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SADRŽAJ ČASOPISA BROJ 03/2022

ZADOVOLJSTVO POSLOM ZAPOSLENIH U KOMUNALNOJ POLICIJI (MILICIJI) REPUBLIKE SRBIJE

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Apstrakt

Istraživanje je dizajnirano kao studija preseka u dva vremenska perioda (2014. godina i 2019. godina) na izabranom uzorku u 12 gradova Republike Srbije. Ima za cilj saznanje o stepenu zadovoljstva poslom zaposlenih u komunalnoj policiji (Sl. glasnik RS, br. 51/2009) – miliciji (Sl. glasnik RS, br. 49/2019). Kako bi se došlo do validnih rezultata od strane ispitanika merenje stepena zadovoljstva vršeno je putem anonimnog standardizovanog upitnika za merenje zadovoljstva poslom - Job Satisfaction Survey (JSS). Prikupljeni podaci su obrađeni Deskriptivnom statističkom analizom (Macura, Kovačević, 2018), određena je srednja vrednost, odnosi i veze sa kategorijskom podelom na subskalama i ukupnoj skali za zadovoljstvo poslom na: nezadovoljne, ambivalentne i zadovoljne. T testom nezavisnih uzoraka izvršeno je poređenje srednjih vrednosti na skali za zadovoljstvo poslom i svim njenim subskalama. Standardnom višestrukom regresionom analizom određen je međusobni uticaj i statistička značajnost postavljenih varijabli na Zadovoljstvo poslom zaposlenih. Rezultati su pokazali statistički značajan uticaj između subskala na skali za zadovoljstvo poslom gde najveći uticaj na nezadovoljstvo zaposlenih u 2014. godini imala je visina plate, napreedovanje, beneficije, nagrađivanje i sama priroda posla. Na ambivalentnost zaposlenih najveći uticaj imalo je

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zadovoljstvo radnim procedurama i zadovoljstvo komunikacijama u 2014. godini dok je u 2019. godini najveći uticaj na ambivalentnost zaposlenih imalo je zadovoljstvo saradnicima, nagrađivanje, sama priroda posla i komunikacijom.

Ključne reči: *komunalna policija, zadovoljstvo poslom, motivacija.*

JEL: O15; E20

Uvod

Komunalna policija je veoma značajan resurs koji direktno i indirektno utiče na kreiranje komunalnog reda i našu životnu sredinu (Crepelle et al., 2022; Soltes et al, 2021; Benito et al., 2021; Allen, 2021). Sprovođenje Zakona i drugih pravnih akata, strogo su definisani i moraju se doslovno poštovati i sprovoditi od strane zaposlenih u komunalnoj policiji Republike Srbije.

Radnici komunalne policije su nosioci operativnih zadataka u organizaciji i karika u stvaranju društvenih odnosa između organizacije (gradska uprava, odeljenje komunalne policije) i korisnika usluga (policijska uprava, javna preduzeća, inspekcijske službe, pravna lica, preduzetnici i pojedinci). Dobra organizacija i upravljanje organizacijom su faktori koji direktno utiču na zadovoljstvo zaposlenih.

Pitanje zadovoljstva poslovom i motivacije zaposlenih jedno je od najvažnijih pitanja koje u poslednje vreme dobija sve veći značaj (Riyanto et al., 2021; Crucke et al., 2021; Marta et al., 2021; Hitka et al., 2021; Đorđević, 2021). Način na koji se upravlja zaposlenima odnosno ljudskim resursima u organizaciji ima značajan uticaj na uspeh i opstanak organizacije u visoko konkurentnom okruženju. Takođe, nesporno je da se pitanjima zadovoljstva i motivacije zaposlenih mora upravljati strateški (Wedajo & Chekole, 2020; Bailey et al., 2018; Wright et al., 2005; Armstrong & Baron, 2002).

Istorijski gledano, uvođenje zadovoljstva poslom u naučne krugove učinio je Hopok koji smatra da je zadovoljstvo poslom kombinacija psiholoških i fizioloških okolnosti, kao i okolnosti okruženja koje uzrokuju da zaposleni kaže: „ja sam zadovoljan svojim poslom“ (Hoppock, 1935, prema Wright, 2006). Vremenom su pogledi istraživača dobili formu koja je objedinila društveni i ekonomski deo poslovanja sa humanitarnim pogledom na zaposlenog u organizaciji. U komunalnoj policiji ovaj pravac istraživanja je veoma malo zastupljen jer ne postoji volja rukovodećih struktura za ovakav vid unapređenja i razvoja ljudskih resursa. Sve se svodi na ekonomiju poslovanja.

Merenje zadovoljstva zaposlenih predstavlja nezaobilazni deo procesa upravljanja organizacijom, to znači da efikasan upravljački proces podrazumeva i efikasan i efektivan sistem merenja (Pinković, 2010). Za potrebe merenja zadovoljstva zaposlenih, Tanasijević prikazuje utvrđene oblasti zadovoljstva a u okviru njih indikatori zadovoljstva (Tanasijević, 2006).

Merenje zadovoljstva zaposlenih je u ovom istraživačkom radu vršeno u dva vremenska perioda, u 2014. i 2019. godini. U 2014. godini istraživanjem je obuhvaćeno 12 gradova na teritoriji Republike Srbije. Bilo je 236 validnih upitnika uvedenih u analizu. U 2019. godini istraživanjem su obuhvaćeni isti gradovi i bilo je 191 validnih upitnika uvedenih u analizu.

Rezultati anketa, mogu se primeniti kao polazna tačka u preventivi i strategiji poslovanja, ali i kao inovacija koja se može implementirati u poslovanju organizacija komunalnih policija kao i drugih službi koje rade slične poslove sa materijalnim i nematerijalnim pokazateljima u svom radu. Značaj ovog istraživanja ogleda se i u neposrednoj primenljivosti rezultata istraživanja u praksi i njihovoj primeni u drugim društvenim sistemima u kojima motivacija i zadovoljstvo imaju direktni uticaj na njihovu ekonomsku efikasnost (na primer, policijski sistem države).

Materijali i metode

Prikazanim istraživanjem obuhvaćeno je 12 gradova Republike Srbije, što je 52.2% od ukupnog broja gradova na teritoriji koji su u okviru svojih Lokalnih samouprava oformili komunalnu policiju.

U 2014. godini, u gradovima gde je vršeno istraživanje, podeljeno je ukupno 282 upitnika od čega je vraćeno 263 upitnika (93.3%), dok je 236 validnih uvedeno u analizu (89.7%) ispitanika. Među ispitanicima koji su vratili ankete, bilo je 78 komunalnih policajaca ženskog pola (33.1%) i 158 komunalnih policajaca muškog pola (66.9%).

U 2019. godini, u istim gradovima, podeljeno je 229 upitnika, od čega je 209 upitnika vraćeno (91.3%), od kojih je bilo 191 validnih (91.4%), uvedeno u analizu. Među ispitanicima bilo je 47 komunalnih policajaca ženskog pola (24.6%) ispitanika i 144 komunalnih policajaca muškog pola (75.4%).

Osnova istraživanja je empirijski utemeljena teorija Pola Spektora (Spector, 1997) prema kojoj se zadovoljstvo poslom određuje kao „ono što osoba oseća prema svom poslu i različitim aspektima posla“, dok se standardizovanim upitnikom meri zadovoljstvo poslom „Job Satisfaction Survey“ (JSS).

Skala se sastoji od 36 tvrdnji i podeljena je na 9 su-skale koje se odnose na platu, napredovanje, rukovođenje, beneficije, nagrađivanje, radne procedure, saradnike, prirodu posla i komunikaciju. Rezultati su na svakoj od devet aspektnih subskala (4 stavke svaka). Rezultati mogu da budu u opsegu od 4 do 24; dok rezultati ukupnog zadovoljstva poslom, na osnovu zbira svih 36 stavki mogu da budu u opsegu od 36 do 216. Ispitanici daju odgovor u kojoj meri se ta tvrdnja odnosi na njih lično, a u opsegu od 1 do 6 (1 - uopšte se ne slažem, 6 - u potpunosti se slažem). Ukupni skor na subskalama može se podeliti na 3 modaliteta zadovoljstva, gde opseg od 4 do 12 predstavlja nezadovoljstvo, od 12 do 16 ambivalentnost, a od 16 do 24 zadovoljstvo. Ukupna skala se takođe deli na ova 3 modaliteta, gde opseg od 36 do 108 predstavlja nezadovoljstvo, od 108 do 144 ambivalentnost i od 144 do 216 zadovoljstvo.

Na izabranom uzorku, Krombahovim koeficijentom alfa, pokazana je pouzdanost skale od 0.81, što pokazuje veoma dobru pouzdanost i unutrašnju saglasnost skale za ovaj uzorak.

Metodom analize predmet istraživanja je raščlanjen na njegove sastavne delove, tako da su razvrstavanjem i grupisanjem određenih pitanja iz upitnika (anketa) koje su ispitanici popunili, metodom sinteze dobijeni pojedinačni rezultati predmeta istraživanja koji se grupišu u složenije celine, po principu mogućih uzajamnih veza i odnosa.

Statistička obrada podataka za 2014. i 2019. godinu, izvršena je putem programa SPSS ver.18 for Windows, u kome su obrađeni podaci grupisani, dok su Deskriptivnom statističkom analizom, dobijeni rezultati predstavljeni u vidu minimuma, maksimuma, rasporeda učestalosti, procenata, aritmetičke sredine i standardne devijacije, odnosi i veze sa kategorijskom podelom na skali za zadovonjstvo poslom i svim njenim subskalama. T test nezavisnih uzoraka upotrebljen je za poređenje srednje vrednosti na skali za zadovoljstvo poslom i svim njenim subskalama za oba ispitivana perioda kao i kategorijska podela na subskalama i ukupnoj skali za zadovoljstvo poslom. Standardnom višestrukom regresionom analizom vršeno je određivanje uticaja godina starosti, ukupnog radnog staža, radnog staža na aktuelnom radnom mestu i mesečnih primanja urađeno je kroz nekoliko standardnih višestrukih regresionih analiza na skali za zadovoljstvo poslom i svim njenim subskalama koje prikazuju zadovoljstvo platom, napredovanjem, rukovođenjem, beneficijama, nagrađivanjem, radnim procedurama, prirodom posla, saradnicima i komunikacijama.

Rezultati

Rezultati dobijeni ispitivanjem zadovoljstva poslom zaposlenih u komunalnoj policiji Republike Srbije za 2014. i 2019. godinu

Deskriptivnom statistikom određen je minimum, maksimum, srednja vrednost i standardna devijacija na skali za zadovoljstvo poslom i svim njenim subskalama koje prikazuju zadovoljstvo platom, napredovanjem, rukovođenjem, beneficijama, nagrađivanjem, radnim procedurama, prirodom posla, saradnicima i komunikacijama (Tabela 1).

Tabela 1. Deskriptivna statistika na skali za zadovonjstvo poslom i svim njenim subskalama za 2014. i 2019. godinu

Skala za Zadovonjstvo poslom sa subskalama	Godina	N	Minimum	Maksimum	Srednja vrednost	Standardna devijacija
Zadovoljstvo platom	2014.	236	4	21	10.30	4.393
	2019.	191	4	24	11.23	4.858
Zadovoljstvo napredovanjem	2014.	236	4	24	10.65	4.396
	2019.	191	4	19	10.43	3.577
Zadovoljstvo rukovođenjem	2014.	236	4	24	**18.41**	4.234
	2019.	191	4	24	**16.38**	4.559
Zadovoljstvo beneficijama	2014.	236	4	20	9.31	4.072
	2019.	191	4	21	10.30	4.805
Zadovoljstvo nagrađivanjem	2014.	236	4	24	11.83	4.293
	2019.	191	4	20	12.30	4.242
Zadovoljstvo radnim procedurama	2014.	236	4	24	12.58	3.706
	2019.	191	4	21	12.97	3.345
Zadovoljstvo prirodom posla	2014.	236	4	24	13.56	4.983
	2019.	191	4	23	13.28	4.225
Zadovoljstvo saradnicima	2014.	236	4	23	15.58	3.745
	2019.	191	8	24	**16.40**	3.460

Zadovoljstvo komunikacijama	2014.	236	9	23	15.50	2.784
	2019.	191	6	24	15.58	3.977
Ukupno zadovoljstvo poslom	2014.	236	41	181	117.81	20.207
	2019.	191	59	163	118.86	21.805
N – broj ispitanika						

Rezultati su pokazali da na skali za zadovoljstvo i svim njenim subskalama (Tabela 1.), postoje više modaliteta sa minimumom 4, ali postoje i više modaliteta se maksimumom u visini od 24. Najviša srednja vrednost je 18.41 i javlja se kod zadovoljstva rukovođenjem u 2014. godini, dok je u 2019. godini srednja vrednost zadovoljstva rukovođenjem bila 16.38, za 11% manje dok je saradnja sa saradnicima bila 16.38.

Inače ne postoje statistički značajna razlika u rezultatima iako postoji razlika u srednjim vrednostima.

T testom nezavisnih uzoraka upoređivane su srednje vrednosti na skali za zadovoljstvo poslom i svim njenim subskalama za oba ispitivana perioda. Rezultati ukazuju da je statistički značajna razlika pokazana između srednjih vrednosti na subskalama za zadovoljstvo rukovođenjem p=.000**, zadovoljstvo beneficijama p=.025*, i zadovoljstvo saradnicima p=.018* dok ukupno zadosvoljstvo poslom nije pokazalo statistički značajnu razliku izmđu ova dva perioda kod ispitivane grupe komunalnih policajaca p<.05 (tabela 2.).

