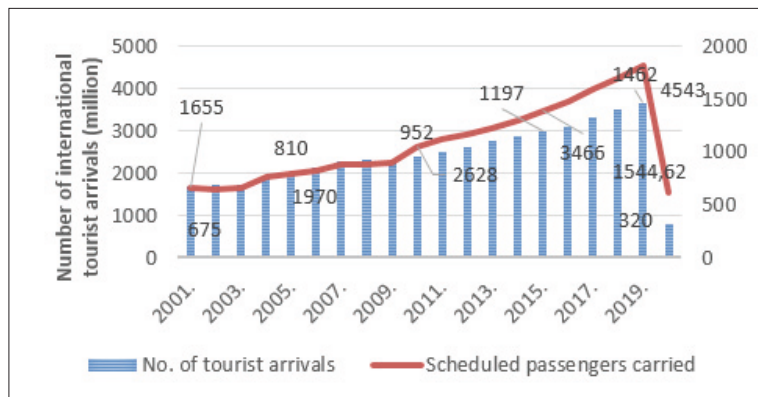
- Solutions for developing countries
- Low stress travel
- Bringing flight closer to home
- Connectivity and big data
- Sustainability (Taneja, 2019).

Besides, air traffic has increased due to drop of the travel costs (dropped by 50 per cent in the last 30 years) and improvement of the safety. The accident rate/million flights in 2017 was 1.08 down from 2.01 over the five-year period from 2012 to 2016 (Taneja, 2019, p. 38). US fatality rates by mode of transportation in the period 1999 – 2016 were for passenger automobile 34 per cent, light truck 29 per cent, motorcycle 10 per cent, bicycle 2 per cent, rail passenger 0.5 per cent, bus 1 per cent, and airline 0.01 per cent (Vasigh, Fleming, & Tacker, 2018, p. 436).

In the year of 2018 over 58 per cent of all international tourists arrived to their destinations by air. The share of air travel has increased from 46 per cent in 2000 to 58 per cent in 2018 (CAPA, 2019).

The correlation between the two parameters: air transport passengers and international touristic arrivals for the last 20 years is extremely high (Figure 3) on the level of 0.993.

Figure 3. Air transport passengers and international touristic arrivals correlation



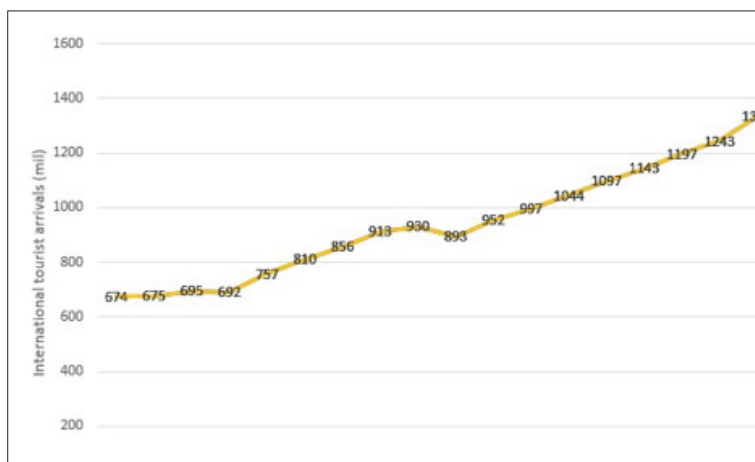
Source: (UNWTO, 2020 e), (The World Bank, 2019), (IATA, 2020)

Taking into consideration Covid-19 effects in 2020, the correlation index is quite similar, at the level of 0.955. The travel industry is very large, and it is growing very rapidly. The number of passengers flying worldwide is expected to grow, according to IATA, by 4.1 per cent per year, resulting in 7.3 billion passengers flying by 2034 (Taneja, 2018, p. 17). Now the economic and tourism recovery in different modes and shapes (V, U, L and W) divide the experts from optimistic approach (2021/2022) to extremely pessimistic approach (2029).

Overall global effects of Covid-19 at the beginning of November 2020 were over 50 million cases and over 1.2 million deaths caused by Covid-19.

According to UNWTO data represented on figure 4 there are three possible scenarios of Covid-19 negative effects on tourism. Optimistic scenario (scenario 1) predicts 58 per cent loss of international touristic arrivals which is 610 million arrivals. The second scenario predicts loss of 70 per cent, and the last scenario, most pessimistic one predicts 78 per cent loss of international touristic arrivals in 2020. According to the current covid-19 effects and lockdown measures imposed in numerous countries, the scenario 3 is the most probable one, if not even worse with international touristic arrivals less than 320 million expected in that scenario.

Figure 4. International tourist arrivals, 2000-2019 and scenarios for 2020



Source: (UNWTO, 2020 e)

According to data (UNWTO, 2020 e) in 2020 global tourist arrivals has plummeted to the levels of 35 year back. In 1985, global tourist arrivals counted up to 320 million arrivals (UNWTO, 2006) – same number of arrivals that is presumed to be achieved in the most pessimistic scenario for the year 2020.

EUROPEAN TOURISTIC RESULTS

European contribution was up to 50 per cent of global international tourist arrivals in the year 2018 according to UNWTO (UNWTO, 2020 d). Tourism occupies an important place in the EU because of its economic and employment potential, as well as its social and environmental implications (European Commission, 2020).

According to Eurostat (Eurostat, 2020 a) one in ten enterprises in the European non-financial business economy belonged to the tourism industries. These 2.4 million enterprises employed an estimated 13.6 million persons. Enterprises in industries with tourism related activities accounted for 9.5 per cent of the persons employed in the whole non-financial business economy and 21.7 per cent of persons employed in the services sector. The tourism industries' shares in total turnover and value added at factor cost were relatively lower, with the tourism industries accounting for 3.9 per cent of the turnover and 5.8 per cent of the value added of the non-financial business economy (Eurostat, 2020 a).

In summer 2019, nearly one third (32 per cent) of annual nights spent at tourist accommodation establishments were recorded in July and August. The share of July and August in total nights spent at tourist accommodation in 2019 ranges from 23 per cent in Malta to 58 per cent in Croatia (Eurostat, 2020 b).

All world regions had large declines in the first eight months of this year in international tourist arrivals compared to the same period in 2019, with the largest decline of almost 80 per cent of Asia and the Pacific, which was first impacted with Covid-19 pandemic.

The regions of Africa and the Middle East recorded almost 70 per cent fewer arrivals of foreign tourists, while these arrivals in Europe were 68 per cent lower, and in the regions of the Americas (both Americas) 65 per cent less (Ministry of Tourism and Sport, 2020). For Europe, the most visited region, the UNWTO adds it had slightly smaller minuses of foreign tourist arrivals in July and August after the gradual reopening of borders, but also that it was a recovery of 'short life', because already in August began to introduce new travel restrictions and tips due to the increase in the number of infected.

Since the beginning of the Covid-19 pandemic, virtually all Member States have implemented containment measures and restrictions on non-essential travel, closed their borders and reinstated internal border controls within the Schengen area, often accompanied by requirements for cross-border travellers to stay in quarantine (Eurostat, 2020 b). This meant that millions of European citizens were suddenly unable to travel. From the data (World of Meter, 2020) Belgium is the worst affected country with Covid-19 in the world with over 1 000 deaths per 1 million population and with an average 7 times larger than Europe average (World of Meter, 2020).

Table 2. Rankings of ten European touristic destinations and most effected European countries by Covid-19

Rank by number of international travellers in 2019	Country	Rank by number of total Covid-19 cases	Rank by number of total deaths	Rank by number of total tests	Rank by number of cases per 1 million population*	Rank by number of deaths per 1 million population*
1	France	1	3	5	6	6
2	Spain	3	4	4	5	2
3	Italy	5	2	6	20	4
4	Germany	6	7	3	31	27
5	UK	4	1	2	14	3
6	Greece	27	26	19	35	31
7	Austria	16	21	16	17	26
8	Russia	2	5	1	24	21
9	Portugal	14	14	10	15	17
10	Poland	8	11	9	23	24

*countries with less than 0.5 million population are excluded from rankings

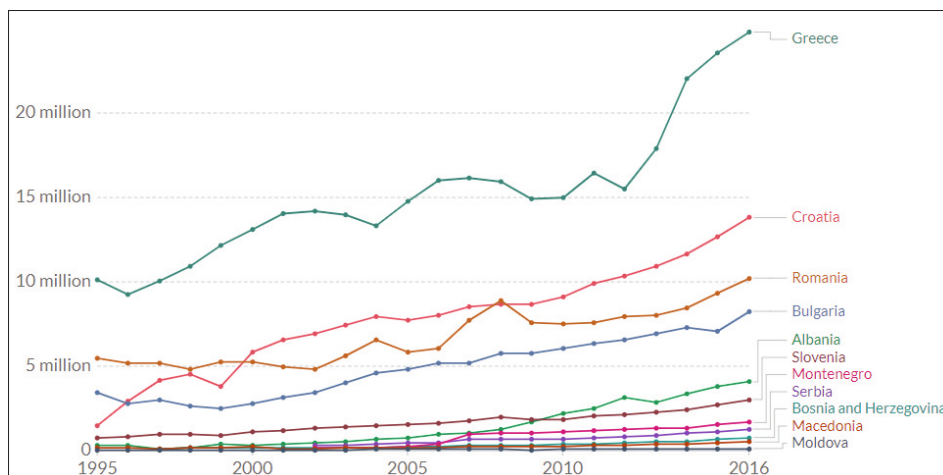
Source: Prepared by authors from (UNWTO, 2020 a), (World of Meter, 2020)

As an answer to the question “Is there any correlation between the most affected COVID 19 countries and the most developed touristic countries?” authors believe that there is a certain level of correlation. That insight is based on the figures in table 2: ranking of top ten European destinations as the most visited in terms of the number of international tourist arrivals in 2019, and the rankings of most Covid-19 effected European countries.

If the criteria is a number of cases, then it is visible that similar countries affected by Covid-19 are also among top 10 European touristic countries. From the table 3 it is obvious that the leading European touristic countries are also leading in ranking on Covid-19 effects in following criteria: number of total cases, number of total death and number of total tests. When taken into consideration number of cases per 1 million population the rankings are a bit different.

TOURISTIC RESULTS OF SOUTH EAST EUROPE

For the purpose of this paper it was important to define and analyse the situation in the region of south east Europe (11 countries). These results will be compared with Croatian results in touristic sector and Covid-19 effects. From the figure 5 it can be concluded that the leading countries in international tourist arrivals in the region are Greece and Croatia followed by Romania and Bulgaria.

Figure 5. International tourism arrivals in SE Europe (1995 – 2016)

Source: (Roser, 2017)

According to the data in the table 3 regional country rankings and criteria for measuring Covid-19 effects show the ranking of every individual country in the south east Europe region. In terms of number of cases and deaths the worst situation is in Romania, followed by Moldova. Changing the criteria to cases per 1 million and death per 1 million population lowest ranking scored Greece, followed by Serbia and Albania. Measured by criteria total tests results are relatively close (12 – 17 tests per 100 population), with an exception of Albania with only 4 tests per 100 population. Average SE Europe score of cases per 1 million population approximately is 75 per cent higher than the world average, and 61 per cent higher than the world average of deaths per 1 million population. Position of Croatia rankings is in the middle of the regional results.

Table 3. Rank of south east European countries by Covid-19 measuring criteria

Ranking	Country	Total cases	Cases per 1 million population	Total tests % population	Total death	Deaths per 1 million population	Population (000)
1 (30)	Romania	246663	12851	17.2%	7067	368	19193
2 (60)	Moldova	76582	18939	9.3%	1800	447	4031
3 (74)	Bulgaria	54069	7802	10.5%	1298	187	6930
4 (77)	Bosnia and Herzegovina	51505	22063	9.7%	1248	381	3274
5 (78)	Croatia	51495	12570	12.3%	562	137	4096
6 (79)	Serbia	48403	5547	15.4%	826	95	8725
7 (83)	Greece	40929	3933	17.2%	635	61	10405
8 (85)	Slovenia	35649	17147	17.7%	363	175	2079
9 (88)	N. Macedonia	32436	15569	12.1%	1004	482	2093
10 (92)	Albania	21202	7370	4.3%	518	122	2876

11 (96)	Montenegro	18714	29795	14.5%	313	498	628
	TOTAL	677647			15634		64330

Source: (World of Meter, 2020)

Table 4 represent best touristic results for the first eight months of 2020 compared to touristic results for the same period in previous year. Slovenia recorded best overall results due to high domestic index in Slovenia which is 26 per cent higher than the previous period. According to the international tourist arrivals criteria relatively best score achieved Croatia with lowest drop of touristic arrivals (60 per cent).

Table 4. Total touristic arrivals Jan-Aug 2020

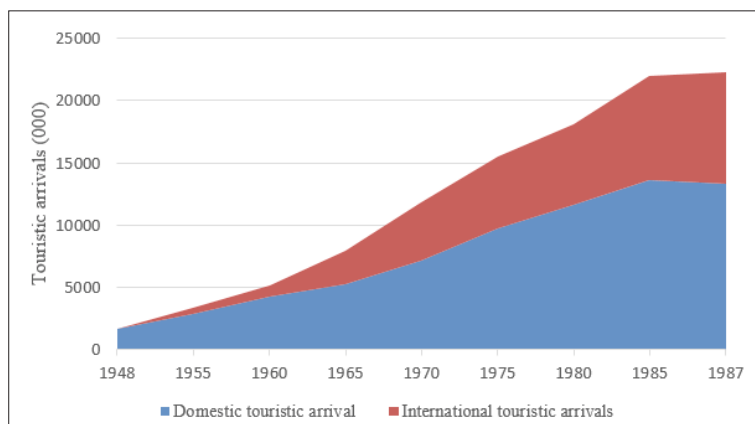
Country	Total touristic arrivals (000)	Index total	Index domestic	Index international
Bosna and Herzegovina	330	29.70	75.2	21.70
Croatia	6179	39.70	74.5	36.20
Montenegro	202	22.10	78.9	16.10
North Macedonia	337	40.10	74.7	17.80
Serbia	1269	50.90	74	26.50
Slovenia	2378	52.50	125.9	29.90

Source: Prepared by authors from various bureau of statistics data

CROATIAN TOURISTIC RESULTS

Historically speaking as a part of Yugoslavia, Croatian touristic results were not devoted to international touristic arrivals, represented in the Figure 6. Structure of the international touristic arrivals, changed in the period 1948 – 1987: from 4 per cent of international touristic arrivals to 48 per cent in the year 1987.

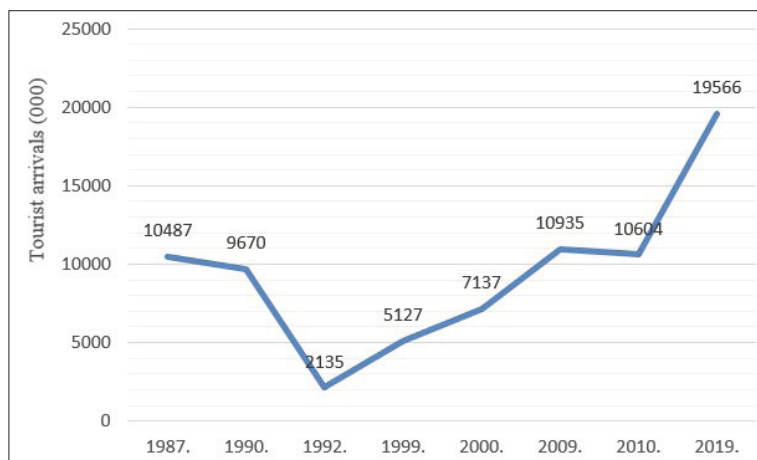
Figure 6. Structure of touristic arrivals in Yugoslavia (1948 – 1987)



Source: Prepared by authors from (Savezni zavod za statistiku i evidenciju FNRJ i SFRJ, 1991)

Within the countries of ex-Yugoslavia Croatian touristic share increased from 41 per cent in 1970 to 43 per cent in 1980 and reached 47 per cent in 1987. In last two years analysing all ex-Yugoslavian republics this share of Croatia touristic results increased to 58 per cent in 2018 and 56 per cent in 2019 respectively (Croatian Bureau of Statistics, 2020 a). The results of total tourist arrivals in Croatia are shown in the Figure 7.

Figure 7. Tourist arrivals in Croatia (1987 – 2019)



Source: (Croatian Bureau of Statistics, 2020 a)

In spite of favourable touristic results, there are numerous shortcomings of the Croatian tourism: high seasonality, modest touristic offer, relatively low average touristic expenditure (according to various sources from 80 – 100 EUR per day) and unfavourable accommodation structure with dominantly cheap accommodation capacity.

In the first eight months of 2020, tourists realised 6.2 million arrivals and 36.6 million nights in commercial accommodation establishments, which was a decrease of 60.3 per cent in tourist arrivals and of 52.0 per cent in tourist nights, as compared to the same period of 2019 (Croatian Bureau of Statistics, 2020 b). The most foreign tourist nights were realised by tourists from Germany (32.5 per cent), Slovenia (14.4 per cent), Poland (12.1 per cent), the Czech Republic (9.0 per cent) and Austria (6.1 per cent) (Croatian Bureau of Statistics, 2020 a). All those countries recorded less tourist arrivals and nights in the first eight months of 2020 than in the same period of 2019, due to the effects of Covid-19 pandemic. Among other effects (transport, health care system, culture, sport...) that will result in drop of Croatia GDP rate predicted to be 9.0 per cent (International Monetary Fund, 2020 a). European Commission predicts even worse GDP rate – drop of 9.6 per cent in 2020 (European Commission, 2020).

Table 5. Comparison of Croatian Covid-19 status with the world statistics on Nov 3rd 2020

	Total cases	Total deaths	Total recovered	Active cases	Total cases/1M pop	Deaths/1M pop	Total tests	Tests/11M pop
Croatia	56 567	654	41 070	14 843	13 809	160	523 382	127 767
World	48 415 149	1 230 114	34 667 038	12 517 997	6 211.2	157.8		

Source: (World of Meter, 2020)

World average deaths per 1 million population is 157.8 and Croatian is 160, which is a world average. Approaching the end of the year situation in Europe and Croatia is unfortunately in rising negative trend.

CONCLUSION

At the moment of defining paper abstract, the total number of Covid-19 cases by the end of September was 34 million. At the beginning of November 2020 Covid-19 infections passed 50 million cases. Similar negative trend happened in the world economy affected particularly in tourism and air transport industries, since those sectors measured for the last 20 years have almost perfect correlation scores (96-99 per cent). The consequences on touristic results in the year 2020, will be a dramatic drop of international tourist arrivals probably to the level realised in 1984/1985 (according to the pessimistic scenario of UNWTO 78 per cent drop is expected). Similar decline is expected with air transport passengers carried in 2020 (expected drop from 59 to 62 per cent), meaning back to the achievement of the year 2000 (close to 1.67 million passengers carried). Answer to the question if there is any correlation between the most affected COVID 19 countries and the most developed worldwide touristic countries is affirmative in the case of North America, South America, and Europe (France, Spain, Italy, Great Britain, Germany and Russia). But in the case of Asia the answer is negative (China, Japan, Singapore, Thailand, South Korea...). This statement is valid for international tourist arrivals, while domestic tourism is not so affected compared to international tourist achievements. Future tourism recovery will be very difficult to predict depending on infection magnitude, flexibility and duration. European and Croatian experts are willing to believe that recovery will not happen before the year 2024. Some other scenarios are more optimistic (2022), but some are expressing pessimism mentioning the Covid-19 scenario. Finally, let's quote the UNICEF warning: Population of three billion worldwide do not have conditions for hand washing procedures.