Tabela 2. Poređenje skale za zadovoljstvo poslom i njenih subskala za 2014. i 2019. godinu - Srednja vrednost i Standardna devijacija

Skala za Zadovonjstvo poslom sa subskalama	Period	*N*	Srednja vrednost	Standardna devijacija	*t*	*df*	*p*
Zadovoljstvo platom	2014	236	10.39	4.393	-1.846	425	.066
	2019	191	11.23	4.858		425	
Zadovoljstvo	2014	236	10.65	4.396	.568	425	.57

napredovanjem	2019	191	10.43	3.577		425	1
Zadovoljstvo rukovođenjem	**2014**	236	**18.41**	4.234	4.722	425	.000 **
	2019	191	16.38	4.558		425	
Zadovoljstvo beneficijama	2014	236	9.31	4.072	- 2.253	425	.02 5*
	2019	191	**10.30**	4.805		425	
Zadovoljstvo nagrađivanjem	2014	236	11.83	4.293	- 1.130	425	.25 9
	2019	191	12.30	4.242		425	
Zadovoljstvo radnim procedurama	2014	236	12.58	3.706	- 1.148	425	.25 2
	2019	191	12.97	3.345		425	
Задовољство природом посла	2014	236	13.56	4.986	.632	425	.52 8
	2019	191	13.28	4.225		425	
Zadovoljstvo saradnicima	2014	236	15.58	3.745	- 2.367	425	.01 8*
	2019	191	**16.40**	3.460		425	
Zadovoljstvo komunikacijama	2014	236	15.50	2.784	- .223	425	.82 3
	2019	191	15.58	3.977		425	
Ukupno zadovoljstvo poslom	2014	236	117.81	20.207	- .515	425	.60 7
	2019	191	118.86	21.805		425	
** statistička značajnost na nivou p<.05							

Poređenje srednjih vrednosti na skali za zadovoljstvo poslom i njenih subskala za period 2014. i 2019. godine (Tabela 2.), pokazalo je da su komunalni policajci u 2014. godini bili zadovoljniji rukovođenjem (18.41), dok su 2019. godine bili zadovoljniji beneficijama (10.30) i saradnicima (16.40).

Ukupno zadosvoljstvo poslom nije pokazalo statistički značajnu razliku izmđu ova dva perioda kod ispitivane grupe komunalnih policajaca.

U 2014. i 2019. godini, Deskriptivnom statistikom prikazani su rezultati u kategorijskoj podeli na subskalama i ukupnoj skali za zadovoljstvo poslom gde su ispitanici podeljeni na nezadovoljne, ambivalentne i zadovoljne (Tabela 3.).

Tabela 3. Kategorijska podela na subskalama i ukupnoj skali za zadovoljstvo poslom za 2014. i 2019. godinu

Skala za Zadovoljstvo poslom sa subskalama	Godina	Nezadovoljni	Ambivalentni	Zadovoljni
		N (%)	*N (%)*	*N (%)*
Zadovoljstvo platom	2014	**147 (62.3)**	63 (26.7)	26 (11.0)
	2019	97 (50.8)	**70 (36.6)**	**24 (12.6)**
Zadovoljstvo napredovanjem	2014	**139 (58.9)**	75 (31.8)	**22 (9.3)**
	2019	111 (58.1)	**65 (34.0)**	15 (7.9)
Zadovoljstvo rukovođenjem	2014	16 (6.8)	38 (16.1)	**182 (77.1)**
	2019	**28 (14.7)**	**66 (34.6)**	97 (50.8)
Zadovoljstvo beneficijama	2014	**166 (70.3)**	55 (23.3)	15 (6.4)
	2019	104 (54.5)	**73 (38.2)**	**14 (7.3)**
Zadovoljstvo nagrađivanjem	2014	**107 (45.3)**	94 (39.8)	35 (14.8)
	2019	76 (39.8)	**78 (40.8)**	**37 (19.4)**
Zadovoljstvo radnim procedurama	2014	**83 (35.2)**	127 (53.8)	26 (11.0)
	2019	51 (26.7)	**117 (61.3)**	**23 (12.0)**

Zadovoljstvo prirodom posla	2014	**98 (41.5)**	73 (30.9)	65 (27.5)
	2019	62 (32.5)	**77 (40.3)**	52 (27.2)
Zadovoljstvo saradnicima	2014	**42 (17.8)**	100 (42.4)	94 (39.8)
	2019	11 (5.8)	**93 (48.7)**	**87 (45.5)**
Zadovoljstvo komunikacijama	2014	24 (10.2)	**122 (51.7)**	**90 (38.1)**
	2019	**31 (16.2)**	91 (47.6)	69 (36.1)
Ukupno zadovoljstvo poslom	2014	**81 (34.3)**	125 (53.0)	**30 (12.7)**
	2019	54 (28.3)	**118 (61.8)**	19 (9.9)
N (%) – broj ispitanika (izraženo u procentima)				

Analizom kategorijske podele na subskali i ukupnoj skali za zadovoljstvo poslom u 2014. i 2019. godini dobijeni su rezultati koji ne predviđaju sjajnu budućnost u radu komunalne policije. Rezultati su pokazali da je:

- Nezadovoljnih komunalnih policajaca je bilo u 2014. godini i to 34.3%, dok ih je u 2019. godini bilo 28.3%.
- Ambivalentnih komunanih policajaca bilo u 2014. godini i to 53.0%, dok je u 2019. godini bilo ambivalentnih 61.8%.
- Komunalni policajci koji su bili zadovoljni poslom bilo je 12.7% u 2014. godini i 9.9% u 2019. godini.

Određivanje međusobnog uticaja postavljenih varijabli na Zadovoljstvo poslom zaposlenih, standardnom Višestrukom Regresionom Analizom, za 2014. i 2019. godinu

Određivanja uticaja godina starosti, ukupnog radnog staža, radnog staža na aktuelnom radnom mestu i mesečnih primanja urađeno je kroz nekoliko standardnih višestrukih regresionih analiza na skali za zadovoljstvo poslom i svim njenim subskalama koje prikazuju zadovoljstvo platom, napredovanjem, rukovođenjem, beneficijama, nagrađivanjem, radnim procedurama, prirodom posla, saradnicima i komunikacijama za 2014. i 2019. godinu.

Određivanja uticaja na Zadovoljstvo poslom za 2014. godinu

U prvoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 2.8% zadovoljstva platom. U modelu **jedini statističi značajan doprinos daje ukupni radni staž** (β =.198, p =.044) (Tabela 4).

U drugoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 5.2% zadovoljstva napredovanjem, U modelu **jedini statističi značajan doprinos daje radni staž na aktuelnom radnom mestu** (β = .148, p =.030) (Tabela 4).

U trećoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 10.3% zadovoljstva rukovođenjem. U modelu **najveći statističi značajan doprinos daju godine starosti** (β = .512, p =.000), a **potom ukupni radni staž** (β = -.253, p =.008) (Tabela 4).

Tabela 4. Standardna višestruka regresiona analiza za zavisne varijable zadovoljstvo platom, napredovanjem i rukovođenjem

Prediktori	Zadovoljstvo platom			Zadovoljstvo napredovanjem			Zadovoljstvo rukovođenjem		
	R^2	F	β	R^2	F	β	R^2	F	β
	.028	2.570*		.052	3.978**		.103	7.193***	
Godine starosti			-.030			.148			.512***
Radni staž ukupno			.198*			.115			-.253**
Radni staž na ovom radnom mestu			.019			-.148*			-.047
Mesečna primanja			.095			-.145			-.112
Statistička značajnost na nivoy p<.05*, p<.01**, p<.001***									

U četvrtoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 1% zadovoljstva beneficijama, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

U petoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 0.8%

zadovoljstva nagrađivanjem, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

U šestoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 0.8% zadovoljstva radnim procedurama, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos**.

*U sedmo*j standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 7.1% zadovoljstva prirodom posla. U modelu **jedini statističi značajan doprinos daje ukupni radni staž** (β = .324, p =.001) (Tabela 5).

U osmoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 0.7% zadovoljstva saradnicima, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

U devetoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 6.3% zadovoljstva komunikacijama. U modelu **jedini statističi značajan doprinos daje ukupni radni staž** (β = .231, p =.017), (Tabela 5).

U desetoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 4.3% ukupnog zadovoljstva poslom, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

Tabela 5. Standardna višestruka regresiona analiza za zavisne varijable zadovoljstvo prirodom posla i komunikacijama

Prediktori	Zadovoljstvo prirodom posla			Zadovoljstvo komunikacijama		
	R^2	F	β	R^2	F	β
	.071	5.090**		.063	4.609**	
Godine starosti			-.074			.082
Radni staž ukupno			.324**			.231*
Radni staž na ovom radnom mestu			-.057			-.050
Mesečna primanja			-.149			-.059

Statistička značajnost na nivou $p<.05^*$, $p<.01^{**}$, $p<.001^{***}$

Određivanja uticaja na Zadovoljstvo poslom za 2019. godinu

U prvoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 5.9% zadovoljstva platom. U modelu **jedini statističi značajan doprinos daje mesečna primanja** (β = .214, p =.003) (Tabela 6).

U drugoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 0.8% zadovoljstva napredovanjem. U modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

U trećoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 8.0% zadovoljstva rukovođenjem. U modelu **najveći statističi značajan doprinos daje radni staž na ovom radnom mestu** (β = -.220, p =.007), **a потом месечна примања** (β = -.181, p =.021), (Tabela 6).

U četvrtoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 0.4% zadovoljstva beneficijama, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

U petoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 2.9% zadovoljstva nagrađivanjem, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

U šestoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 1.2% zadovoljstva radnim procedurama, ali, u modelu, **ni jedna varijabla nije dala statističi značajan doprinos.**

Tabela 6. Standardna višestruka regresiona analiza za zavisne varijable zadovoljstvo platom, napredovanjem i rukovođenjem

Prediktori	Zadovoljstvo platom			Zadovoljstvo napredovanjem			Zadovoljstvo rukovođenjem		
	R^2	F	β	R^2	F	β	R^2	F	β

	.059	3.892**		-	-	-	.080	5.023 **	
Godine starosti			-.086						.215
Radni staž ukupno			.216						.055
Radni staž na ovom radnom mestu			-.036						-.220**
Mesečna primanja			.214*						-.181*
Statistička značajnost na nivou p<.05*, p<.01**, p<.001***									

U sedmoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 7% zadovoljstva saradnicima. U modelu **najveći statističi značajan doprinos daju godine starosti** (β = .492, p =.002), a potom **ukupni radni staž** (β = -.348, p =.026) (Tabela 7).

U osmoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 20.8% zadovoljstva prirodom posla. U modelu **najveći statističi značajan doprinos daju godine starosi** (β = .163, p =.000), a **potom mesečna primanja** (β = -.292, p =.000) (Tabela 7).

U devetoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 5% zadovoljstva komunikacijama. U modelu **jedinstveni statističi značajan doprinos daje ukupni radni staž** (β = .321, p =.034) (Tabela 7).

Tabela 7. Standardna višestruka regresiona analiza za zavisne varijable zadovoljstvo saradnicima, prirodom posla i komunikacijama

Prediktori	Zadovoljstvo saradnicima			Zadovoljstvo prirodom posla			Zadovoljstvo komunikacijama		
	R^2	F	β	R^2	F	β	R^2	F	β
	.070	4.463**		.208	13.174 ***		.050	3.422 *	

Godine starosti			.492**			-.163***			-.038
Radni staž ukupno			-.348*			.569			.321*
Radni staž na ovom radnom mestu			-.025			-.096			-.103
Mesečna primanja			.101			-.292***			-.080
Statistička značajnost na nivou p<.05*, p<.01**, p<.001***									

U desetoj standardnoj višestrukoj regresionoj analizi mesečna primanja, radni staž na ovom radnom mestu, ukupni radni staž i godine starosti objasnile su 5.4% ukupnog zadovoljstva poslom. U modelu **jedinstveni statističi značajan doprinos daje ukupni radni staž** (β = .352, p =.026) (Tabela 8).

Tabela 8. Standardna višestruka regresiona analiza za zavisne varijable ukupno zadovoljstvo poslom

Prediktori	Ukupno zadovoljstvo poslom		
	R^2	F	β
	.054	3.637**	
Godine starosti			-.070
Radni staž ukupno			.352*
Radni staž na ovom radnom mestu			-.050
Mesečna primanja			-.022
Statistička značajnost na nivou p<.05*, p<.01**, p<.001***			

Diskusija

Planovi razvoja, kako materijalnih tako i nematerijalnih nagrada za uspešno izvršene zadatke komunalnih policajaca nisu više deo retorike rukovodstva gradova kao ni građana. Nematerijalno nagrađivanje u vidu pohvala, potvrda o dobro izvršenim zadacima i pomoći u rešavanju problema, nestalo je i od strane korisnika usluga - građana (fizičkih i pravnih lica). Uvažavanje ličnosti i integriteta komunalnih policajaca kao službenih lica koja su u svojstvu servisa građana, dostiglo je izuzetno nizak nivo u gradovima gde je oformljena kao i u društvu uopšte.

Faktore koji su uticali na zadovonjstvo komunalnih policajaca, koji se nalaze na subskali i ukupnoj skali za zadovoljstvo poslom, deo su organizacione strukture komunalne policije i njenog rukovodstva i to su nezadovoljstvo, amotivisanost i zadovoljstvo zaposlenih. Shodno njihovim međusobnim korelacijama u kojima se nalaze, u isto vreme su i prediktori efikasnog poslovanja (Manić et al. 2020).

Deskriptivnom statistikom na skali za zadovonjstvo poslom i svim njenim subskalama za 2014. i 2019. godinu, tokom istraživanja, dobilo se više modaliteta sa minimumom u visini 4, i više modaliteta sa maksimumom od 24.

U 2014. godini komunalni policajci su bili najzadovoljniji rukovođenjem dok su u 2019. godini bili zadovoljni rukovođenjem i radom sa saradnicima. Međutim deskriptivna analiza je pokazala da ne postoji statistički značajna razlika u rezultatima iako postoji razlika u srednjim vrednostima.

Poređivanjem srednjih vrednosti na skali za zadovoljstvo poslom i svim njenim subskalama za oba ispitivana perioda, dobijeni rezultati ukazuju na statistički značajne razlike pokazane između srednjih vrednosti na subskalama za zadovoljstvo rukovođenjem, zadovoljstvo beneficijama i zadovoljstvo saradnicima, dok ukupno zadosvoljstvo poslom nije pokazalo statistički značajnu razliku izmđu ova dva perioda. Ovo pokazuje da su komunalni policajci u 2014. godini bili zadovoljniji rukovođenjem (18.41), dok su 2019. godine bili zadovoljniji beneficijama (10.30) i saradnicima (16.40). Ovo je i možda očekivano iz ugla radnika komunalne policije. U 2014. godini oni su bili početnici u ovoj novoj službi i prva generacija koja se najviše oslanjala na svoje neposredne rukovodioce jer su im oni bili potpora i sigurnost u izvršavanju zadataka. Sa iskustvom od nekoliko godina (2014. - 2019.) u komunikaciji sa saradnicima i nekim dobijenim benificijama (noćni rad, slobodni dani za višak odrađenih sata, kvalitetna oprema) rezultati ukazuju da postoji statistički značajna razlika između srednjih vrednosti na subskalama za zadovoljstvo rukovođenjem, zadovoljstvo beneficijam i zadovoljstvo saradnicima, dok ukupno zadosvoljstvo poslom nije pokazalo statistički značajnu razliku između ova dva perioda.

U analizi kategorijskih podela na subskalama i ukupnoj skali za zadovoljstvo poslom na nezadovoljne, ambivalentne i zadovoljne, rezultati su pokazali veoma visoku ambivalentnost - ravnodušnost (61.8%) u 2019. godini, iako ni u 2014. godini nije bila mala (53.0%). Nezadovoljnih komunalnih policajaca je bilo više u 2014. godini (34.3%), dok je zadovoljnih bilo veoma malo i 2014. (12.7%) i 2019. (9.9%) godine.

Nezadovoljstvo se smanjilo zbog beneficija koje su dobijene i povećane tolerancije rukovodioca. Ima uticaj iskustvo u radu koje je podiglo nivo komunikacije sa saradnicima i unutar same organizacije. Na nezadovoljstvo je uticala učestala kampanja protiv komunalne policije koju su vodili političarai kako bi nalazili krivce za svoju nestručnost i nesposobnost. Ovo je prešlo u ravodušnost komunalnih policajaca koji su se povukli u sebe, izolovali se u svom svetu, krenuli u ličnu privatnu edukaciju i usavršavanje, što je uzrokovalo odlaskomm velikog broja zaposlenih u komunalnoj policiji na druga radna mesta.

Određivanje međusobnog uticaja postavljenih varijabli na zadovoljstvo poslom zaposlenih, putem višestruke regresione analize, došlo se do određenih saznanja, tako da u 2014. godini najveći statističi značajan doprinos na zadovoljstvo rukovođenjem daju godine starosti i ukupni radni staž. Radni staž aktuelnom radnom mestu **s**tatističi ima značajan doprinos na zadovoljstvo napredovanjem ali kroz benefite a nikako kao napredak u hiararhiji komandovanja. Sa radim stažom se povećava i platata kao određeni benefit zaposlenima u službi. Dobijeni rezultati potvrđuje predhodno dobijene rezultate, jer sa godinama starosti i iskustvom na ovom radnom mestu, dolazi do ozbiljnijeg pristupa poslu, ponovnih ili sličnih situacija u radu i samim tim većeg poštovanja rukovodioca, koji je deo zajedničkog rada.

Kao zatvoren sistem koji se kontroliše iz Ministarstva za državnu upravu lokalnu samoupravu a ne iz Gradske uprave koji je osnivač komunalne policije, već unapred po političkoj liniji menja se zakon i druga podzakonska akta koja omogućuju pojedincima da mogu da budu rukovodioci ove službe.

Za 2019. godinu, određivanje međusobnog uticaja postavljenih varijabli na zadovoljstvo poslom zaposlenih, putem višestruke regresione analize, došlo se do statističkog značajanog doprinosa u odnosu na zadovoljstvo platom koje daju mesečna primanja što se manifestuje povećanomplatom koja prouzrokuje zadovoljstvo. Statističi značajan doprinos daje radni staž na ovom radnom mestu, zatim mesečna primanja na zadovoljstvo rukovođenjem, što potvrđuje predhodne navedene rezultate. Najveći statističi značajan doprinos daju godine starosti na zadovoljstvo prirodom posla i zadovoljstvo saradnicima, što je pokazatelj iskustva, naučenog zakona o komunalnoj policiji – komunalnonoj miliciji i drugih zakona i pozakonskih akata, članova i poslovne rutine u rešavanju postavljenih zadataka. Veća plata u odnosu na prethodne godine rada doprinosi blagostanju zaposlenih i kvalitetnom radu, kao i radni staž koji utiče na zadovoljstvo u komunikacijama unutar organizacije ali i na terenu sa trećim licima i saradnicima.

U prikazanom modelu, jedinstveni statističi značajan doprinos daje ukupni radni staž na ukupno zadovoljstvo poslom, što se može objasniti da su zaposleni u komunalnoj policiji kroz iskustvo na radnom mestu zadovoljniji jer su mnogo ambivalentniji. Sama ambivalentnost utiče na efikasnost u rešavanje postavljenih zadataka ali sa iskustvom je potrebno i mnogomanje vremena da se zadatak izvrši.

Svi ovi podaci dobijeni istraživanjem, dovode do zaključka da je ovakvo poslovanje, koje se bazira na godine starosti, radnom iskustvu i plati kao benefitima je neodrživo. Hitne mere u pravcu pronalaženja motiva i motivatora u cilju da se podigne zadovoljstvo zaposlenih u komunalnoj policiji, moraju da prevaziđu sujetu pojedinaca, partijsku liniju zapošljavanja i neadekvatne stručnjake, kako bi zamišljena služba komunalne policije imala dugoročnu viziju i ispunjenje svoje misije „da bude servis građana“ a ne pojedinaca

U nastavku teksta osvrnućemo se na neka od istraživanja zadovoljstva poslom zaposlenih sa paralelom istraživanja ovog naučnog rada.

Istraživanja Pavlovića i Markovića (Pavlović & Marković, 2014), potvrđuju i istraživanja sprovedena u ovom radu u kome su zaposleni u komunalnoj policiji zadovoljniji ukoliko su adekvatno nagrađeni, zadovoljni su radnim procedurama i uslovima rada i zadovoljni su međuljudskim odnosima sa kolegama. Pozitivna atmosfera u organizaciji i osećaj pripadnosti daju veći učinak zaposlenih u komunalnoj policiji.

Stivens (Stevens, 2008) u svom radu „Police officer stress: sources and solutions“, konstantuje da radnici policije često imaju osećaj nelagodnosti zbog negativnih medijskih kampanja koje se vode protiv policije (Julseth et al., 2011).

Tanasijević (Tanasijević, 2006) u svom istraživanju „Zadovoljstvo zaposlenih“, predočava da se efikasnost i efektivnost jedne organizacije u savremenom poslovanju ne meri se samo profitom, već i kvalitetom radnog potencijala i njegovim merenjem.

U 2019. godini, eksterni i interni uticaji na komunalnu policiju doprineli su da se zaposleni u komunalnoj policiji okreću sebi i svojim ličnim ciljevima, kao najboljem načinu za adekvatno rešavanje postavljenih zadataka. Tako su svoje stečeno iskustvo i profesionalni odnos prema radnim obavezama, iskoristili da se izoluju od sve većeg uticaja okoline i politike, stekli su osećaj kolegijalne povezanosti kako bi se odbranili od okoline i prevazišli nekorektne i neprimerne napade na službu i njih lično, poistovećavajući ih sa neradnicima i političkim neistomišljenicima, kako od strane opozicije, tako i od strane vladajuće strukture.

Radna motivacija komunalnih policajaca, najčešće je nastajala kao proizvod ličnih stavova, samopoštovanja i osećaja samoodgovornosti lica koja rade po pravilima službe, sprovode zakone i ostala pravna akta Republičkih i Lokalnih vlasti. Sa osećajem ličnog značaja zadataka koje sprovode, komunalni policajci određuju intenzitet rada, vreme i hitnost u izvršenju istih i to sve u saglasnosti doživljaja na ličnom planu.

Zaključak

Nemogućnost uticaja na eksterne uslove rada, primorali su zaposlene na bežanje od spoljašnjih uticaja i kompenzaciju sa unutrašnjim ličnim razvojem. Došlo je do zanemarivanja i zamene mišljenja okoline sa ličnim stavovima, samokontrole u postupanju i radu sa rukovodiocima, samoodređenja intenziteta rada i intenziteta određenog za dodeljeni zadatak i lično određivanje kvaliteta pružene usluge. Sam način rada u okolnostima u kojima se odvija, kod komunalnih policajaca je dovelo do povećane amotivisanosti, drastično povećao visinu ambivalentnog ponašanja i nezadovoljstvo poslom, što je dovelo do smanjenja broja zaposlenih komunalnih policajaca.

Ovakva struktura organizacione jedinice kao što je komunalna policija, ne sme da dozvoli sebi ovako visok procenat ambivalentno i nezadovoljnih radnika. Propuste i odnose treba korigovati prema potrebama zaposlenih, kako bi se smanjio odliv komunalnih policajaca, podigao profesinalizam službe, povećala motivisanost i zadovoljstvo poslom zaposlenih i podigla efikasnost na još viši nivo produktivnosti.

U budućnosti je potrebno sprovesti brojnija istraživanja na temu zadovoljstva zaposleni u komunalnoj policijii. Potrebno je sistematski raditi na medijskoj edukacija građana, rukovodilaca i saradnika komunalne policije, zaštititi komunalne policajce od politizacije i zloupotrebe u bilo koju svrhu, omogućiti nesmetan rad kako bi doprineli podizanju kvaliteta rada, efikasnosti istog i stvaranja pozitivne atmosfere u društvu, u kome je komunalna policija neodvojivi deo istog društva.

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JOB SATISFACTION OF EMPLOYEES IN THE MUNICIPAL POLICE (MILITIA) OF THE REPUBLIC OF SERBIA

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Original scientific paper

Abstract

The research was designed as a cross-sectional study in two time periods (2014 and 2019) on a selected sample in 12 cities of the Republic of Serbia. It aims to find out about the level of job satisfaction of employees in the municipal police (Official Gazette of the RS, No. 51/2009) - militia (Official Gazette of the RS, No. 49/2019). In order to obtain valid results from the respondents, the measurement of the degree of satisfaction was carried out by means of an anonymous standardized questionnaire for measuring job satisfaction - Job Satisfaction Survey (JSS). The collected data were processed by Descriptive statistical analysis (Macura, Kovačević, 2018), determined is medium value, relationships and connections with categorical by division on the subscales and total scales For pleasure by work: dissatisfied, ambivalent and satisfied. T test of independent samples performed is a comparison of mean values on the job satisfaction scale and all its subscales. Standard multiple regression analysis of certain is mutual and influence and statistics the significance of the set variables on Employee Job Satisfaction. The results showed a statistically significant influence between the subscales on the job satisfaction scale, where the greatest influence on employee dissatisfaction in 2014 was the salary, promotion, benefits, rewards and the very nature of the job. The greatest influence on employee ambivalence was satisfaction with work procedures and satisfaction with communications in 2014, while in 2019 the greatest influence on employee ambivalence was satisfaction with co-workers, rewards, the very nature of work and communication.

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JEL: O15; E20

Introduction

Communal Police is very much significant resource which one directly and indirectly influence on the creation communal order and our life the middle (Crepelle et al., 2022; Soltes et al., 2021; Benito et al., 2021; Allen, 2021). Implementation of the Law and others legal akata, strictly are defined and they have to literally respect and carry out from the sides employees in communal to the police Republic of Serbia.

Workers communal of the police are bearers operational tasks in organization and link in creation social relationship between organizations (city administration, department communal police) and user service (police administration, public companies, inspection services, legal persons, entrepreneurs and individuals). Good organization and management of the organization are factors that directly affect employee satisfaction.

The issue of job satisfaction and motivation of employees is one of the most important issues that has gained increasing importance recently (Riyanto et al., 2021; Crucke et al., 2021; Marta et al., 2021; Hitka et al., 2021; Đorđević, 2021). The way in which employees are managed, that is, human resources in the organization, has a significant impact on the success and survival of the organization in a highly competitive environment. Also, it is undeniable that issues of employee satisfaction and motivation must be managed strategically (Wedajo & Chekole, 2020; Bailey et al., 2018; Wright et al., 2005; Armstrong & Baron, 2002).

Historically, the introduction of job satisfaction in scientific circles was done by Hoppock who believes that job satisfaction is a combination of psychological and physiological circumstances, as well as environmental circumstances that cause the employee to say: "I am satisfied with my job" (Hoppock, 1935, according to Wright, 2006). Over time, the researcher's views took a form that united the social and economic part of business with a humanitarian view of the employee in the organization. In the municipal police, this direction of research is very little represented because there is no will of the management structures for this type of improvement and development of human resources. It all comes down to the economics of the business.

Measuring employee satisfaction is an unavoidable part of the organization's management process, which means that an effective management process implies an efficient and effective measurement system (Pinković, 2010). For the purposes of measuring employee satisfaction, Tanasijević shows established areas of satisfaction and satisfaction indicators within them (Tanasijević, 2006).