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KRATKO ILI PRETHODNO SAOPŠTENJE / SHORT OR PRELIMINARY REPORT

EXAMINING THE ROLE OF FIRM SIZE IN COMMITMENT - SMALL FIRM PERFORMANCE RELATIONSHIP AMONG SOUTHEAST EUROPEAN SMES

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Abstract: *Studies on the effect of the firm size and commitment on small firm performance indicators are inconclusive, especially in the geographic area of Southeast Europe. This study examines the role of firm size in the relationship between commitment and firm sales growth, operating profit and market share. Alterations in firm size and commitment are attributed to differences in market structures, namely, non-European union and European union member states. Results of the empirical research state that firm size and commitment have a positive and significant effect on performance indicators (sales growth rate, operating profit, and market share). Separating firms that originate from the European union member states from those that do not, suggested that firms that are not part of the European union rely on commitment more firmly than those that from the European union member states. Moreover, firm size moderates the relationship between commitment and firm performance indicators only in the non-European union countries. Larger firm size indicates a smaller effect of the commitment on firm performance for firms from the non-European union countries. The study concludes with limitations and practical implications of the empirical research.*

Keywords: *commitment, small firm performance, firm size, Southeast Europe, transition countries*

JEL classification: *M16, M21, O57, P20*

INTRODUCTION

Information is extremely important for the decision-making process; however, timely acquisition of the right information entails certain costs (Coleman, 1988). For

this reason, networks provide access to potentially important information in a cost-effective way. By networking, entrepreneurs access the information woven into the network, and thus the entrepreneur can increase their chances for making the right decision. Commitment to staying in the network is only a part of the entrepreneurial strategic networking process. Hence, this study aims to answer whether there are differences in commitment and firm sales growth, operating profit and market share based on firm size in the geographic area of Southeast Europe. We assume that these differences are mainly attributable to the markets that are slower in their transition to capitalist market system, i.e., the Southeast EU vs non-EU countries.

After the introduction, literature review explains the nature of hypotheses, followed by the methodology and data gathering process. Afterwards, results of the conducted analysis are presented, followed by the conclusion where theoretical and practical implications have been elaborated.

LITERATURE REVIEW

Networking theory states that entrepreneurs can via networking gain access to the resources not under their control, and thus can increase chances for the success of their business (Zhao & Aram, 1995; Sullivan & Ford, 2014). Stated differently, business network participation can lead to the increase in existing resources, and facilitate the acquisition of external resources (Lin & Zhang, 2005). Therefore, it can be said that business networks are formed primarily to improve firm's performance through efficient use of their resources, achieving economies of scale and higher returns on their assets, and reduce their unit operating costs (Oliver, 1990; Jiang, Mavondo, & Zhao, 2020). Moreover, through business networks, firms can reduce certain risks, reduce production costs, and simultaneously increase flexibility, efficiency, and knowledge sharing (Lin & Zhang, 2005). Gulati et al. (Gulati, Nohria, & Zaheer, 2000) found that a company's competitive advantage is based on collaborative business networks. Through collaboration and coordination, companies can pursue common interests and achieve common goals (Oliver, 1990; Castañer & Oliveira, 2020).

Furthermore, based on social capital theory, Granovetter (Granovetter, 1983) considers that individuals whose networks mainly consist of family and friends, the so-called strong ties, as a rule, have limited access to the information than the individuals whose networks also include acquaintances, the so-called weak ties. For this reason, Fischer and Reuber (Fischer & Reuber, 2003) believe that entrepreneurs must develop relationships outside their circle of acquaintances and the local community. Littunen (Littunen, 2000) suggests that entrepreneurial networks can be divided into formal and informal networks. Formal networks represent professional relationships such as relationships with accountants, clients, suppliers, and the like, while informal networks represent relationships with family, friends, and acquaintances. Furthermore, Zhao and Aram (Zhao & Aram, 1995) consider that networking can be understood in terms of range, i.e. the number of different networks in which the entrepreneur is involved, and the intensity, i.e. the frequency of the entrepreneur's use of these networks. Thus, companies involved in networking activities should achieve better business results than companies not involved in networking activities.

COMMITMENT

Commitment is a rather researched concept and is seen as an implicit or explicit persistence in maintaining a continuous business relationship among business partners (Xue, Qian, Qian, & Li, 2021). Commitment is an important determinant of a successful strategic network (Stone & Brush, 1996), and at the same time a frequent measure of the relationship between a buyer and a seller (Anderson & Weitz, 1992). Main characteristic of commitment, observed in any context, whether interorganizational, intraorganizational, or interpersonal setting, is stability and sacrifice (Anderson & Weitz, 1992). Commitment, on one hand, represents a desire to maximize efforts to maintain a useful business relationship, and, on the other hand, a belief that a relationship is worth a long-term and continuous investment in it (Anderson & Weitz, 1992; Morgan & Hunt, 1994; Krämer, 2014). Stated differently, the highest form of connection occurs when partners are committed to each other and when they believe that their relationship is continuous and long-term guaranteed. Such partners are more inclined to cooperate and share resources (Krämer, 2014). When entrepreneurs do their best to develop and maintain a relationship (connection), then such a relationship can survive even in times when various unforeseen problems arise. Thus, commitment represents a desire to maintain a stable and continuous relationship, and a willingness to take on short-term sacrifices to ensure long-term benefits (Krämer, 2014; Jap & Ganesan, 2000). Stated differently, in the context of strategic networking, network partner with high commitment to the strategic network is more willing to sacrifice its own interests with the goal of preserving the strategic network and achieving common goals. On the other hand, network partner with low commitment to the strategic network will be more inclined in not supporting or even leaving the network when faced with private sacrifice (Krämer, 2014; Andrésen, Lundberg, & Roxenhall, 2012). Mikhailitchenko (Mikhailitchenko, 2021) considers that commitment is directly associated with a mechanism of distribution and balance of resources within a network and points out that various studies in the banking and manufacturing sectors have established the empirical link between commitment and networking.

FIRM SIZE AND PERFORMANCE

When SME growth is connected to industry growth, it becomes an important part of understanding its patterns (Park & Jang, 2010). Gibrat's law (Gibrat, 1931) is most often used to inspect firm size-growth relationship (Audretsch, Klomp, Santarelli, & Thurik, 2004; Córdoba, 2008). Gibrat's law states that firm growth rate is not connected to its absolute size. However, studies on firm size-growth relationship are inconclusive. Authors such as (Bentzen, Madsen, & Smith, 2012), (Doğan, 2013) and (Avdullahi & Ademi, 2020) studied firm size-growth relationship based on Gibrat's law and found that firm growth rates tend to be positively connected to firm size. On the other hand, Evan's study (Evans, 1987) robust results confirmed that firm growth decreases with firm size. The study of 87,000 UK firms shows that growth is negatively related to firm size (Hart & Oulton, 1996). While for the largest companies there is no effect between firm size and growth, (Hart & Oulton, 1996) state that even for the smallest firms' size-growth relationship is induced from transition effects. Namely, smaller firms are more constrained in obtaining outside funds for growth and can, therefore, be expected to experience a proclivity to grow when their internally generated profits are high (Mukhopadhyay &

AmirKhalkhali, 2010). Herein, indebtedness can mediate the size-performance relationship (Lopez-Valeiras, Gomez-Conde, & Fernandez, 2016).

Differences between service and manufacturing industries show that service industry is characterised by higher growth rate of small compared to large businesses (Park & Jang, 2010). In case of manufacturing firms, firm size has a negative effect on growth rate (Park, Shin, & Kim, 2010). As Hall's (Hall, 1986) research additionally accentuates, employment does not tend to go back to previous levels, the question arises on the relationship between firm's operating profit and market share and firm size. Opposing studies herein also exist. (Abeyrathna & Priyadarshana, 2019) found that firm size has no considerable impact on profitability, while in the period 2002-2010 Croatian firms were studied for the size-growth effect and a significant positive effect of firm size on firm profitability was found (Pervan & Višić, 2012). Additionally, firm size significantly and negatively affects country growth rate (Yadav, Pahi, & Goyari, 2020), whereby larger firms dominate specific markets and can cause negative monopoly effects (Amato & Amato, 2004). Hence, this research questions the firm size-performance relationship of the Southeast European SMEs, particularly noting the differences in the sales growth rate, operating profit and market share based on the following hypotheses:

H1: Firm size affects small firm performance.

H1.1: Firm size has a positive effect on sales growth rate.

H1.2: Firm size has a positive effect on operating profit.

H1.3: Firm size has a positive effect on market share.

COMMITMENT AND FIRM PERFORMANCE

Many studies have analyzed the concept of commitment in the context of SME networks (Andrésen, Lundberg, & Roxenhall, 2012; Clarke, 2006; Krämer, 2014; Roxenhall, 2011), and at both firm and employee levels (Greenfield, 2016; Tett & Meyer, 1993), where commitment has been positively linked to the network performance (Clarke, 2006) and network resilience (Krämer, 2014). From the perspective of social capital theory, relationships consist of social interactions, and can be developed based on mutual commitment. When there is a mutual commitment in a stable relationship then independent network partners work together to better meet the needs of their customers. In such manner, they can be more successful and achieve higher profitability. By establishing mutual commitment with suppliers, manufacturers gain wider access to market information related to new product development and receive greater support for the development and marketing of new products. On the other hand, committed suppliers can also help manufacturers differentiate themselves in the market and develop competitive advantages, resulting in further strengthening the relationships with suppliers (Jap & Ganesan, 2000). As both parties invest in a common long-term and committed relationship, a higher level of commitment leads to the mutual success of all partners.

Moreover, in small business context, tendency of small firm owners and their respective management is not to use highly developed formal control mechanisms (Chen, Hsiao, & Chu, 2014), but rather rely on the use of informal control mechanisms where commitment plays a crucial role in relationship building of successful co-operative arrangements (Pesämaa, Pieper, Da Silva, & Black, 2013)). More specifically, commitment is an essential element in providing safety and security, facilitating ex-

change of information, ideas, resources and knowledge, disincentivizing opportunistic behaviour, and aligning performance goals among network members (Pinho, 2016). Committed partners increase the likelihood of continuity of the business relationship and in turn the overall performance of strategic network (Hammarfjord & Roxenhall, 2017; Agostini & Nosella, 2019). Thus, it can be concluded that commitment leads to increased performance within strategic network. Moreover, literature confirms positive relationship between commitment and firm performance (McClellan & Collins, 2011), and stresses the importance of maintaining a long-term successful business relationships (Anderson & Weitz, 1992; Garbarino & Johnson, 1999; Selnes, 1998).

H2: Commitment positively affects small firm performance.

H2.1: Commitment size has a positive effect on sales growth rate.

H2.2: Commitment has a positive effect on operating profit.

H2.3: Commitment has a positive effect on market share.

H3: Firm size moderates a relationship between commitment and small firm performance.

H3.1: Firm size moderates a relationship between commitment and sales growth rate.

H3.2: Firm size moderates a relationship between commitment and operating profit.

H3.2: Firm size moderates a relationship between commitment and market share.

H4: There is a difference between EU and non-EU countries of Southeast Europe when examining the moderating effect of firm size on the relationship between commitment and small firm performance.

METHODOLOGY AND DATA

Sample

Database of consulting companies who operate in Southeast European countries has been taken as a sampling frame. Countries included in the research were: Slovenia and Croatia representing Southeast European EU member states, while Serbia, Bosnia and Herzegovina, Montenegro, and Macedonia represented Southeast European non-EU countries. Data has been collected via online questionnaire sent to the emails of small and medium sized firm representatives, mostly to the firms' owners and respective directors. To ensure accuracy and compliance in respect to potential errors due to differences in the official languages spoken in each of the observed countries, questionnaire has been translated from English and back to each of the official languages of the countries at hand, where translation has been done by the specialized language translation agencies in each country. Moreover, online questionnaire has been accompanied by a separate letter attached to the online questionnaire explaining the purpose and objectives of the research. Operational part of the research lasted from December 2019 till April 2020, in which period 9,000 SMEs has been contacted out of which 963 firm representatives responded and correctly filled out online questionnaire., ie. making response rate rather modest of bit less than 11%.

Analysis of sample demographics reveals that 42% were micro firms, 41% were small firms, and 17% were medium sized firms, while majority of the firms operated in the wholesale and retail sector (22%), manufacturing sector (20%), and construction sector (13%). Interesting to note is that 71% of the respondents were either firm owners or firm directors, meaning that the online questionnaire managed find its way to the target group intended by this research. Moreover, majority of respondents had a bachelor's,

master, or PhD degrees (83%), while 74% worked for the firm for more than 7 years. Analysis of sample demographics further adds to the robustness of the research results considering that majority of respondents were firm owners or directors, with higher education, and with more than seven years of experience in managing the business.

Measures

Dependent variables

Sales growth rate, operating profit, and market share as dependent variables measuring small firm performance were measured by asking respondents to classify their level of satisfaction with each of these measures on a seven-point Likert scale. Research shows that subjective assessments of firm performance are highly correlated with objective measures of firm performance (Dess & Robinson, Jr., 1984; Venkatraman & Ramanujam, 1987).

Independent variables

Commitment to a strategic network was measured using (Allen & Meyer, 1990) seven-point Liker-type questions scale with 3 items (statements). Exploratory factor analysis was done initially by principal component analysis. Kaiser – Meyer – Olkin's measure of sampling adequacy = 0.761, Bartlett's test of sphericity has a p -value=0.000. All communalities are greater than 0.5 and 87.715% of total variance is explained by component loadings. Cronbach's alpha is 0.930 for the three items. Then principal axis factoring as a confirmatory factor analysis of the three items was performed to save the variables extracted from exploratory factor analysis under the factor *Commitment*.

Firm size was measured by asking respondents how many employees they have in order to classify their size by using European Union definition of small and medium-sized enterprises. Micro firm is classified with less than 10 employees, small firm with 10 to 49 employees, and medium sized firm with 50 up to 250 employees.

Control variables

Education as a control variable was measured by asking respondents of their highest achieved education level, with the following coding: 'secondary school and lower', 'university diploma', 'master/MBA diploma', and 'PhD diploma'.

Position as a control variable was measured by asking respondents what is their current position within the firm's organizational structure, and these positions were then coded in three different coding groups: 'owner', 'director', and 'manager'.

Industry as a control variable was measured by asking respondents to select one of the following industry sectors based on what they believe their main line of business is: agriculture, manufacturing, construction, transportation and communications, wholesale and retail, tourism and hospitality, financial and other services, and other.

RESULTS

Descriptive statistics and bivariate correlations are presented in Table 1. All variables are mean centred to avoid potential multicollinearity issue and variance inflation factors (VIF) of all variables are around 1 that is below the threshold value of 10, indicating that multicollinearity is not an issue (Neter, Wasserman, & Kutner, 1990).

Table 1. Descriptive statistics and cross-correlations, N = 963.

Variable	Mean	S.D.	1	2	3	4	5	6	7	8
Sales growth rate	4.89	1.39	1							
Operating profit	4.73	1.37	0.734**	1						
Market share	4.76	1.34	0.794**	0.733**	1					
Commitment	0.00	1.00	0.127**	0.150**	0.160**	1				
Size	1.76	0.73	0.114**	0.110**	0.129**	-0.021	1			
Position	2.48	0.86	-0.018	-0.054	-0.043	-0.005	-0.215**	1		
Education	2.19	0.80	0.016	0.010	0.007	0.077*	0.046	-0.041	1	
Industry	0.80	0.40	0.022	0.041	-0.006	0.036	-0.222**	-0.010	0.051	1

Source: Authors

Highest correlation is observed between the measures of financial and non-financial performance: sales growth rate, operating profit and market share, which are all dependent variables in the model. Also, significant correlations are among independent variables in the model: commitment and size, and dependent variables: sales growth rate, operating profit and market share. There are no outliers in the data, as all data are obtained from the survey using a 7-point Likert scale. Firms from six Southeast European countries are present in the sample. Breusch Pagan and White's tests are used to test for the presence of homoskedasticity of error terms. Both of the test showed a presence of heteroskedasticity. In order to correct for this issue weighted least squares hierarchical regression was used to test the hypotheses. Weighted least squares (WLS) regression model addresses this issue by attributing different weights to different cases, in this study different weights are given to firms originating from different countries. WLS regression is used to test the effects of firm size and commitment on firm performance indicators: sales growth rate, operating profit and market share (Table 2).

Table 2. Effect of firm size and commitment on firm performance

All countries	Sales growth rate			Operating profit			Market share		
	M1	M2	M3	M1	M2	M3	M1	M2	M3
Constant	4.748*** (0.214)	4.174*** (0.264)	4.198*** (0.260)	4.683*** (0.209)	4.151*** (0.259)	4.176*** (0.255)	4.969*** (0.206)	4.414 (0.254)**	4.440*** (0.250)
Control variables									
Industry	0.080 (0.114)	0.190 (0.117)	0.174 (0.116)	0.167 (0.112)	0.269* (0.115)	0.252* (0.113)	-0.057 (0.110)	0.049 (0.113)	0.032 (0.111)
Education	0.072 (0.057)	0.062 (0.057)	0.041 (0.056)	0.047 (0.056)	0.037 (0.056)	0.015 (0.055)	0.003 (0.055)	-0.007 (0.055)	-0.029 (0.054)
Position	-0.040 (0.053)	-0.005 (0.053)	-0.007 (0.053)	-0.081 (0.052)	-0.049 (0.052)	-0.051 (0.051)	-0.070 (0.051)	-0.037 (0.051)	-0.039 (0.050)
Independent variables									
Size		0.242*** (0.066)	0.260*** (0.065)		0.224** (0.065)	0.244*** (0.064)		0.234*** (0.064)	0.253*** (0.063)
Commitment			0.251*** (0.047)			0.267*** (0.046)			0.270*** (0.045)
ANOVA (p-value)	0.426	0.003	0.000	0.131	0.002	0.000	0.533	0.004	0.000
R2	0.003	0.017	0.045	0.006	0.018	0.051	0.002	0.016	0.051
Adjusted R2	0.000	0.012	0.040	0.003	0.014	0.046	-0.001	0.012	0.046
Durbin-Watson	1.977		1.981	2.007		2.018	1.986		1.989

Source: Authors

Note: *** p - value < 0.001 ** p - value < 0.01 * p - value < 0.05 † p - value < 0.1

N = 963. Standard errors in parentheses. Weighted least squares weight based on countries.

M1 represents a model only with control variables, M2 control variables and the effect of size. M3 contains control variables, size and commitment.

Results of the WLS regression with only control variables are given in Model 1, Model 2 illustrates the results with control variables and the effect of firm size, and Model 3 presents the results of hierarchical WLS regression with control variables, firm size and commitment (Table 2). Results show that both firm size and commitment have a positive and statistically significant effect on sales rate growth, operating profit and market share in the Southeast European countries. Hence, Hypotheses 1 and 2 cannot be rejected.

Moderation effects for all countries: The effect of size on relationship between commitment and firm performance

Table 3 displays the results of testing of Hypotheses 3 and 4.