The measurement of employee satisfaction in this research work was carried out in two time periods, in 2014 and 2019. In 2014, the research covered 12 cities on the territory of the Republic of Serbia. There were 236 valid questionnaires included in the analysis. In 2019, the research covered the same cities and there were 191 valid questionnaires included in the analysis.

The results of the surveys can be used as a starting point in prevention and business strategy, but also as an innovation that can be implemented in the business of municipal police organizations as well as other services that do similar work with tangible and intangible indicators in their work. The importance of this research is also reflected in the direct applicability of research results in practice and their application in other social systems where motivation and satisfaction have a direct impact on their economic efficiency (for example, the police system of the state).

Materials and methods

The presented research covers 12 cities of the Republic of Serbia, which is 52.2% of the total number of cities in the territory that have established municipal police within their Local Self-Governments.

In 2014, in the cities where the research was conducted, a total of 282 questionnaires were distributed, of which 263 questionnaires were returned (93.3%), while 236 valid ones were included in the analysis (89.7%) of respondents. Among the respondents who returned the surveys, there were 78 female community police officers (33.1%) and 158 male community police officers (66.9%).

In 2019, in the same cities, 229 questionnaires were distributed, of which 209 questionnaires were returned (91.3%), of which 191 were valid (91.4%), included in the analysis. Among the respondents there were 47 female municipal police officers (24.6%) of respondents and 144 male municipal police officers (75.4%).

The basis of the research is the empirically based theory of Paul Spector (Spector, 1997), according to which job satisfaction is defined as "what a person feels about his job and various aspects of his job", while job satisfaction is measured using a standardized questionnaire, the "Job Satisfaction Survey" (JSS).

The scale consists of 36 statements and is divided into 9 subscales related to salary, promotion, leadership, benefits, rewards, work procedures, co-workers, nature of work and communication. Scores are on each of the nine facet subscales (4 items each). Scores can range from 4 to 24; while the results of overall job satisfaction, based on the sum of all 36 items, can be in the range from 36 to 216. Respondents answer the extent to which this statement applies to them personally, and in the range from 1 to 6 (1 - and do not agree at all, 6 - and completely agree). The total score on the subscales can be divided into 3 modalities of satisfaction, where the range from 4 to 12 represents dissatisfaction, from 12 to 16 ambivalence, and from 16 to 24 satisfaction. The overall scale is also divided into these 3 modalities, where the range from 36 to 108 represents dissatisfaction, from 108 to 144 ambivalence and from 144 to 216 satisfaction.

On the selected sample, Krombach's alpha coefficient showed a reliability of the scale of 0.81, which shows very good reliability and internal agreement of the scale for this sample.

Using the method of analysis, the research object is broken down into its constituent parts, so that by sorting and grouping certain questions from the questionnaire (survey) that the respondents filled out, the synthesis method obtained individual results of the research object, which are grouped into more complex units, according to the principle of possible mutual connections and relationships.

statistical processing of the data for 2014 and 2019 was carried out using the *SPSS ver.18 for Windows program*, in which the processed data were grouped, while the results obtained with the descriptive statistical analysis were presented in the form of minimum, maximum, frequency distribution, percentages, arithmetic means and standard deviations, ratios and correlations with the categorical division of the job satisfaction scale and all its subscales. T test independent samples used is for comparison mean values on the job satisfaction scale and all its subscales for both examined periods, as well as the categorical division on the subscales and the overall job satisfaction scale. A standard multiple regression analysis was used to determine the influence of age, total length of service, length of service at the current workplace and monthly income was performed through several standard multiple regression analyzes on the job satisfaction scale and all its subscales that show satisfaction salary, promotion, leadership, benefits, rewards, work procedures, nature of work, co-workers and communications.

Results

Results obtained by questioning pleasures by work employees in communal to the police Republic Serbia for 2014 and 2019

Descriptive statistics determined is minimum, maximum, mean value and standard deviation on the scales for pleasure by work and to all hers subscales who is show pleasure salary, advancement, management, benefits, rewarding, working procedures, nature work, associates and communications (Table 1).

Table 1. Descriptive statistics on the job satisfaction scale and all its subscales for 2014 and 2019

Job Satisfaction Scale with subscales	Year	N	The minimu m	The maximum	Middle value	Standard deviation
Satisfaction with salary	in 2014	236	4	21	10.30	4,393
	in 2019	191	4	24	11.23	4,858
Satisfaction with progress	in 2014	236	4	24	10.65	4,396
	in 2019	191	4	19	10.43	3,577
Satisfaction with management	in 2014	236	4	24	**18.41**	4.234
	in 2019	191	4	24	**16.38**	4,559
Satisfaction with benefits	in 2014	236	4	20	9.31	4,072
	in 2019	1 91	4	21	10.30	4,805
Rewarding satisfaction	in 2014	236	4	24	11.83	4.293
	in 2019	191	4	20	12.30	4.242
Satisfaction with work procedures	in 2014	236	4	24	12.58	3,706
	in 2019	191	4	21	12.97	3,345
Satisfaction with	in 2014	236	4	24	13.56	4,983

the nature of work	in 2019	191	4	23	13.28	4,225
Satisfaction with colleagues	in 2014	236	4	23	15.58	3,745
	in 2019	191	8	24	**16.40**	3,460
Satisfaction with communications	in 2014	236	9	23	15.50	2,784
	in 2019	191	6	24	15.58	3,977
Overall job satisfaction	in 2014	236	41	181	117.81	20.207
	in 2019	191	59	163	118.86	21,805
N – number of respondents						

The results showed that on the scale for satisfaction and all its subscales (Table 1), there are several modalities with a minimum of 4, but there are also several modalities with a maximum of 24. The highest mean value is 18.41 and occurs in satisfaction with management in In 2014, while in 2019, the mean value of satisfaction with management was 16.38, 11% less, while cooperation with co-workers was 16.38.

Otherwise, **there are no statistically significant differences in the results,** although there is a difference in the mean values.

The mean values on the job satisfaction scale and all its subscales for both investigated periods were compared using the test of independent samples. The results indicate that a statistically significant difference was shown between the mean values on the subscales for satisfaction with leadership p =.000**, satisfaction with benefits p =.025*, and satisfaction with co-workers p =.018* while overall job satisfaction did not show a statistically significant difference between these two periods in the examined group of communal police officers r <.05 (table 2.).

Table 2. Comparison of the job satisfaction scale and its subscales for 2014 and 2019 - Mean and Standard Deviation

Job Satisfaction Scale with subscales	Period of time	*N*	Middle value	Standard deviation	*t*	*df*	*p*
Satisfaction with salary	in 2014	236	10.39	4,393	- 1. 846	425	.066
	in 2019	191	11.23	4,858		425	
Satisfaction with progress	in 2014	236	10.65	4,396	. 568	425	.57 1
	in 2019	191	10.43	3,577		425	
Satisfaction with management	**in 2014**	236	**18.41**	4.234	4. 722	425	.000 **
	in 2019	191	16. 38	4,558		425	
Satisfaction with benefits	in 2014	236	9.31	4,072	- 2. 253	425	.02 5*
	in 2019	191	**1 0.30**	4,805		425	
Rewarding satisfaction	in 2014	236	11.83	4.293	- 1. 130	425	.25 9
	in 2019	191	12.30	4.242		425	
Satisfaction with work procedures	in 2014	236	12.58	3,706	- 1. 148	425	.25 2
	in 2019	191	12.97	3,345		425	
Satisfaction with the nature of work	in 2014	236	13.56	4,986	. 632	425	.52 8
	in 2019	191	13.28	4,225		425	
Satisfaction with colleagues	in 2014	236	15.58	3,745	- 2. 367	425	.01 8*
	in 2019	191	**16.40**	3,460		425	
Satisfaction with	in 2014	236	15.50	2,784	-.223	425	.82

communications	in 2019	191	15.58	3,977		425	3
Overall job satisfaction	in 2014	236	117.81	20.207	-.5 15	425	.60 7
	in 2019	191	118.86	21,805		425	
** statistical significance at the *r* <.05 level							

A comparison of the mean values on the job satisfaction scale and its subscales for the period of 2014 and 2019 (Table 2), showed that in 2014 municipal police officers were more satisfied with management (18.41), while in 2019 they were more satisfied with benefits (10:30 a.m.) and associates (4:40 p.m.).

Overall job satisfaction did not show a statistically significant difference between these two periods in the examined group of communal police officers.

In 2014 and 2019, Descriptive statistics showed the results in a categorical division on the subscales and the overall scale for job satisfaction, where respondents were divided into dissatisfied, ambivalent and satisfied (Table 3).

Table 3. Categorical division on the subscales and the total scale for job satisfaction for 2014 and 2019

Job Satisfaction Scale with subscales	Year	Dissatisfied	Ambivalent	Satisfied
		N (%)	*N (%)*	*N (%)*
Satisfaction with salary	in 2014	**147 (62.3)**	63 (26.7)	26 (11.0)
	in 2019	97 (50.8)	**70 (36.6)**	**24 (12.6)**
Satisfaction with progress	in 2014	**139 (58.9)**	75 (31.8)	**22 (9.3)**
	in 2019	111 (58.1)	**65 (34.0)**	15 (7.9)
Satisfaction with management	in 2014	16 (6.8)	38 (16.1)	**182 (77.1)**
	in 2019	**28 (14.7)**	**66 (34.6)**	97 (50.8)
Satisfaction with	in 2014	**166 (70.3)**	55 (23.3)	15 (6.4)

benefits	in 2019	104 (54.5)	**73 (38.2)**	**14 (7.3)**
Rewarding satisfaction	in 2014	**107 (45.3)**	94 (39.8)	35 (14.8)
	in 2019	76 (39.8)	**78 (40.8)**	**37 (19.4)**
Satisfaction with work procedures	in 2014	**83 (35.2)**	127 (53.8)	26 (11.0)
	in 2019	51 (26.7)	**117 (61.3)**	**23 (12.0)**
Satisfaction with the nature of work	in 2014	**98 (41.5)**	73 (30.9)	65 (27.5)
	in 2019	62 (32.5)	**77 (40.3)**	52 (27.2)
Satisfaction with colleagues	in 2014	**42 (17.8)**	100 (42.4)	94 (39.8)
	in 2019	11 (5.8)	**93 (48.7)**	**87 (45.5)**
Satisfaction with communications	in 2014	24 (10.2)	**122 (51.7)**	**90 (38.1)**
	in 2019	**31 (16.2)**	91 (47.6)	69 (36.1)
Overall job satisfaction	in 2014	**81 (34.3)**	125 (53.0)	**30 (12.7)**
	in 2019	54 (28.3)	**118 (61.8)**	19 (9.9)
N (%) – number of respondents (expressed as a percentage)				

analysis of the categorical division on the subscale and the overall scale for job satisfaction in 2014 and 2019 yielded results that do not predict a bright future in the work of the communal police. The results showed that:

- dissatisfied communal policemen in 2014, while in 2019 there were 28.3%.
- And in 2014, there were 53.0% of ambivalent communal policemen, while in 2019 there were 61.8% ambivalent.
- Communal police officers who were satisfied with their work were 12.7% in 2014 and 9.9% in 2019.

Determining the mutual influence of set variables on employee job satisfaction, using standard Multiple Regression Analysis, for 2014 and 2019.

Determining the influence of age, total length of service, length of service at the current workplace and monthly income was done through several standard multiple regression analyzes on the job satisfaction scale and all its subscales showing satisfaction with salary, promotion, management, benefits, rewards, work procedures, nature of work, associates and communications for 2014 and 2019.

Determination of the impact on job satisfaction for 2014

In the first standard multiple regression analysis, monthly income, seniority at this job, total seniority, and age explained 2.8% of salary satisfaction. In the model, the **only statistically significant contribution is made by total work experience** (β =.198, r =.044) (Table 4).

In the second standard multiple regression analysis, monthly income, seniority at this workplace, total seniority and years of age explained 5.2% of satisfaction with promotion. In the model, the **only statistically significant contribution is seniority at the current workplace** (β =.148, r =.030) (Table 4).

In the third standard multiple regression analysis, monthly income, length of service at this position, total length of service and years of age explained 10.3% of satisfaction with management. In the model, age (β =.512, r =.000) and **total length of service** (β = -.253, r =.008) **make a significant contribution in the model (Table** 4).

Table 4. Standard multiple regression analysis for dependent variables satisfaction with pay, promotion, and management

Predictors	Satisfaction with salary			Satisfaction with progress			Pleasure leadership		
	R2	*F*	*β*	*R2*	*F*	*β*	*R2*	*F*	*β*
	.028	2,570 *		.052	3,978* *		.10 3	7,193***	
Age			-.030			.148			.51 2***
Total length of service			. 198*			.115			-.253**
Work experience in this position			.019			-.148 *			-.0 47

Monthly income			.095			-.145			-.112
Statistical significance at the level of r<.05*, r<.01**, r<.001***									

In the fourth standard multiple regression analysis, monthly income, length of service at this job, total length of service, and age explained 1% of satisfaction with benefits, but, in the model, **no variable made a statistically significant contribution.**

In the fifth standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 0.8% of reward satisfaction, but in the model, **none of the variables made a statistically significant contribution.**

In the sixth standard multiple regression analysis, monthly income, seniority at this workplace, total seniority and years of age explained 0.8% of satisfaction with work procedures, but, in the model, **not a single variable made a statistically significant contribution.**

In the seventh standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 7.1% of satisfaction with the nature of the job. In the model, the **only statistically significant contribution is made by total work experience** (β =.324, r =.001) (Table 5).

In the eighth standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 0.7% of employee satisfaction, but, in the model, **no variable made a statistically significant contribution.**

In the ninth standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 6.3% of satisfaction with communications. In the model, the **only statistically significant contribution is made by total work experience** (β =.231, r =.017), (Table 5).