Table 3. Interaction effect of firm size and commitment on firm performance

All countries	Sales growth rate			Operating profit			Market share		
	M4	M4 (EU)	M4 (non-EU)	M4	M4 (EU)	M4 (non-EU)	M4	M4 (EU)	M4 (non-EU)
Constant	4.182*** (0.260)	4.103*** (0.474)	4.131*** (0.317)	4.158*** (0.254)	4.378*** (0.463)	4.045*** (0.310)	4.423*** (0.249)	3.930*** (0.459)	4.472*** (0.303)
Control variables									
Industry	0.182 (0.116)	0.316† (0.190)	0.170 (0.143)	0.262* (0.113)	0.186 (0.185)	0.293* (0.140)	0.041 (0.111)	0.258 (0.184)	0.001 (0.137)
Education	0.039 (0.056)	-0.088 (0.103)	0.062 (0.069)	0.013 (0.055)	-0.158 (0.101)	0.046 (0.067)	-0.030 (0.054)	-0.036 (0.100)	-0.033 (0.066)
Position	-0.005 (0.052)	0.083 (0.101)	-0.016 (0.063)	-0.049 (0.051)	-0.023 (0.098)	-0.048 (0.062)	-0.036 (0.050)	0.033 (0.097)	-0.046 (0.061)
Independent variables									
Size	0.260*** (0.065)	0.307** (0.112)	0.270** (0.081)	0.244*** (0.064)	0.332** (0.109)	0.242** (0.079)	0.254*** (0.062)	0.337** (0.108)	0.257** (0.078)
Commitment	0.521*** (0.125)	0.027 (0.189)	0.661*** (0.160)	0.578*** (0.122)	0.043 (0.184)	0.717*** (0.156)	0.548*** (0.119)	-0.016 (0.183)	0.791*** (0.153)
Interaction effects									
Commitment x Size	-0.154* (0.066)	0.032 (0.092)	-0.123* (0.086)	-0.177** (0.064)	0.030 (0.090)	-0.237** (0.084)	-0.159* (0.063)	0.074 (0.089)	-0.230** (0.082)
ANOVA (p-value)	0.000	0.089	0.000	0.000	0.012	0.000	0.000	0.016	0.000
R2	0.050	0.034	0.061	0.059	0.050	0.070	0.058	0.048	0.068
Adjusted R2	0.044	0.016	0.053	0.053	0.032	0.061	0.052	0.030	0.059
Durbin-Watson	1.971	1.923	1.990	2.015	1.944	2.046	1.987	1.885	2.013

Source: Authors

Note: *** p - value < 0.001 ** p - value < 0.01 * p - value < 0.05 † p - value < 0.1

N = 963. Standard errors in parentheses. Weighted least squares weight based on countries.

M4 comprises interaction effects between commitment and firm size for all countries in the sample as well as separately for the EU member states and non-EU member states.

Model 4 shows there exists an interaction between firm size and commitment that affects sales growth rate, operating profit and market share. The interaction effect between firm size and commitment is negative, stating that size dampens the positive relationship between commitment and firm performance indicators, implying the larger the firm is, in terms of its employee size, the effect of commitment on firm performance indicators is going to be lower. Graphical representation of the effect of firm size on the commitment-firm performance relationships is presented in Figures 1-3.

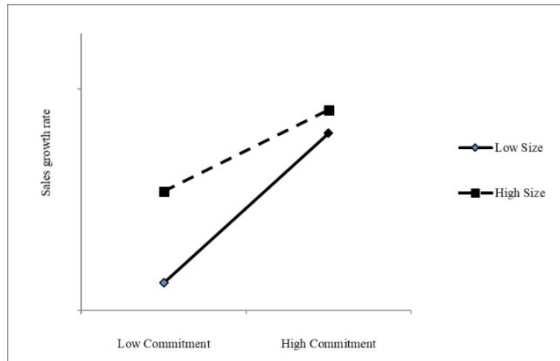


Figure 1. The effect of size on the relationship between commitment and sales growth rate

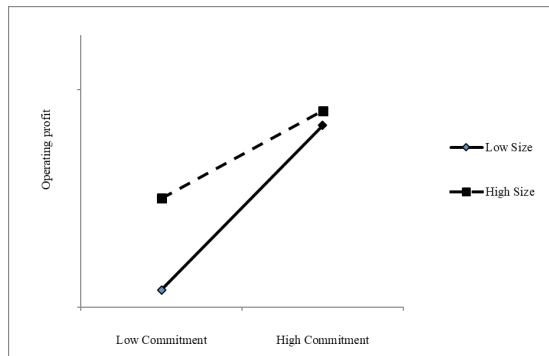
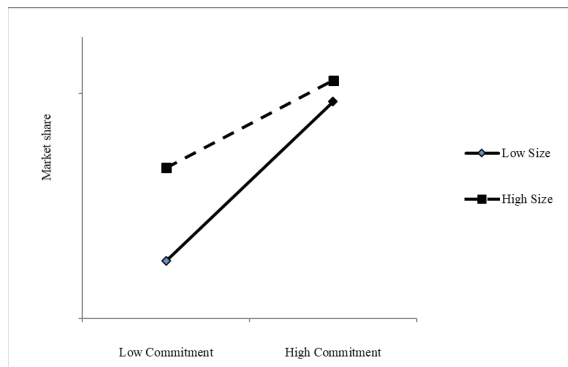


Figure 2. The effect of size on the relationship between commitment and operating profit

Source: Authors

Figure 3. The effect of size on the relationship between commitment and market share



Source: Authors' representation

Model 4 (EU and non-EU) in Table 3 show the results of Hypothesis 4 testing. Hypothesis 4 proposes different effect of firm size-commitment interaction between firms coming from non-European union (Bosnia and Herzegovina, Macedonia, Mon-

tenegro and Serbia) and European union (Croatia and Slovenia) member states. Results indicate that size is an important predictor of firm performance in both groups of countries. However, commitment differs between firms from the non-European union (Bosnia and Herzegovina, Macedonia, Montenegro and Serbia) and European union (Bosnia and Herzegovina, Macedonia, Montenegro and Serbia) European union member states. Commitment is a significant positive predictor of firm performance for firms from the non-European union member states, while it is not for firm from the European union member states.

CONCLUSION

This study attempted to inspect differences in firm sales growth, operating profit and market share based on firm size and networking commitment. The underlying notion was to attribute the differences in the effect of firm size and commitment on firms' performance indicators was to differences in market structures, namely, non-European union and European union member states. Results of the empirical research have shown that firms' size and commitment have a positive and significant effect on firm performance in terms of firms' sales growth rate, operating profit and market share. When the sample is divided between firms that are part of the European union and those that are not, an interesting finding suggests that firms that are not the European union member states rely on commitment more firmly than those countries which are European union member states. Consequently, firm size moderates the relationship between commitment and firm performance indicators only in the non-European union countries. The larger the size of the firm, smaller is the effect of the commitment on firm performance indicators for firms that are not European union member states.

Practical implications of this study are twofold. Firstly, business environment in Southeast Europe is not simple nor unique. There are cross-cultural differences that might originate from differences in institutional frameworks between the European union member states and non-European union countries. Frequently, headquarters of international enterprises are situated in one of the European union member states, while business is performed in the whole region. Managers stumble on subtle but important difference after they enter the region. This could serve as a starting point for understanding various doing business mechanisms. Secondly, doing business in different environments will incur different costs for businesses due to employee commitment based on different firm sizes. Management must take that into consideration and consider costs that are associated with increasing employee commitment.

Limitations of this study are based on the time frame in which the study was conducted. Research had been done through the online questionnaire survey performed in a specific time period that allowed for a cross-sectional analysis. Further research should be performed by a longitudinal analysis and take into account different aspects of strategic networking to gain a wider picture of the state of strategic networking in the business environments of the Southeast European countries.

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EXPLORING THE EXTENSION OF CONSUMER ETHNOCENTRISM ON ETHNOCENTRIC BUSINESS ORIENTATION OF YOUNG ADULTS FROM TWO COUNTRIES

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Abstract: *Many consumer studies have confirmed that in different international settings ethnocentric consumers mostly prefer domestic products. Consequently, consumer ethnocentrism has been considered as a prominent informal barrier for international trade. Even though an ethnocentrism as a personal trait has been a subject of international management studies, ethnocentrism was rarely observed within a context of managers' or owners' decisions that affect business orientations. The purpose of this study was to explore a link among consumer ethnocentrism and ethnocentric business orientations of graduate students as future managers and business owners. The main goal was to and derive implications relevant for consumer and organizational marketing in international environment. The main motivation behind the study was to explore potential extension of consumer ethnocentrism on managerial ethnocentric decision making, and consequently, on ethnocentric business orientation. Research was conducted on a convenience sample of 219 business economics graduates from the University of Rijeka, Croatia and from the University of Mostar, Bosnia and Herzegovina. Multi-Group Structural Equation Modeling has been employed to explore a linkage among observed concepts. Empirical results indicated a differences among sub-samples from two countries in level of consumer ethnocentrism and its impacts on preferences towards domestic products. However, significant positive relation has been found between consumer ethnocentrism and ethnocentric business orientation in case of both observed groups. Consumer ethnocentrism has been confirmed as predictor of ethnocentric tendencies towards domestic products as well as predictor of ethnocentric business orientations of youth as a future managers and business owners. Research results confirmed that consumer ethnocentrism can be extended from consumer preferences and orientation towards domestic products to managers' ethnocentric decision making, providing ethnocentric business orientation.*

Keywords: *Consumer ethnocentrism, managerial ethnocentric decision making, ethnocentric business orientation, millennials*

JEL classification: *M21, F, C20*

INTRODUCTION

General applicability of ethnocentrism within consumer studies has been recognized at the beginning of 1970s. Shimp & Sharma (1987, p. 280) have developed the term “consumer ethnocentrism” representing “beliefs held by American consumers about the appropriateness, indeed morality, of purchasing foreign-made products”. Substantial body of the literature subsequently confirmed an effect consumer ethnocentrism from consumer evaluations, to intentions and behaviors. Consumer ethnocentrism has been often seen as one of the most important informal barriers in today’s global marketplace (Shankarmahesh, 2006). Therefore, companies have recognized the importance of consumer ethnocentrism while developing various strategies regarding foreign markets (Cateora & Graham, 1999).

The concept of ethnocentrism has history of nearly 50-year in International Business research, which can be traced back to Perlmutter’s (1969) article capturing the degree of multinationality existing in the ‘state of mind’ of a firm’s managers (Michilova, Piekkari, Storgaard, & Tienari, 2017). The majority of international business research that explore ethnocentrism deal with organizational strategic models of multinational corporation as well as with international hiring practices. Ethnocentrism affects various consumer decisions, and should also be observed as managerial decision and product evaluation (Myers, 1995, p. 202). Depending on level of ethnocentrism within several stakeholder groups relevant for international corporate management, companies need to develop specific business as well as marketing strategies (Sinkovics & Holzmüller, 1994). The concept of consumer ethnocentrism offers an understanding of a way in which individual and organizational consumers draw comparisons between domestic and foreign products (Luque-Martínez, A., & del Barrio-García, 2000), which means that, according to the consumer ethnocentrism research literature, it is possible to transfer ethnocentrism concept to other stakeholder groups with a particular importance for managers and employers (Sinkovics & Holzmüller, 1994).

The main purpose of this paper is to provide an insight into effects of consumer ethnocentrism (CET) on preferences towards products (domestic vs. imported), as well as potential extension of consumer ethnocentrism on decision making process towards foreign companies and products. Extension of consumer ethnocentrism on managerial/owners’ decision making would consequently provide ethnocentric orientation of business. The paper has been structured as it follows: introduction, theoretical backgrounds of the concept of ethnocentrism from the perspective of consumer studies and international business literature, research methodology, empirical data analysis and discussion. Conclusion was offered with some contributions and limitations of the given analysis.

THEORETICAL BACKGROUNDS

Ethnocentrism in the context of consumer studies

The concept of ethnocentrism has been introduced in social science by the American sociologist Sumner (1906). Sumner defined ethnocentrism as an “view of things in which one’s group is the center of everything, and others are scaled and rated with reference to it” (Sumner, 1906, p. 13). Subsequently, the ethnocentrism has been observed in different disciplines with relevance to individual-level personality systems as well as to more general cultural and socio-analytic framework (Le Vine & Campbell, 1972). The conceptualization of consumer ethnocentrism is the first attempt to extend the socio-psychological concept in a business context (Sinkovics & Holzmüller, 1994). Lanz & Loeb (1996) consider that Shimp and Sharma’s concept (1987) of consumer ethnocentrism, and the scale they developed to measure it (CETSCALE), concerns the extent to which individuals feel desire or a duty to support the domestic economy in the face of foreign competition. A lot of studies in different research environment confirmed that one of the most important consequence of consumer ethnocentrism is expressed in consumers’ preferences towards domestic products.

Cross-cultural researches provide a conclusion that nations show different degree of consumer ethnocentrism, irrespective of economic development (Hamin, 2006). Schuh (1994) has defined a framework that requires a connection between different stages of economic development and consumer preferences towards foreign products in developing countries. In accordance with this framework, during the early stages of transition from a state-controlled economy to a market economy, foreign products are preferred because of their good qualities but also because of novelty and motives of status and curiosity. According to Schuh (1994), ethnocentric motives in the background of the buying behavior become dominant as the economy moves towards the middle stage of transition. Since the mid 1990s, studies of consumer ethnocentrism in transition countries in Europe have shown trends of increasing consumer loyalty to domestic alternatives (Jenk, Michel, & Roze, 1995). Some more recent studies also confirmed the influence of consumer ethnocentrism on domestic product preferences in transitional economies Croatia, Bosnia and Herzegovina, Serbia and Macedonia (Dmitrovic, Vida, & Reardon, 2009), as well as in Slovenia (Vida & Reardon, 2008).

Ethnocentrism in the context of international business studies

by the lack of active debate on ethnocentrism in international business research. Authors have proposed a contemporary view on ethnocentrism as an attribute of individuals and collectives (e.g., groups, organizations, countries, and cultures) which delineates a strong sense of positive self-regard, but does not inevitably imply superiority over and/or negativity towards other individuals or collectives. Prevailing ethnocentrism in a country as well ethnocentric Ethnocentrism in the international business literature has been mostly observed in the context of corporate strategic orientations (Malnight, 1995), from the perspective of managerial policies and hiring practices of multi-nationals (Zeira, 1976, 1979), human resource management of multinational companies (Neuliep, Hintz, & McCroskey, 2005), operations of the multinational companies (ie. ethnocentric, geocentric, polycentric, regiocentric), organizational strategy-structure in worldwide activities (Malnight, 1995; Perlmutter, 1969).

Perlmutter (1969) has argued that the collective attitudes of managers toward

‘foreign people, ideas or resources’ impact the quality of decision-making with regard to organization design, control, communication, people management, and the identity of the internationalizing firm’ and ultimately its long-term viability (Perlmutter, 1969, p. 11-12). According to Michilova, Piekkari, Storgaard, & Tienari (2017) Perlmutter’s (Perlmutter, 1969, 1984) contribution to international business research lies primarily in the introduction of a mental model or paradigm to better explain the nature and key characteristics of multi-nationals’ global strategy, structure, and key management processes. Michilova, Piekkari, Storgaard, & Tienari (2017) have stated that in the international business literature the concept of ethnocentrism has been mystified to a great extent attitude in host-country organizations determine the strategy formulation in foreign markets (Sinkovics & Holzmüller, 1994; Zeira, 1979). Ethnocentrism is worth being considered as a determinant from the perspective of international management, especially individual ethnocentrism who might shape and influence the relation between companies, their strategy formulation and relations towards different stakeholder groups (Sinkovics & Holzmüller, 1994).

METHODOLOGY

Research propositions

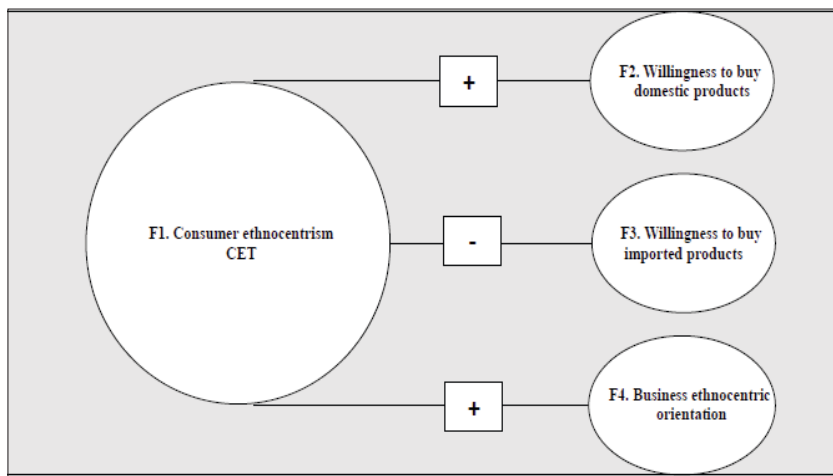
“Ethnocentrism seems to act as a self-defense reflex of local economies, governments, organizations and individuals against the threat of imports and foreign competition” (Saimagka & Balabanis, 2015, p. 66). From the normative perspective, ethnocentric consumers have a view that it is wrong to purchase foreign products because it harms domestic economy, causes loss of jobs and it is unpatriotic (Shimp & Sharma, 1987). From the personal perspective, consumer ethnocentrism represents a trait suggesting the enduring nature of ethnocentrism irrespective of situational factors or socio-economic environment (Saimagka & Balabanis, 2015; Sharma & Shimp, 1995). Based on the individual point of view of supporting the domestic economy by favoring domestic products, consumer ethnocentrism expresses the wish to contribute the economic growth, and thus the domestic overall welfare (Sinkovics & Holzmüller, 1994). Accordingly, it is possible to transfer ethnocentrism concept to other groups, beside consumers, to managers and employers (Sinkovics & Holzmüller, 1994). Michilova, Piekkari, Storgaard, & Tienari (2017) have noted that there is a need to pay closer attention to the dynamics that underlie processes of interaction between managerial cognition and the outcomes of company’s strategies. The varying degree of ethnocentricity, polycentricity, and geocentricity in the companies could be captured in the ethnocentric attitudes of top management (Perlmutter, 1969; Wan, Chen, & Yiu, 2015). Consumer ethnocentrism conceptualization, from the normative and personal perspective, implies general disposition to act in a consistent manner towards foreign products *in toto* (Shimp & Sharma, 1987). Therefore, the concept of consumer ethnocentrism offers an understanding of the way in which individual and organizational consumers draw comparisons between domestic and foreign products (Luque-Martínez, A., & del Barrio-García, 2000).

Research question and model conceptualization

Considering the above described aspects of consumer ethnocentrism it is reasonable to assume that the concept can be extended from consumers to other groups

such as managers, especially in the domain of decision making process towards foreign companies and products. Accordingly, the main research question of this research is: Does consumer ethnocentrism affect managerial decision making process towards foreign companies and products, and consequently influences ethnocentric orientation of business?

Fig. 1. Conceptual framework



Source: Own estimates

More specifically, this study intends to examine: a) the effect of Consumer ethnocentrism (CET) on preferences towards domestic vs. imported products; b) the impact of Consumer ethnocentrism on decision making process towards foreign companies and products, and consequently business ethnocentric orientation.

Design of the study

This study is based on primary data collected through a survey questionnaire method. Participants were graduate students enrolled in academic programs at public higher education institutions in Bosnia and Herzegovina and Croatia.