In the tenth standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 4.3% of total job satisfaction, but, in the model, **no variable made a statistically significant contribution.**

Table 5. Standard multiple regression analysis for the dependent variables satisfaction with the nature of work and communications

Predictors	Satisfaction with the nature of work			Satisfaction with communications		
	R2	*F*	*β*	*R2*	*F*	*β*
	.071	5,090 **		.063	4,609**	
Age			-.074			.082
Total length of service			.324 **			.231 *
Work experience in this position			-.057			-.050
Monthly income			-.149			-.059
Statistical significance at the level of *r* <.05*, *r* <.01**, *r* <.001***						

Determination of the impact on Job Satisfaction for 2019

In the first standard multiple regression analysis, monthly income, length of service at this job, total length of service and years of age explained 5.9% of salary satisfaction. In the model, the **only statistically significant contribution is given by monthly income** (β =.2 14, r =.003) (Table 6).

In another standard multiple regression analysis, monthly income, length of service at this job, total length of service, and years of age explained 0.8% of satisfaction with advancement. In the model, **not a single variable made a statistically significant contribution.**

In the third standard multiple regression analysis, monthly income, length of service at this position, total length of service and years of age explained 8.0% of satisfaction with management. In the model, **the most statistically significant contribution is made by seniority at this workplace** (β = -.220, r =.007), **followed by monthly income** (β = -.181, r =.021), (Table 6).

In the fourth standard multiple regression analysis, monthly income, length of service at this job, total length of service and years of age explained 0.4% of satisfaction with benefits, but, in the model, **no variable made a statistically significant contribution.**

In the fifth standard multiple regression analysis, monthly income, length of service at this job, total length of service and years of age explained 2.9% of reward satisfaction, but, in the model, **no variable made a statistically significant contribution.**

In the sixth standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 1.2% of satisfaction with work procedures, but, in the model, **no variable made a statistically significant contribution.**

Table 6. Standard multiple regression analysis for dependent variables satisfaction with pay, promotion, and management

Predictors	Satisfaction with salary			Satisfaction with progress			Satisfaction with management		
	R2	*F*	*β*	*R2*	*F*	*β*	*R2*	*F*	*β*
	.0 59	3. 892**		-	-	-	. 080	5,023 **	
Age			-.0 86						. 215
Total length of service			. 216						. 055
Work experience in this position			-. 036						-. 220**
Monthly income			. 214*						-. 181*
Statistical significance at the level of r<.05*, r<.01**, r<.001***									

In the seventh standard multiple regression analysis, monthly income, length of service at this position, total length of service and years of age explained 7% of employee satisfaction. In the model, age (β =.492, r =.002) and **total length of service** (β = -.348, r =.026) **give a significant contribution in the model** (Table 7).

In the eighth standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 20.8% of satisfaction with the nature of work. In the model, **the most statistically significant contribution is made by age** (β =.163, r =.000), followed **by monthly income** (β = -.292, r =.000) (Table 7).

In the ninth standard multiple regression analysis, monthly income, seniority at this workplace, total seniority and age explained 5% of satisfaction with communications. In the **unique statistical model, a significant contribution is given by the total length of service** (β =.321, r =.034) (Table 7).

Table 7. Standard multiple regression analysis for dependent variables satisfaction with co-workers, nature of work and communications

Predictors	Satisfaction with colleagues			Satisfaction with the nature of work			Satisfaction with communications		
	R2	*F*	*β*	*R2*	*F*	*β*	*R2*	*F*	*β*
	.070	4,463**		.208	13,174 ***		.050	3,422 *	
Age			.492**			-.163***			-.038
Total length of service			-.348 *			.569			.321*
Work experience in this position			-.02 5			-.096			-.103
Monthly income			.101			-.292***			-.080
Statistical significance at the level of r<.05*, r<.01**, r<.001***									

In the tenth standard multiple regression analysis, monthly income, length of service at this workplace, total length of service and years of age explained 5.4% of total job satisfaction. In the **unique statistical model, a significant contribution is given by the total length of service** (β =.352, r =.026) (Table 8).

Table 8. Standard multiple regression analysis for dependent variables overall job satisfaction

Predictors	Overall job satisfaction		
	R2	*F*	*β*
	.054	3,637 **	
Age			-.070
Total length of service			.352*

Work experience in this position			-.050
Monthly income			-.022
Statistical significance at the level of r<.05*, r<.01**, r<.001***			

Discussion

Development plans, both material and non-material rewards for the successfully completed tasks of municipal police officers, are no longer part of the rhetoric of city leaders or citizens. Intangible rewards in the form of praise, confirmation of well-executed tasks and help in solving problems have also disappeared from the users of services - citizens (natural and legal entities). Respect for the personality and integrity of communal policemen as officials who are in the capacity of citizens' service has reached an extremely low level in the cities where it was formed, as well as in society in general.

The factors that influenced the satisfaction of municipal police officers, which are found on the subscale and the overall scale for job satisfaction, are part of the organizational structure of the municipal police and its management, and they are dissatisfaction, amotivation and satisfaction of employees. According to their mutual correlations in which they are found, at the same time they are predictors of efficient business (Manić et al. 2020).

Descriptive statistics on the job satisfaction scale and all its subscales for 2014 and 2019, during the research, yielded more modalities with a minimum of 4, and more modalities with a maximum of 24.

In 2014, municipal police officers were the most satisfied with management, while in 2019 they were satisfied with management and work with colleagues. However, the descriptive analysis showed that there is no statistically significant difference in the results, although there is a difference in the mean values.

By comparing the mean values on the job satisfaction scale and all its subscales for both investigated periods, the obtained results indicate statistically significant differences between the mean values on the subscales for satisfaction with management, satisfaction with benefits and satisfaction with co-workers. while overall job satisfaction did not show a statistically significant difference between these two periods. This shows that in 2014 communal police officers were more satisfied with management (18.41), while in 2019 they were more satisfied with benefits (10.30) and co-workers (16.40). This is perhaps expected from the point of view of communal police workers. In 2014, they were beginners in this new service and the first generation that relied the most on their direct managers because they were their support and security in completing their tasks. With the experience of several years (2014 - 2019) in communication with colleagues and some received benefits (night work, days off for excess hours worked, quality equipment), the results indicate that there is a statistically significant difference between the mean values on the subscales for satisfaction with management, satisfaction with benefits and satisfaction with co-workers, while overall job satisfaction did not show a statistically significant difference between these two periods.

In the analysis of their categorical division on subscales and the overall scale for job satisfaction into dissatisfied, ambivalent and satisfied, the results showed a very high ambivalence - indifference (61.8%) in 2019, although it was not low in 2014 either (53.0%). There were more dissatisfied municipal police officers in 2014 (34.3%), while there were very few satisfied ones in 2014 (12.7%) and 2019 (9.9%).

Dissatisfaction decreased due to the benefits received and the increased tolerance of managers. Work experience that has raised the level of communication with co-workers and within the organization has an impact. Dissatisfaction was influenced by the frequent campaign against communal police led by politicians to find the culprits for their incompetence and incompetence. This turned into the complacency of communal policemen who withdrew into themselves, isolated themselves in their own world, started personal private education and training, which caused the departure of a large number of municipal police employees to other jobs.

Determining the mutual influence of the set variables on employee job satisfaction, through multiple regression analysis, led to certain findings, so that in 2014, the greatest statisticians make a significant contribution to management satisfaction is age and total length of service. The length of service in the current workplace has a significant contribution to satisfaction with advancement, but through benefits and not as progress in the hierarchy of command. With seniority, the salary increases as a certain benefit to employees in the service. The obtained results confirm the previously obtained results, because with years of age and experience in this workplace, there is a more serious approach to work, repeated or similar situations at work and therefore greater respect for the manager, which is part of joint work.

As a closed system that is controlled by the Ministry of State Administration and Local Self-Government and not by the City Administration, which is the founder of the communal police, the law and other by-laws are changed in advance along political lines, which enable individuals to be managers of this service.

For the year 2019, on the arrangement of the mutual influence of the set variables on the job satisfaction of employees, through multiple regression analysis, there was a statistically significant contribution in relation to the satisfaction with the salary that you give in the monthly income, which is manifested by an increased salary that causes satisfaction. Statistically, a significant contribution is made by length of service in this workplace, followed by monthly income to satisfaction with management, which confirms the previously mentioned results. The greatest statisticians make a significant contribution to satisfaction with the nature of work and satisfaction with co-workers, which is an indicator of experience, learned and the law on communal police - communal militia and other laws and by-laws, members and business routines in solving set tasks. A higher salary compared to previous years of work contributes to the well-being of employees and quality work, as well as seniority that affects satisfaction in communications within the organization, but also in the field with third parties and associates.

In the presented model, the unique statistician gives a significant contribution of total length of service to total job satisfaction, which can be explained by the fact that municipal police employees are more satisfied through experience at the workplace because they are much more ambivalent. The ambivalence itself affects the efficiency in solving the set tasks, but with experience, it takes much less time to complete the task.

All these data obtained through research lead to the conclusion that this type of business, which is based on age, work experience and salary as benefits, is unsustainable. Urgent measures in the direction of finding motives and motivators in order to increase the satisfaction of employees in the municipal police must overcome the vanity of individuals, the party line of employment and inadequate experts, so that the envisioned municipal police service has a long-term vision and the fulfillment of its mission "to be a service for citizens" and not individuals

In the rest of the text, we will refer to some of the research on the job satisfaction of employees with a parallel to the research of this scientific work.

Research by Pavlović and Marković (Pavlović & Marković, 2014) also confirms the research conducted in this paper, in which municipal police employees are more satisfied if they are adequately rewarded, they are satisfied with work procedures and working conditions, and they are satisfied with interpersonal relations with colleagues. A positive atmosphere in the organization and a sense of belonging give greater performance to employees in the communal police.

Stevens (Stevens, 2008) in his work "Police officer stress: sources and solutions", maintains that police officers often have a feeling of discomfort due to negative media campaigns against the police (Julseth et al., 2011).

Tanasijević (Tanasijević, 2006) in his research "Employee satisfaction", suggests that the efficiency and effectiveness of an organization in modern business is not measured only by profit, but also by the quality of work potential and its measurement.

In 2019, external and internal influences on the municipal police contributed to municipal police employees turning to themselves and their personal goals, as the best way to adequately solve the assigned tasks. Thus, they used their acquired experience and professional attitude towards work duties to isolate themselves from the increasing influence of the environment and politics, they gained a sense of collegial connection in order to defend themselves from the environment and overcome incorrect and inappropriate attacks on the service and them personally, identifying them with non-workers and political dissidents, both from the opposition and the ruling structure.

The work motivation of communal police officers was most often created as a product of personal attitudes, self-respect and sense of self-responsibility of persons who work according to the rules of the service, implement laws and other legal acts of the Republic and Local Authorities. With a sense of the personal importance of the tasks they carry out, municipal police officers determine the intensity of work, the time and urgency in their execution, and all this in accordance with the experience on a personal level.

Conclusion

The impossibility of influencing external working conditions forced employees to flee from external influences and compensate with internal personal development. There was neglect and replacement of the opinion of the environment with personal attitudes, self-control in handling and working with managers, self-determination of work intensity and intensity determined for the assigned task and personal determination of the quality of the service provided. The very way of working in the circumstances in which it takes place has led to increased amotivation among municipal police officers, drastically increased the level of ambivalent behavior and job dissatisfaction, which has led to a decrease in the number of employed municipal police officers.

Such a structure of an organizational unit such as the communal police cannot allow such a high percentage of ambivalent and dissatisfied workers. Omissions and relations should be corrected according to the needs of employees, in order to reduce the outflow of municipal police officers, increase the professionalism of the service, increase the motivation and job satisfaction of employees and raise efficiency to an even higher level of productivity.

In the future, it is necessary to conduct more research on the topic of satisfaction of employees in communal police. It is necessary to systematically work on media education of citizens, managers and associates of communal police, to protect communal police officers from politicization and abuse for any purpose, to enable smooth work in order to contribute to raising the quality of work, its efficiency and creating a positive atmosphere in society, in which communal the police are an inseparable part of the same society.

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UTICAJ ISPLATA OSIGURANIH SUMA NA INVESTICIONI PORTFOLIO OSIGURAVAJUĆIH KOMPANIJA

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Apstrakt

Potreba za osiguranjem datira u dalekoj prošlosti. Od primitivnih načina osiguranja do njegove institucionalizacije i zakonske implementacije je proteklo mnogo vremena. Savremeno tržište osiguranja, bez obzira na globalni karkter, nije ravnomerno razvijeno. Neujednačenost razvoja je jedna od njegovih glavnih karakteristika neretko povezana sa ostvarenim nivoom privrednog razvoja. Brojni faktori utiču na investicionu aktivnost osiguravajućih kompanija kao nosioca tržišta osiguranja. Predmet ovog rada će biti ispitivanje veze odnosno uticaja isplata osiguranih suma (šteta) na redistribuciju investicionog portfolija na tržištu kapitala. Za tu potrebu biće formulisane dve hioteze, odvojeno za tržište neživotnog i životnog osiguranja. Ispitivanje veze razmatranih varijabli će biti sprovedeno pomoću SPSS statističkog softvera odnosno HI kvadrat testa. Bez obzira na dokazivanje hipoteza neće biti moguće jedinstveno donošenje zaključaka za oba tržišta.