Operationalization of the key concepts

For the purpose of this study the shortened version of CETSCALE was used in accordance with study of Kaynak and Kara (2002). Consumer preferences towards domestic and foreign products *in toto* were measured through the items that describes general willingness to buy domestic and imported products (Wang & Chen, 2004). In accordance with theoretical explanations of consumer ethnocentrism as general disposition to act in a consistent manner towards foreign products *in toto* (Shimp & Sharma, 1987) the main research proposition was that concept can be extended from consumers to other groups such as managers. The items for measurement of business ethnocentric orientation, as an extension of consumer ethnocentrism on the domain of managers' decision making process towards foreign companies and products has been developed from two steps. Firstly, the panel discussion was organized including

10 graduate students from the Faculty of Economics, University of Mostar. Students were asked to discuss several statements extracted from the extended theoretical propositions of consumer ethnocentrism on managers' decision process towards foreign products and companies. Discussion resulted with six statements that describe ethnocentric orientations of domestic business managers/owners. As a next step, the other group of 36 graduate students were asked to fulfill the short questionnaire with six extracted statements from the previous discussion group. Exploratory factor analysis with oblim rotation resulted in four items loading on a single factor explaining 74.6% of the variance with Cronbach Alpha 0.87. All items loading was above 0.70. The final questionnaire included a list of statements describing measured concepts. Respondents expressed their degree of agreement or disagreement measured by Likert-type scale of five degrees. Results of ANOVA indicated significant difference between observed samples in case of CET scale only ($F=17.524$; $df=1$; $p=0.000$). Students from Bosnia and Herzegovina express higher level of Consumer ethnocentrism ($M=14.260$; $SD=3.955$) in comparison with Croatian students ($M=11.707$; $SD=4.846$)

Sampling and research procedure

Research was conducted on a convenience sample of 219 graduates from the studies of business economy from University of Rijeka, Croatia and from three public Universities in Bosnia and Herzegovina. From the point of this study sampling students from the faculties of economics is appropriate in order to understand attitudes and behavioral intentions of future managers and business owners. In the case of sample from Bosnia and Herzegovina, ethnically structure of sample has been followed by collecting data from business economy graduates at the three the biggest public universities in Bosnia and Herzegovina: Mostar, Banja Luka and Sarajevo. Students were approached by so called 'mall intercepts' technique in the areas of university campuses and asked to voluntarily and anonymously provide their responses on the questionnaire. All participants were born between 1982 and 2004 and belong to the Millennials cohort (Howe & Strauss, 2000).

Table 1. Sample characteristics

Croatia		Bosnia and Herzegovina	
Gender/Age	N	Gender/Age	N
Male	69	Male	49
21-23	34	21-23	27
24-26	13	24-26	12
26+	22	26+	10
Female	54	Female	47
21-23	44	21-23	38
24-26	6	24-26	6
26+	4	26+	3
Total	123	Total	96

Source: Own estimates

EMPIRICAL RESULTS

Data analysis

Empirical procedure in this paper follows multi group structural equation model (SEM) approach. We firstly followed confirmatory factor analysis (CFA) to examine relationship between latent variables and their (observed) indicators. To capture potential asymmetries, we used mean adjusted maximum likelihood (MLM) as an estimator (Byrne, 2012, p. 100). After CFA structural equation model (SEM) was estimated (Table 2). As goodness of fit measures Comparative Fit Index ($CFI \geq .95$) and Root Mean Square Error of Approximation ($RMSEA < .05$.) were calculated and suggested well-fitting. All calculations were obtained using R package from Rosseel (2012).

Table 2. Confirmatory factor analysis – for both samples Croatia and Bosnia and Herzegovina

Latent variables (factors)	Group 1 – Croatia			Group 2 –Bosnia and Herzegovina		
	Estim.	S.E.	P(> z)	Estim.	S.E.	P(> z)
F.1 Consumer ethnocentrism (CET)						
It is not good to buy imported products because it leaves citizens without jobs	1.187	0.087	0.000	0.696	0.1420	0.0000
A true citizen should always buy domestic products	1.077	0.107	0.000	0.977	0.1270	0.0000
We need to buy local products and thus not allow others to get rich on us	1.200	0.078	0.000	1.050	0.103	0.000
Citizens should not buy imported products because it endangers the domestic economy and causes unemployment	1.162	0.076	0.000	0.848	0.127	0.000
F2. Willingness to buy domestic products	Estim.	S.E.	P(> z)	Estim.	S.E.	P(> z)
If I have a choice between two products of the same type, I will buy a domestic products	0.961	0.090	0.00	0.981	0.111	0.000
Whenever I have the opportunity, I buy domestic products	1.046	0.079	0.000	1.332	0.132	0.000
I prefer to buy domestic products	1.044	0.081	0.000	1.033	0.133	0.000
F3. Willingness to buy imported products	Estim.	S.E.	P(> z)	Estim.	S.E.	P(> z)
If I have a choice between two products of the same type I will buy an imported product	0.932	0.080	0.000	1.013	0.089	0.000
Whenever I have the opportunity, I buy imported products	1.068	0.075	0.000	1.183	0.077	0.000
I prefer to buy imported products	1.022	0.072	0.000	1.095	0.082	0.000
F4. Business ethnocentric orientation	Estim.	S.E.	P(> z)	Estim.	S.E.	P(> z)
Domestic entrepreneurs/managers should not sell their business to foreigners	1.252	0.093	0.000	0.981	0.161	0.000
Domestic entrepreneurs/managers should not make strategic alliances with foreign companies	0.953	0.098	0.000	0.964	0.123	0.000
Domestic entrepreneurs/managers should not sell technology and knowledge to foreign companies	1.047	0.101	0.000	0.989	0.145	0.000
Domestic entrepreneurs/managers should prefer domestic companies in their procurement	0.789	0.120	0.000	0.572	0.174	0.001

Source: Own estimates

To illustrate reliability of construct several measures were provided. The first measure (ω_1) was obtained following Bollen (1980) and Raykov (2001). The second coefficient (ω_2) based on Bentler (1979) and Bentler (2009). While the third coefficient (ω_3) was calculated as suggested by McDonald (1999) frequently referred as hierarchical omega. Table 3 and Table 4 summarize Cronbach's alpha, Average Variance Extracted (AVE) and three aforementioned omega measures for the case of Croatia and Bosnia and Herzegovina, respectively.

Table 3. Construct reliability – Croatia group

Croatia	α	ω_1	ω_2	ω_3	AVE
F1	0.917	0.917	0.917	0.918	0.737
F4	0.824	0.831	0.831	0.832	0.559
F2	0.909	0.901	0.901	0.900	0.752
F3	0.930	0.932	0.932	0.932	0.821

Source: Own estimates

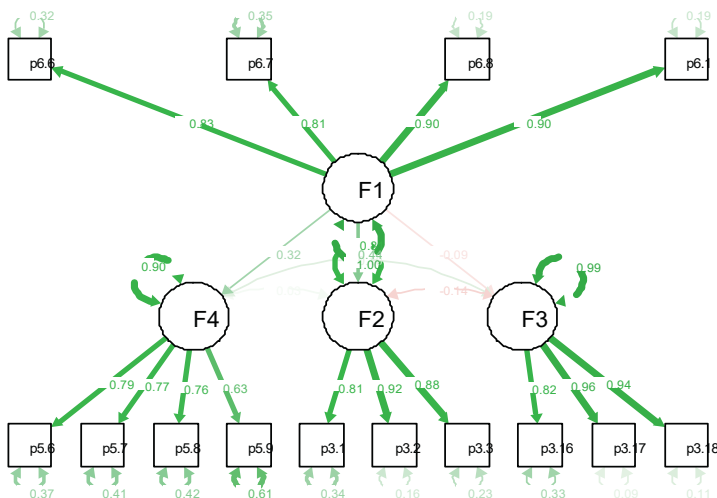
Table 4. Construct reliability – Bosnia and Herzegovina group

B&H	α	ω_1	ω_2	ω_3	AVE
F1	0.821	0.826	0.826	0.824	0.549
F4	0.746	0.755	0.755	0.754	0.446
F2	0.834	0.842	0.842	0.843	0.645
F3	0.944	0.947	0.947	0.948	0.857

Source: Own estimates

Fig 2. Structural model – Croatia group

1



Source: Own estimates

Table 5. Hypothesized relations – Group 1 – Croatia

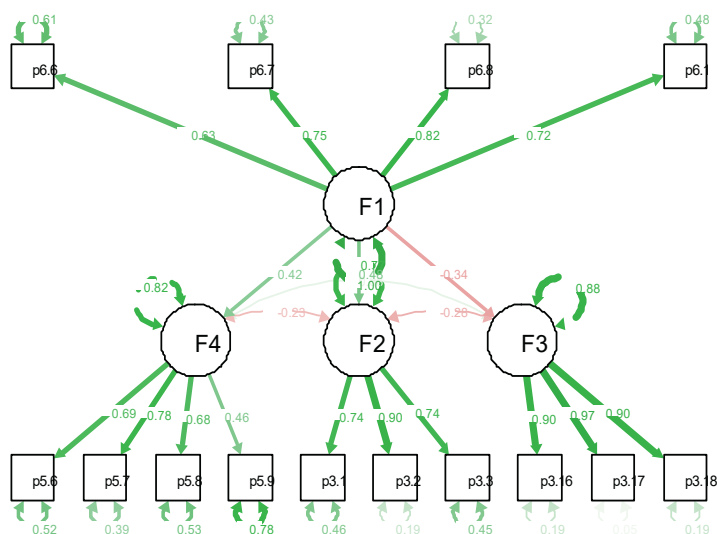
Path	Beta	S.E.	Relations
CET → Business ethnocentric orientation	0.339	*** 0.121	Positive
CET → Willingness to buy domestic products	0.484	*** 0.115	Positive
CET → Willingness to buy imported products	-0.091	n.s. 0.093	Not significant

Notes: *** - $p < 0.001$, ** - $p < 0.05$

Source: Own estimates

Fig 3. Structural model – Bosnia and Herzegovina group

2



Source: Own estimates

Table 6. Hypothesized relations – Group 2 – Bosnia and Herzegovina

Path	Beta	S.E.	Relations
CET → Business ethnocentric orientation	0.464	*** 0.146	Positive
CET → Willingness to buy domestic products	0.550	*** 0.166	Positive
CET → Willingness to buy imported products	-0.362	*** 0.129	Positive

Notes: *** - $p < 0.001$, ** - $p < 0.05$

Source: Own estimates

In the case of Croatia, consumer ethnocentrism effect on willingness to buy imported products was not significant. However, overall research results have indicated that Consumer ethnocentrism affect managerial decision-making process towards foreign companies and products. Consequently, business ethnocentric orientation of their organization was confirmed.