Ključne reči: *tržište osiguranja, životno osiguranje, neživotno osiguranje, akcije, obveznice*

JEL: *G11, G22, G52, H54*

Uvod

Ekonomska aktivnosti su suočene sa brojnim rizicima koji u slučaju realizacije mogu negativno uticati na željeni ishod (Černohorská & Klofát, 2021). Rizici

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se ne odnose samo na ovu vrstu aktivnosti, već su prisustni u svakodnevnici svakog pojedinca. Dinamičan razvoj privrede, koja obrise svog savremenog karaktera stiče u vremenu prve industrijske revolucije, intezivirao je rast životnog standarda i probudio svest ljudi o mogućim rizicima i potrebi da se oni izbegnu ili svedu na podnošljiviji nivo (Kielholz, 2021; Antić et al., 2021). Osiguranje zasnovano na principima solidarnosti i uzajamnosti vuče korene u dalekoj prošlosti. Potreba da se rizici udruže i štete kolektivno podnesu datira iz perioda prvobitne ljudske zajednice, dok se dokumentovani dokazi vezuju za period pre nove ere i odnose se pretežno na trgovačke karavane i obezbeđivanje transporta tereta (Koijen & Yogo, 2022). U srednjem veku je osiguranje implementirano u mnogim zakonicima pri čemu treba izdvojiti zakonik cara Dušana iz XIV veka u kojem je više od 200 članova bilo posvećeno upravo osiguranju (Žarković, 2008, 179). Slični primeri se kasnije mogu pronaći u Firenci, Rimu i Barseloni ali i na teritoriji Dubrovačke Republike gde su pronađene i sačuvane autentične polise osiguranja iz srednjeg veka (Anđelinović et al., 2018; Čolović, 2010, 241). Turbulentni periodi i posledične finansijske krize su, između ostalog, uzrokovale i krize na tržištima osiguranja pogotovo krajem XX veka. To je posledično uticalo na nepoverenje u sektor osiguranja koje je neretko bilo povezivano sa prevarom i izjednačavano sa kockanjem. Ovakva uvrežena shvatanja su bila dominantna u nerazvijenim i zemljama u razvoju. Danas je gotovo nemoguće zamisliti preduzimanje bilo koje poslovne aktivnosti bez nekog vida osiguranja. Ono je sveprisutno u svih granama i sektorima. Uslužne delatnosti i tercijarni sektor su nezamislivi bez instituta osiguranja (Tepavčević, et al., 2021). Turističko putovanje nezamislivo bez osiguranja putnika (Mitrović et al., 2021). Osiguravajuće kompanije, kao nosioci osiguranja, su kako bi stekle poverenje, svoje poslovanje učinile transparentnijim, sve više vodeći računa o alokaciji svojih slobodnih i privremeno neuposlenih novčanih sredstava (Kouwenberg, 2018). U poslednje dve decenije je porasla aktivnost osiguravajućih kompanija na tržištu kapitala (Poufinas & Tsitsika, 2018). Kako bi ostvarile svoj osnovni cilj poslovanja i nepredviđene troškove učinile podnošljivijim, u aktivi osiguravajućih kompanija su sve prisutnije akcije i obveznice državnog sektora (Peleckienė & Peleckis, 2014). Pri tome treba imati u vidu da je sigurnost plasmana osiguravajućih društava pod strogom kontrolom zbog velike senzitivnosti fizičkih lica i pravnih subjekata na eventualne potrese i gubitke (Esfandi et al., 2020). Isplata šteta u osiguranju diktira iznos slobodnih novčanih sredstva koji može biti alociran na raznim tržištima a time i na tržištu kapitala (Baranoff & Sager, 2009; Ristić et al., 2021). Predmet ovog rada će biti utvrđivanje zavisnosti isplata osiguranih suma na aktivnost koju preduzimaju osiguravajuće kompanije na tržištu kapitala kroz kupovinu akcija i obveznica državnog sektora. Analiza će obuhvatiti osiguranje na nivou država pri čemu će se odvojeno razmatrati neživotna i životna osiguranja.

Pregled literature

Tiefeng i Rwegasira (2006) su se bavili tržištem osiguranja u Kini kao i faktorima koji utiču na investicioni portfolio osiguravajućih kompanija. Zaključci do kojih su došli pokazuju postoji veza između aktivnosti na tržištu kapitala sa ostvarenim profitom. U godinama dobrog poslovanja i velikih iznosa profita je aktivnost osiguravajućih kompanija usmerena ka rizičnijim investicionim aktivnostima, odnosno kupovini akcija i obratno. Zaključak je da bilo koji potresi na osigurvajućem tržištu imaju izrazito negativne reperkusije na aktivnost fizičkih i ravnih lica kao i rast nepoverenja. Iz tog razloga osiguravajuće kompanije posebno moraju voditi računa o sigurnosti svojih plasmana i iznosima kapitala u tehničkim rezervama.

Agic-Sabeta (2017) je istraživala tržište osiguranja u jugoistočnoj Evropi u desetogodišnjem periodu kao i načine kako da se izbegnu sistemski rizici koji u velikoj meri mogu da ugroze poslovanje osiguravajućih kompanija a time i stabilnost tržišta osiguranja. Zaključci do kojih je došla upućuju na potrebu veće aktivnosti osiguravajućih kompanija na tržištu kapitala i to pogotovo u godinama većih ostvarenih profita ili manje isplaćenih odštetnih zahteva od planiranih. Aktivnost na tržištu novca treba povećati u kriznim periodima i to kroz ulaganje u kratkoročne hartije od vrednosti državnog sektora.

Chevallier & Müller (2014) su uradili analizu tržišta osiguranja razvijenih zemalja, odnosno uticaj isplata odštetnih zahteva na aktivnosti na finansijskom tržištu. Kao jedan od razloga neujednačenog razvoja osiguravajućih kompanija navode rizične plasmane u godinama u kojima je isplata odštetnih zahteva bila veća od planirane što je pojedine kompanije dovelo do problema likvidnosti koja je rešavana kapitalom iz rezervi. Dugoročno, neadekvatan plasman trenutno neuposlenih novčanih sredstava može dovesti do problema solventnosti što se može odraziti ne celokupno tržište osiguranja. Zato su planske i pažljivo odabrane aktivnosti na tržištu kapitala od ključnog značaja za stabilnost oiguravajućeg tržišta a time i finansijskog sistema.

Hamidi (2014) je sa grupom autora analizirao aktivnosti investicionih kompanija na tržištu kapitala zasnovane na odlukama u vezi sa njegovim trenutnim stanjem. Osiguravajuće kompanije su aktivnije na ovom tržištu u periodima njegove stabilnosti i obratno. Primetili su da aktivnosti i odluke nisu u vezi sa ostvarenim poslovnim rezultatima pa su konstatovali da je time izgubljena šansa za dodatnim profitom čime je kapital ostao zarobljen. Zato su predložili model koji može poslužiti osiguravajućim kompanijama da pri donošenju odluka akcenat treba da bude na uspešnosti njihovog poslovanja, a ne na trenutno stanje finansijskog tržišta. Takođe su predložili da prilikom odluke o eventualnim aktivnostima glavni parametar treba da bude iznos isplaćenih šteta po osnovu realizovanih osiguranih rizika.

Chache (2021) je sa grupom autora analizirao investicionu aktivnost 63 osiguravajuće kompmanije u Keniji. Imajući u vidu nerazvijeno tržite osiguranja velike su razlike u uspešnosti poslovanja osiguravajućih društava. Evidentno je učešće malih osiguravajućih kompanija uz par velikih. Takođe, velika opreznost i strah od rizičnih ulaganja ima za posledicu veliku neaktivnost malih kompanija na tržitu kapitala. Analiza je pokazala potrebu izlaska na tržište kapitala kao neophodan uslov napretka osiguravajućeg tržišta. Velika prepreka na tom putu je nedovoljan stručan kadar ali i nepoverenje u osiguranje koje je posledica nedovoljno ostvarenog nivoa privrednog razvoja koji je uslov razvoja tržišta osiguranja.

Metodologija istraživanja

Za potrebe analize zavisnosti odnosno uticaja promena isplata osiguranih suma na aktivnosti na tržištu kapitala će se koristiti podaci na državnom nivou odabranih država u periodu 2014-2019. godine. Kako bi se zavisnost utvrdila i postavljene hipoteze ispitale, koristiće se rezultati Hi kvdrat testa na pomenutom uzorku.

Teorijski, model se može predstaviti na sledeći način:

$Z_{1,2}$ – promena učešća akcija i državnih obveznica u investicionom portfoliju neživotnog i životnog osiguranja

$Y_{1,2}$ – promena isplata osiguranih suma neživotnog i životnog osiguranja

Vrednosti zavisnih promenljivih $Z_{1,2}$ mogu biti predstavljene kao

$Z_{1,2}$: $R(Z) = \{s_{1,2}, \dots, s_{r1,r2}\}$ (1)

Vrednosti nezavisnih promenljivih $Y_{1,2}$ mogu biti predstavljene kao

$Y_{1,2}$: $R(Y) = \{m_{1,2}, \dots, m_{n1,n2}\}$ (2)

Skup vrednosti obeležja (Z,Y): $R\,[(Z,Y)] = \{(s_k, m_l) : 1 \leq k \leq r,\ 1 \leq l \leq n\}$ (3)

r_{kl} – učestalost od (s_k, m_l) u uzorku

r_k – granična učestalost od s_k u uzorku

p_l – grančna učestalost od m_l u uzorku

$$rk = \sum_{l=1}^{n} fkl \qquad\qquad pl = \sum_{k=1}^{r} fkl$$

(4)

Hipoteze koje će biti predmet dokazivanja se mogu formulisati na sledeći način:

H_1: Postoji veza između promena isplata osiguranih suma i promena investicionog portfolija na tržištu neživotnog osiguranja

H_2: Postoji veza između promena isplata osiguranih suma i promena investicionog portfolija na tržištu životnog osiguranja

Dokazivanjem H_1/H_2 hipoteza može se konstatovati da su $H_1/H_2 \approx \chi^2 ((r-1) * (n-1))$

Rezultati i diskusija tržišta neživotnog osiguranja

Spektar usluga koje nude osiguravajuće kompanije za neživotno osiguranje je širok i prvi oblici osiguranja su se upravo odnosili na osiguranja pokretne i nepokretne imovine (Alshammari et al., 2018; Tasić et al., 2021). Ostali oblici osiguranja i poslovanje osiguravajućih kompanija koje su se bavile drugim vrstama osiguranja su većinu svojih principa poslovanja preuzela iz poslovanja ovih osiguravajućih kompanija. Predmet analize će biti tržišta osiguranja u 20 odabranih zemalja u kojima nije ostvaren isti nivo razvoja tržišta. U šestogodišnjem razmatranom periodu se prati procentualna promena isplata šteta po osnovu realizovanih rizika u odnosu na prethodnu godinu.

Tabela 1. Realni godišnji rast isplata osiguranih suma neživotnog osiguranja u periodu 2014-2019. godine u odabranim državama

Države	**Godine**					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Turska	3,5	17,8	6,2	9,5	-3,1	4,7
Holandija	-7,1	-2,2	-6,4	3,9	-1,8	2,0
Finska	-19,9	-2,1	18,4	-4,8	3,7	-3,4
Estonija	2,8	10,7	-4,6	5,7	6,4	5,5
SAD	10,0	8,6	2,7	6,3	5,7	4,8
Danska	8,2	-2,3	-7,1	3,1	-5,9	6,6
Nemačka	-10,8	6,5	-5,7	-6,8	9,1	-10,3
Austrija	0,8	-1,5	-0,5	1,8	-4,7	3,6
Švedska	10,0	-3,5	5,8	-4,6	3,6	-0,7
Francuska	3,4	-0,8	2,4	-0,9	5,4	-4,6

Italija	-6,0	-4,6	-7,6	5,1	-2,4	4,1
Španija	-2,9	1,0	-3,6	3,4	-1,6	5,0
Slovenija	-5,5	-4,8	1,4	-2,9	2,9	4,3
Belgija	15,3	-1,7	0,3	3,8	6,8	-3,4
Norveška	17,2	2,2	6,3	-5,7	-4,7	5,7
Poljska	-1,7	3,5	15,8	-4,9	5,9	6,3
Izrael	8,3	-0,1	14,8	-6,7	2,4	-3,9
Češka	-1,3	7,6	0,8	3,9	3,6	-2,2
Slovačka	6,6	-1,6	3,6	-1,1	2,8	-4,7
Grčka	-2,4	-8,5	1,7	-4,8	3,6	-2,8

Izvor: Autori, na osnovu Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

Prema podacima iz tabele 1 jedino je na osiguravajućem tržištu SAD-a ostvaren kontinuirani rast isplata šteta u odnosu na prethodnu godinu i to na godišnjem nivou većem od 5% izuzev 2016. godine. Primetan je trend na tržištima Nemačke, Švedske, Francuske, Španije, Izraela i Slovačke koji ukazuje na to da nakon godine u kojoj je zabeležen rast isplata šteta sledi godina u kojoj je ostvaren procentualan pad. Time se, ipak ne sasvim precizno, može reći da je suma isplata na sličnom nivou poredeći prvu i poslednju godinu posmatranog perioda. Najveći procentulani pad isplata šteta je ostvaren na tržitu Finske 2014. godine u kojoj je na ime isplata šteta u osiguranju izdvojeno 19,9% manje sredstava nego 2013. godine. Ipak je dve godine kasnije taj pad nadoknađen rastom od 18,4%. Značajni, dvocifreni procentualni padovi, su ostvareni u Nemačkoj 2014 i 2019. godine i to za 10,8 i 10,3 % respektivno. Najveći rast isplata šteta posle Finske je ostvaren u Belgiji i Norveškoj 2014. godine i to za 15,3 i 17,2% respektivno, ali i na osigurvajućim tržištima Poljske i Izraela 2016. godine za 15,8 odnosno 14,8%. U sledećoj tabeli je predstavljena investiciona aktivnost osiguravajućih kompanija na tržištu kapitala, odnosno tržištima akcija i obveznica državnog sektora.