DISCUSSION

Ethnocentrism as an attribute is relative to circumstances and besides negative manifestation can also take neutral or positive forms (Michilova, Piekari, Storgaard, & Tienari, 2017). The concept of consumer ethnocentrism in some cases implies biased cognitive aspects such as beliefs about domestic products superiority (Shimp & Sharma, 1987), but also has a positive forms of manifestation such as a prosociality (Olsen, Granzin, & Biswas, 1993; Saimagka & Balabanis, 2015; Skallerud & Wien, 2019). Prosociality refers to caring for the welfare of others without expectation of reward (Saimagka & Balabanis, 2015; Shimp & Sharma, 1987). Consumer ethnocentrism entails normative and personal perspective, therefore it is reasonably to conclude that ethnocentric disposition to act (Shimp & Sharma, 1987) can be initiated from normative, personal or both of described paths. Even the fact that ethnocentrism is mostly been observed from the point of consumers' reactions, this study has confirmed that effects of ethnocentrism can be manifested at different levels of environments (Neuliep, Hintz, & McCroskey, 2005), including interpersonal (eg. consumer), and organizational environments (e.g. managers and business owners). The main contribution of this study is confirmation that concept of consumer ethnocentrism offers an understanding of the way in which individual and organizational consumers draw comparisons between domestic and foreign products (Luque-Martínez, A., & del Barrio-García, 2000).

This study contributes to the managerial implications from the point of influence of consumer ethnocentrism on individual and organizational consumers, leading to the conclusion that a certain level of consumer ethnocentrism in an observed market can be understand as an indicator of specific informal barrier to the international strategy formulations towards other groups, beside consumers. Also, the fact that this research includes Millennials from two countries contributes to the higher relevance of this study. Millennials represent the largest global consumer group which makes a sizeable contribution to the economy (Stępień, Hinner, & Pinto Lima, 2018). Although some recent researches suggest that Millennials express marginally level of consumer ethnocentrism (Stamule & Steluta, 2017), some other studies have pointed out that formation of consumer ethnocentrism is results of complex interaction of two opposite forces homogenization and globalization, and can be highly research context specific (Gonzales-Fuentes, 2019). Even the facts that Millennials are very often described as a homogeneous global segment, doubts about the homogeneity of this cohort are supported by more recent academic findings claiming that the country-specific and global values or trends co-exist as an attribution of Millennials (Stępień, Hinner, & Pinto Lima, 2018). This research has also confirmed some country-specific characteristics of Millennials, especially in the case of different level of consumer ethnocentrism between sample from two countries. At the same time, the size of sample and only two countries included in the research can be considered as a certain limitation of this study, especially from the point of generalization of the results.

CONCLUSION

As a direct consequence of formal market deregulation, there is a growing importance of informal market barriers. Ethnocentrism has been considered as a prominent informal barrier to international business, and assessing the levels of consumer

ethnocentrism is fundamentally important to consumer and strategic decision making in the global marketplace (Saimagka & Balabanis, 2015). The research results of this study have confirmed that consumer ethnocentrism can be related to ethnocentric decisions of managers and to shape overall organizational strategies towards foreign products and companies. The main research question has been answered positively confirming that the concept of consumer ethnocentrism can be extended from consumers to other groups such as managers, especially in the domain of decision making process towards foreign companies and products influencing ethnocentric orientation of business. This study confirmed the extension of consumer ethnocentrism from consumer to managerial decision making process, indicating the relevance of this concept, not only for consumer based strategies, but also for overall international business strategies. Consumer ethnocentrism as an attribute of certain market can be a clear indicator of existence of ethnocentrism of different groups such as managers of host country organizations. Therefore, existence of consumer ethnocentrism on a certain country should be treated not only as an important segmentation variable, but also as an important factor that determine behaviors of other stakeholders' groups that might affect companies' success on the concrete market. As it was noted above, including young population from two countries as a part of global cohort Millennials in the research have a lot of positive benefits, still generalization of the research results on overall population is limited. Also, further studies should offer an integrative theoretical approach to ethnocentrism in the international business field. In international business literature Millennials as managers are characterized with a sense of well-being and commitment to social causes (Gerard, 2019; Rawlins, Indvik, & Johnson, 2008), therefore Social Identity Theory might contribute to better insight in various intergroup dynamics in globalized environment and to understanding of decision-making by and within organizations (Tackas-Haynes & Raskovic, 2020). Future studies should observe several markets taking in account a Social Identity Theory in exploration of ethnocentrism to bridging the fields between international business and consumer behavior.

ACKNOWLEDGEMENTS

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INSTRUCTIONS TO AUTHORS

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„Economy and Market Communication Review –

Časopis za ekonomiju i tržišne komunikacije“

Pere Krece 13, 78102 Banja Luka, Bosnia and Herzegovina

E-mail: emc@apeiron-edu.eu ; Web: www.emc-review.com

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The scientific international journal „Economy and Market Communication Review – Časopis za ekonomiju i tržišne komunikacije“ - journal for economy and market communication (ISSN 2232-8823 print; 2232-9633 online) was launched in 2011.

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It should define the problem, subject matter and aim of research, as well as the motive for undertaking such research. The Introduction should also offer one or several hypotheses of the paper, which should be developed in the final chapter of the paper – the Conclusion. The Introduction ends with the description of the paper's structure.

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Empirical evidence represents the documentation background to the research conducted.

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Results and discussion represent part of the paper in which results of the research conducted are explained and compared to similar research, the limits of the interpreted results are analysed, as are their significance and potential implications.

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The list of literature should be provided at the end of paper, and it should only contain those titles which are referred to by the author throughout the text. It should be provided in the alphabetical order of the last name of authors of the mentioned works with no classification per types, and data on the work must be complete, in accordance with the standards of bibliography. If several works of the same author have been published in the same year, the year should be accompanied by designations "a,b,c".

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Peter, C. (2013). Privatization, urban fragmentation, and sustainable development. In: *Institutional and Social Innovation for Sustainable Urban Development*, Mieg, H. A., Töpfer, K. (ur.). Oxon i New York: Routledge: 130-146.

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Articles in journals: last name, initials. (year) Article title. Name of journal, volume (number): pages. (if there are two or three authors, their last names and initials should be listed in order, separated by a comma)

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Granger, C. W. J. (1969). Investigating Causal Relations by Econometric Models and Cross-spectral Methods. *Econometrica*, 37(3): 424-438.

Series of articles/official publications:

Heal, G. (2011). Sustainability and its measurement. NBER Working Paper 17008, National Bureau of Economic Research, Cambridge, MA. Dostupno na: <http://www.nber.org/papers/w17008.pdf>.

Papers presented at conferences:

Moylan, K. (2009). The Future of EU Cohesion Policy and its implications for Irish Regional Policy. Rad prezentovan na Regional Science Association International Conference, Irska, 3.9.2009. Dostupno na: http://cua.ie/gorm/publications/The_Future_of_EU_Cohesion_Policy_and_its_Implications_for_Irish_Regional_Policy_Sept%202009.pdf [13.1.2015.].

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McMaster, I., Bachtler, J. (2005). Implementing Structural Funds in the New Member States: Ten Policy Challenges. European Policies Research Centre. Dostupno na: http://www.eprc.strath.ac.uk/eprc/Documents/pdf_files/12A07_McMaster-Bachtler_paper.pdf [24.11.2014.].

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Naučni međunarodni časopis „*Economy and Market Communication Review – Časopis za ekonomiju i tržišne komunikacije*“ (ISSN 2232-8823 print; 2232-9633 online) pokrenut je 2011. godine. Ekonomija, održivi ekonomski i društveni razvoj, kao i tržišne komunikacije predstavljaju centralna mjesta interesa savremenih društava. S fokusom na region Ju-goistočne Evrope časopis objavljuje naučne i stručne radove koji pokrivaju široki raspon tema iz područja globalne ekonomije, poslovne ekonomije, društvenog razvoja, tržišta i konkurencije, potrošača, medija i poslovne komunikacije, novih tehnologija, menadžmenta, marketinga, a sve u cilju širenja i unapređivanja postojećih saznanja, podsticanja rasprava i razmišljanja o savremenim temama iz navedenih područja. Časopis je usmjeren na navedene teme s aspekata različitih teorija, politika i praksi, te promoviše interdisciplinarni pristup. Časopis za ekonomiju i tržišne komunikacije (EMC Review) je međunarodni recenzirani časopis s otvorenim pristupom (OA) i posvećen je najvišim profesionalnim i etičkim standardima, uključujući nultu toleranciju plagijarizma i drugih neprihvatljivih oblika rada.

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Granger, C. W. J. (1969). Investigating Causal Relations by Econometric Models and Cross-spectral Methods. Econometrica, 37(3): 424-438.

Serijske članaka/službene publikacije:

Heal, G. (2011). Sustainability and its measurement. NBER Working Paper 17008, National Bureau of Economic Research, Cambridge, MA. Dostupno na: <http://www.nber.org/papers/w17008.pdf>.

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