Tabela 2. Investicioni portfolio neživotnog osiguranja u periodu 2014-2019. godine u odabranim državama

Države	**Godine**											
	2014		**2015**		**2016**		**2017**		**2018**		**2019**	
	Akc	Obv	Akc	Obv	Akc	Obv	Akc	Obv	Akc	Obv	Akc	Obv
Turska	0,6	34,7	0,8	38,3	0,9	27,2	0,6	31,6	0,8	39,5	0,6	41,4
Holandija	11,5	35,4	8,0	39,5	9,3	40,7	8,4	41,6	9,6	37,9	8,9	38,1
Finska	24,3	64,7	29,6	65,4	18,2	55,6	19,4	54,2	17,6	55,3	18,5	55,4
Estonija	9,1	75,6	6,5	78,3	5,3	72,0	4,3	74,3	3,9	74,6	3,8	74,9
SAD	19,6	68,6	23,3	64,2	14,2	73,6	14,1	74,5	13,9	75,0	13,4	75,1

Danska	28,3	66,9	23,1	71,0	17,1	68,0	15,3	69,4	16,8	63,1	14,6	66,2
Nemačka	9,2	38,1	10,0	40,1	33,3	43,7	35,9	42,0	34,1	44,5	36,4	42,6
Austrija	35,9	31,6	39,6	29,4	54,7	39,9	52,1	40,5	53,2	39,1	51,4	41,5
Švedska	34,6	54,2	38,3	55,6	36,9	55,8	39,5	52,4	38,4	53,6	40,6	51,2
Francuska	20,8	60,4	23,7	61,0	14,8	71,6	14,0	72,6	13,6	72,9	13,9	71,3
Italija	5,9	79,3	6,7	78,2	5,4	84,9	5,1	85,3	5,6	85,0	5,0	86,1
Španija	10,6	42,9	12,1	43,8	9,6	83,3	9,3	83,9	8,9	84,2	8,4	85,1
Slovenija	6,3	69,5	4,2	71,0	5,1	59,7	5,3	58,1	4,9	59,3	4,6	62,5
Belgija	8,9	60,4	9,4	64,6	11,5	54,7	10,5	55,2	9,6	56,9	9,8	56,0
Norveška	21,4	70,6	20,8	72,4	19,6	75,4	20,6	74,8	21,5	71,2	18,4	79,1
Poljska	16,7	46,8	15.5	47,0	13,6	51,4	18,2	55,9	11,3	59,4	10,2	58,3
Izrael	10,0	50,2	8,7	53,8	13,3	49,7	15,3	42,9	13,0	47,1	14,6	41,3
Češka	6,3	61,4	5,0	62,4	8,9	59,8	7,8	61,8	6,9	67,6	8,1	59,4
Slovačka	-	77,3	-	78,9	-	79,5	-	81,3	-	75,3	-	81,6
Grčka	1,4	45,8	1,8	47,0	2,3	46,9	3,5	44,1	3,0	47,2	4,1	41,8

Izvor: Autori, na osnovu Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

Dostupni podaci iz tabele 2 ukazuju na dominantno učešće državnih obveznica u investionom portfoliju osiguravajućih kompanija. Učešće akcija u portfoliju Turkse, Estonije, Italije, Španije, Slovenije, Belgije, Češke i Grčke je jednocifreno a time i zanemarljivo u odnosu na učešće državnih obveznica. Na švedskom osiguravajućem tržištu su u posmatranom periodu akcije značajno prisutne u inveticionom portfoliju pa je njihovo učešće 2019. godine premašilo 40%. U ostalim državama se može konstatovati raspon između 10 i 20%. Uporedno analizirajući podatke predstavljene u tabeli 1 može se primetiti da je u godinama u kojima je došlo do rasta isplata šteta u odnosu na prethodnu tržište osiguranja, odnosno osiguravajuće kompanije kao predstavnici ponude, sklonije sigurnijim plasmanima i rastom kupovine državnih obveznica. Obratno, u godinama pada isplata šteta primetan je rast rizičnijih plasmana u vidu veće aktivnosti na tržištu akcija.

Analizirani podaci prema preleminaranim analizama ne prate normalnu raspodelu što nije značajno za ovu vrstu analize. U dobijenim rezultatima je najznačajnija vrednost Pearson Chi Square u tabeli 3. Korigovana vrednost Jejtsove promenljive iznosi 0,038 uz statističku značajnost $p = 0,046$ čime se može prihvatiti hipoteza H1 odnosno, dokazano je da postoji veza između promena isplata osiguranih suma i promena investicionog portfolija na tržištu neživotnog osiguranja. Porast isplata osiguranih suma na tržištu neživotnog osiguranja utiče na pojačanu investicionu aktivnost na tržištu obveznica državnog sektora i smanjenu aktivnost na tržištu akcija. Alternativno, pad isplata osiguranih suma na tržištu neživotnog osiguranja utiče na pad investicione aktivnosti na tržištu obveznica državnog sektora i porast aktivnosti na tržištu akcija.

Tabela 3. Hi kvadrat testovi

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi Square	.041	1	.039		
Continuity Correction	.038	1	.046		
Fishers Exact Test				.043	.029
Linear-by-Linear Association	.045	1	.036		
N of Valid Cases	40				

Izvor: Proračun autora u SPSS-u

Pored statističke značajnosti dobijenog rezultata potrebno je utvrditi jačinu veze odnosno veličinu uticaja. Podaci u tabeli 4 daju informaciju o tome da li je dokazana veza jaka ili slaba.

Tabela 4. Simetrična merenja

		Value	Approx Sig.
Nominal by Nominal	Phi	-.028	.039
	Cramer's V	.028	.039
N of Valid Cases		40	

Izvor: Proračun autora u SPSS-u

U tu svrhu se koristi Cramer's V pokazatelj čija vrednost od 0.028 za tabele veće od 2 sa 2 govori o jakom uticaju, odnosno o značajnoj vezi između posmatranih promenjivih. Na kraju se može konstatovati da je ne samo statistički dokazano postojanje veze ispitivanih promenljivih već je intezitet te veze jak odnosno uticaj je veliki.

Rezultati i diskusija tržišta životnog osiguranja

Životno osiguranje se može shvatiti kao moralna obavezu ne samo prema sebi već i prema sebi blikim osobama (Olarewaju, & Msomi, 2021). Činjenica koja govori o srazmernosti privrednog nivoa društva i osiguranja ovde posebno dobija na značaju. Nesrazmeran odnos razvijenosti globalnog tržišta životnog osiguranja je izraženiji nego kod neživotnog osiguranja. Predmet analize će, kao i na primeru životnog osiguranja biti tržišta istih 20 odabranih država. U šestogodišnjem razmatranom periodu se prati procentualna promena isplata šteta po osnovu realizovanih rizika u odnosu na prethodnu godinu.

Tabela 5. Realni godišnji rast isplata oiguranih suma životnog osiguranja u periodu 2014-2019. godine u odabranim državama

Države	**Godine**					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Turska	-20,5	-6,9	31,6	-5,9	6,1	-8,7
Holandija	6,2	-12,0	15,3	-8,4	7,5	-3,1
Finska	-5,1	5,9	8,9	6,2	-1,5	5,3
Estonija	3,6	4,9	-5,3	-3,4	2,6	-1,6
SAD	-3,8	4,7	1,2	0,7	-1,4	4,8
Danska	11,3	-8,2	0,0	5,7	-6,8	10,5
Nemačka	7,9	-3,7	5,4	-2,7	6,5	-3,0
Austrija	11,4	17,4	-10,1	13,6	-5,1	4,9
Švedska	-5,5	-0,8	1,3	2,6	-5,9	3,1
Francuska	-0,4	4,7	3,4	-1,9	2,2	-7,9
Italija	-3,4	9,9	-11,6	7,4	5,7	-4,6
Španija	13,1	4,2	-5,7	6,9	5,9	-3,0
Slovenija	2,0	5,9	1,1	-3,6	6,4	-3,2
Belgija	-0,5	7,2	-5,4	6,7	-4,2	5,7
Norveška	-1,1	4,8	0,2	-3,3	2,8	-3,9
Poljska	-11,4	-3,7	3,5	2,7	-4,1	5,2
Izrael	10,0	11,4	6,0	-3,6	5,2	-3,4
Češka	14,7	-12,9	-14,7	2,5	-11,0	5,6
Slovačka	-0,4	-9,6	-6,8	6,4	-2,1	5,4
Grčka	15,1	-9,3	-5,9	-1,1	4,3	-7,2

Izvor: Autori, na osnovu Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

Prema podacima iz tabele 5 najveći pad isplata osiguranih suma je realizovan u Turskoj 2014. godine kada je isplata bila za 20,5% manja u odnosu na 2013. godinu. Primer Turske je zanimljiv i sa apekta rasta isplata jer je 2 godine kasnije bio izrazito veliki i to za 31,6% u odnosu na prethodnu 2015.godinu. U popisu svih država nema zabeleženog stalno rastućeg ili pak opadajućeg trenda dok se u retkim slučajevima mogu konstatovati istoznačni trendovi u trogodišnjem periodu. Tržišta koja su pretprela najmanje godišnje promene su Finska, Estonija, Norveška, Belgija i Slovačka koja se smatraju jednim od najrazvijenijih tržišta životnog osiguranja. Minimalne fluktuacije se mogu pripisati adekvatnoj proceni rizika ali i poslovnim ciljevima osiguravajućih kompanija koje se tiču stabilnosti i konstantnosti u isplatama osiguranih suma. Najveći kumulativni rast u isplati osiguranih suma je u Izraelu u prve tri godine posmatranog perioda, kada je isplata osiguranih suma porasla za 27,4% što je ipak na manjem nivou nego jednogodišnji rast u Turskoj 2016. godine. Takođe je najveći kumulativni pad u Turskoj u prve dve godine posmatranog perioda i to za 27,4%. Sledeća tabela daje uvid u investicionu aktivnost osiguravajućih kompanija na tržištu kapitala, odnosno tržištima akcija i obveznica državnog sektora.

Tabela 6. Investicioni portfolio životnog osiguranja u periodu 2014-2019. godine u odabranim državama

Države	**Godine**											
	2014		**2015**		**2016**		**2017**		**2018**		**2019**	
	Akc	Obv	Akc	Obv	Akc	Obv	Akc	Obv	Akc	Obv	Akc	Obv
Turska	3,3	94,0	1,9	42,9	2,5	63,7	3,4	51,8	2,0	52,4	2,6	47,2
Holandija	18,6	41,0	21,4	43,7	19,7	51,9	24,1	44,0	21,5	45,2	23,6	40,3
Finska	13,9	25,4	13,2	27,6	14,9	28,5	11,3	34,6	13,6	30,1	12,0	32,4
Estonija	8,8	71,7	8,8	74,7	7,9	73,6	8,9	71,5	7,4	73,6	8,1	70,2
SAD	3,7	73,1	3,6	73,4	3,9	74,5	3,1	77,4	3,6	73,2	2,9	75,3
Danska	49,2	36,2	51,5	35,3	50,2	38,9	44,7	41,5	49,0	37,6	47,1	39,2
Nemačka	3,3	40,0	3,6	39,5	4,9	37,6	5,2	35,2	4,6	36,1	4,8	34,5
Austrija	4,3	88,1	3,6	89,7	4,9	87,9	4,1	90,1	5,0	87,8	4,3	89,6
Švedska	38,9	51,1	41,3	51,8	46,2	52,9	44,5	54,8	47,2	50,2	45,6	51,8
Francuska	11,9	83,0	12,0	82,2	13,1	84,1	15,2	80,4	12,6	82,2	14,7	80,8
Italija	3,2	89,5	2,9	89,9	1,7	90,2	1,4	90,6	1,1	91,2	1,6	89,7
Španija	3,3	77,8	3,4	78,7	2,8	78,6	2,5	79,5	2,0	80,9	2,1	78,4
Slovenija	31,2	58,0	28,2	69,8	30,4	66,4	31,5	64,7	29,8	65,6	30,4	63,2
Belgija	14,1	61,0	10,3	62,7	12,4	60,0	10,3	61,4	11,4	60,0	11,0	60,7
Norveška	14,6	63,0	14,3	62,9	16,8	60,7	17,0	59,3	16,1	61,0	18,1	59,8
Poljska	4,6	65,7	4,2	65,7	3,5	69,3	3,1	70,2	3,9	68,2	3,4	70,3
Izrael	-	62,6	-	90,5	-	80,4	1,1	79,6	0,9	81,2	1,3	80,3
Češka	1,6	74,0	1,9	78,7	2,0	79,3	1,6	81,3	2,9	74,1	2,0	79,6
Slovačka	-	85,3	-	83,3	1,9	82,4	1,4	84,3	1,6	80,2	1,2	82,2
Grčka	1,3	43,8	1,4	74,5	1,7	59,6	2,0	55,4	1,5	57,2	1,6	55,4

Izvor: Autori, na osnovu Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

Uvidom u podatke u tabeli 6 se može konstatovati da u potrfoliju dominiraju obveznice državnog sektora. Ta konstatacija se odnosila i na neživotno osiguranje dok je ovde razlika između investicija u kupovinu akcija i obveznica još izraženija. Razloge treba tražiti u potrebi za većom sigurnošću. Nedovoljna informisanost, svest i znanje o potrebi i benefitima životnog osiguranja kao posledicu imaju potrebu za aktivnostima niskog rizika. Ovo treba da potencijalnim osiguravačima pošalje signal sigurnosti poslovnih aktivnosti što, kao krajnju cilj, treba da rezultuje rastom poverenja. Učešće obveznica na većini posmatranih tržišta je u rasponu 60-90%. U Austriji je u posmatranom periodu najdominantnije učešće obveznica i to na prosečnom nivou od 90%. Na tržištu Turske je 2014. godine učešče obveznica u portfoliju bilo čak 94% nako čega je u godinama koje su predstojale opalo i bilo je na prosečnom nivou od 50%. Na više od 50% tržišta je učešće akcija manje od 5% (Turska, Amerika, Nemačka, Austrija, Italija. Španija, Poljska, Izrael, Slovačka, Češka i Grčka). Uporedno analizirajući podatke predstavljene u Tabeli 2 može se primetiti da je u godinama u kojima je došlo do rasta isplata u odnosu na prethodnu tržište osiguranja, odnosno osiguravajuće kompanije kao predstavnici ponude, sklonije sigurnijim plasmanima i rastom kupovine državnih obveznica. Obratno, u godinama pada isplata primetan je rast rizičnijih plasmana u vidu veće aktivnosti na tržištu akcija.

Preleminaranim analizama nije ustanovljena normalna raspodela što se može zanemariti. U dobijenim rezultatima je najznačajnija vrednost Pearson Chi Square u tabeli 7. Korigovana vrednost Jejtsove promenljive iznosi 0,043 uz statističku značajnost p = 0,050 čime se može prihvatiti hipoteza H2 odnosno, dokazano je da postoji veza između promena isplata osiguranih suma i promena investicionog portfolija na tržištu životnog osiguranja. Porast isplata osiguranih suma na tržištu životnog osiguranja utiče na pojačanu investicionu aktivnost na tržištu obveznica državnog sektora i smanjenu aktivnost na tržištu akcija. Alternativno, pad isplata osiguranih suma na tržištu životnog osiguranja utiče na pad investicione aktivnosti na tržištu obveznica državnog sektora i porast aktivnosti na tržištu akcija.

Tabela 7. Hi kvadrat testovi

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi Square	.049	1	.048		
Continuity Correction	.043	1	.050		
Fishers Exact Test				.049	.038
Linear-by-Linear Association	.049	1	.057		
N of Valid Cases	40				

Izvor: Proračun autora u SPSS-u

Pored statističke značajnosti dobijenog rezultata potrebno je utvrditi jačinu veze odnosno veličinu uticaja. Podaci u tabeli 8 daju informaciju o tome da li je dokazana veza jaka ili slaba.

Tabela 8. Simetrična merenja

		Value	Approx Sig.
Nominal by Nominal	Phi	-.004	.048
	Cramer's V	.004	.048
N of Valid Cases		40	

Izvor: Proračun autora u SPSS-u

U tu svrhu se koristi Cramer's V pokazatelj čija vrednost od 0.004 za tabele veće od 2 sa 2 govori o malom uticaju, odnosno o slaboj vezi između posmatranih promenjivih. Na kraju se može konstatovati da je statistički dokazano postojanje veze ispitivanih promenljivih ali je intezitet te veze slab odnosno uticaj je jako mali. Razloge treba tražiti u već ranije navedenoj opreznosti nosilaca tržišta osiguranja kao posledica izuzetne senzitivnosti korisnika osiguranja. Minimalni gubici ili potresi mogu ugroziti tržište životnog osiguranja. Svesni te činjenice, za sada se još uvek nisu stekli uslovi za rizičnije plasmane. Dodatno, zauzimanje sigurne i dugoročne pozicije je pozitivno prihvaćeno od strane korisnika u, još uvek, početnoj fazi razvoja ovog tržišta.

Zaključak

Rizici sa kojima su pojedinci i društvo suočeni zahtevaju mehanizme njihovog upravljanja i svođenja na prihvatljiviji nivo. Istorijski posmatrano uočava se neravnomeran razvoj globalnog tržišta koji je prisutan i danas. Disproporcijalan karakter onemogućava donošenje jedinstvenih zaključaka, već se oni mogu odnositi samo na geografski ograničene prostore ili organizacione celine. Činjenica je da stepen razvoja tržišta osiguranja prati dostignuti nivo privrednog razvoja. Kao sveprisutan fenomen, bez obzira na neujednačen karakter, tržište osiguranja se razvija. Taj razvoj je ubrzan globalizacijom tržišta i slobodnim kretanjem kapitala. Posmatrajući iz ugla osnovnog cilja poslovanja svake osiguravajuće kompanije – maksimizacije profita, moraju se pronalaziti načini njegove realizacije. Aktivnost na tržištu kapitala svih osiguravajućih kompanija je tržišna potreba a ne pitanje izbora. Ipak, osetljivost ovog tržišta na potrese i poverenje koje je lako izgubiti, naglašava potrebu opreznijih poslovnih odluka. One moraju biti takve da ne ugroze svoje poslovanje čime mogu uzdrmati celokupno tržište osiguranja imajući u vidu njegov karakter i osetljivost. U ovom radu su postavljene dve hipoteze koje su analizom potvrđene. Bez obzira na to treba napraviti razliku u tumačenjima dobijenih rezultata. Na tržištu neživotnog osiguranja promena isplata odštetnih zahteva ima uticaj na aktivnost na tržištu kapitala. Pored toga je taj uticaj jako veliki i veza između analiziranih varijabli je jaka. Potvrda druge hipoteze se mora protumačiti na drugačiji način. Na primeru životnog osiguranja je dobijen statistički značajan rezultat povezanosti i uticaja identičnih varijabli. Bez obzira na tu činjenicu, ostvarena veza nije jaka, već je izrazito slaba i uticaj varijabli je jako mali. Zato se ne može usvojiti jedinstven zaključak na oba tržišta. Kao nedostatak ovog modela se može navesti uzorak sastavljen od država koje ne pripadaju jednom području ili grupi zemalja, pa se ne može izvesti zaključak koji bi bio globalniji i precizniji. Dodatno, analiza je vremenki ograničena na šest godina, pa bi nju svakako trebalo proširiti što je preporuka budućim autorima na ovu temu. Takođe je moguće uraditi uporednu analizu tržišta razvijenih i zemalja u razvoju koja će pokazati da li ima razlika u aktivnostima na tržitu kapitala i čime su one uslovljene. Uzorak čine podaci do 2019. godine odnosno analiza je rađena u periodu pre pandemije COVID-19. Uslovi na tržištu su već duže od 2 godine značajno promenjeni. Posledična kriza se reflektuje na sve sektore. Definicija tržišta osiguranja kao jako osetljivog na krizne periode, upućuje na zaključak da je došlo do promena u uslovima i načinu poslovanja privrednih subjekata. U periodu koji predstoji biće veliki izazov za nosioce tržišta da adekvatnom politikom i implementiranim strategijama sačuvaju i ojačaju tržišni poziciju. Iz tog razloga će saradnja privrede i naučnog sektora biti od posebne važnosti.

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THE INFLUENCE OF CLAIMS PAYMENTS ON THE INVESTMENT PORTFOLIO OF INSURANCE COMPANIES

Nemanja Pantić[12], Karmen Mikulić[13], Miljan Leković[14]

Original scientific paper

Abstract

The need for insurance dates back from the distant past. A lot of time has passed from the primitive insurance forms to its institutionalization and legal implementation. The modern insurance market, regardless of its global character is not equally developed. The unevenness of development is one of its main characteristics, often connected with the achieved level of economic development. Numerous factors influences on the investment activities of insurance companies as the carriers of the insurance market. The subject of this paper will be the examination of the connection of payments of insured sums (damages) on the redistribution of the investment portfolio on the capital market. For this purpose will be formulated two hypotheses, separately for the non-life and life insurance market. Examination of the relationship between the considered variables will be conducted by using SPSS statistical software, ie the Chi-squared test. Regardless of proving the hypotheses will not be possible to draw unique conclusions for both markets.

Keywords: *insurance market, life insurance, non-life insurance, stok, municipality bonds*

JEL: *G11, G22, G52, H54*

Introduction

Economic activities are faced with numerous risks that can negatively affect the on the expected result, in case of its implementation. (Černohorská & Klofát,

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2021). Risks are not only related with this type of activity but they are present in every individual's daily life. The dynamic development of the economy, which gets the contours of its modern character during the first industrial revolution, intensified the growth of living standards and awakened people's awareness of possible risks and the need to be avoided or reduced on the tolerable level. (Kielholz, 2021; Antić et al., 2021). Insurance based on the principles of solidarity and reciprocity has its roots in the distant past. The need to pool risks and bear damages collectively dates back to the period of the original human community, while the documented evidence is related to the BC period which are mainly related with the trade caravans and the provision of cargo transport (Koijen & Yogo, 2022). In the Middle Ages, insurance was implemented in many leal codes, where the legal code of Emperor Dušan from the XIV century should be singled out because more than 200 regulations were dedicated to insurance (Žarković, 2008, 179). Later can be fund similar examples in Florence, Rome and Barcelona, but also in the territory of the Republic of Dubrovnik, where authentic insurance policies from the Middle Ages were also found and preserved. (Anđelinović et al., 2018; Čolović, 2010, 241). Turbulent periods and consequent financial crises caused, among other things, crises in the insurance markets, especially at the end of the 20th century. This consequently affected distrust in the insurance sector, which was often associated with fraud and equated with gambling. Such stereotypes were dominant in underdeveloped and developing countries. Today, it is almost impossible to imagine undertaking any business activity without some form of insurance. It is ubiquitous in all branches and sectors. Service activities and the tertiary sector are unthinkable without an insurance institute (Tepavčević, et al., 2021). Any tourist trip is unthinkable without passenger insurance (Mitrović et al., 2021). In order to gain trust, insurance companies, as insurance carriers, made their operations more transparent, paying more attention on the allocation of their free and temporarily unemployed funds (Kouwenberg, 2018). In the last two decades the activity of insurance companies on the capital market has increased (Poufinas & Tsitsika, 2018). In order to achieve their main business goal and make unexpected costs more tolerable, the assets of insurance companies are increasingly dominated by shares and bonds of the state sector. (Peleckienė & Peleckis, 2014). At the same time, it should be borne in mind that the security of placement of insurance companies is under strict control due to the high sensitivity of individuals and real entities on possible shocks and losses. (Esfandi et al., 2020). Payment of insurance claims dictates the amount of free funds that can be allocated in various markets and thus also on the capital market (Baranoff & Sager, 2009; Ristić et al., 2021). The subject of this paper will be the determination of the dependence of payments of insured sums on the activity undertaken by insurance companies on the capital market through the purchase of shares and municipal bonds. The analysis will include insurance at the state level, with non-life and life insurance being considered separately.

Literature review

Tiefeng and Rwegasira (2006) dealt with the insurance market in China and the factors affecting the investment portfolio of insurance companies. Their conclusions shows connections between the activities on the capital market and the amounts of profit. In the years of good business results and large amounts of profit, the activity of insurance companies is directed towards riskier investment activities, i.e. buying shares and vice versa. The conclusion is that any upheavals on the insurance market have extremely negative repercussions on the activity of individuals and private sector, as well as the growth of mistrust. For this reason, insurance companies must take special care of the security of their placements and capital amounts in technical reserves.

Agic-Sabeta (2017) investigated the insurance market in Southeast Europe over a ten-year period, as well as methods to avoid systemic risks that can threaten the operations of insurance companies and thus the stability of the insurance market. The conclusions indicates the need for more significant activity of insurance companies on the capital market, especially in years of higher profits or less paid insured sums than planned. Activity on the money market should be increased in crisis periods through investing in short-term securities of the state sector.

Chevallier and Müller (2014) performed an analysis of the insurance market of developed countries, i.e. the impact of payment of compensation claims on financial market activities. As one of the reasons for the uneven development of insurance companies they indicate the risky placements in years when the payment of compensation claims was higher than planned, which led some companies to liquidity problems. This problem was solved with capital from tcnical reserves. In the long term, inadequate placement of currently idle funds may lead to solvency problems, which may affect the entire insurance market. That is the reason why are planned and carefully selected activities on the capital market of key importance for the stability of the insurance market and thus the financial system.

Hamidi et al. (2014) analyzed activities of the insurance companies on the capital market based on decisions regarding to its current condition. Insurance companies are more active on this market during periods of its stability and vice versa. They noticed that the activities and decisions were not related to the achieved business results, so they concluded that the chance for additional profit was lost and the capital remained trapped. That's the reason they proposed a model that can insurance companies use decison making. The emphasis should be on the success of their business, and not on the current state of the financial market. They also suggested that the main parameter for possible activities should be the amount of paid insured sums paid based on realized insured risks.

Chache et al. (2021) analyzed the investment activity of 63 insurance companies in Kenya. Considering the underdeveloped insurance market, there are big differences in the business success of the insurance companies. The participation of small insurance companies along with a couple of large ones is evident. Also, caution and fear of risky investments results in the inactivity of small companies on the capital market. The analysis showed the need to participation on the capital market as a necessary condition for the progress of the insurance market. A big obstacle is insufficient professional staff, but also distrust in insurance, which is a consequence of the insufficiently achieved level of economic development, which is a condition for the development of the insurance market.

Research methodology

For the purpose of analysis of dependence, i.e. the impact of changes in payments of insured sums on activities on the capital market will be used the data at the state level of selected countries in the period 2014-2019. In order to determine that dependence and examine the hypotheses, will be used the results of the Chi-square test on the mentioned sample.

In theory the model can be presented as follows:

$Z_{1,2}$ – change in share of stocks and municipality bonds in the investment portfolio of non-life and life insurance

$Y_{1,2}$ – change in payments of insured sums of non-life and life insurance

The values of the dependent variables $Z_{1,2}$ can be represented as

$Z_{1,2}$: $R(Z) = \{s_{1,2}, \ldots, s_{r1,r2}\}$ (1)

The values of the independent variables $Y_{1,2}$ can be represented as

$Y_{1,2}$: $R(Y) = \{m_{1,2}, \ldots, m_{n1,n2}\}$ (2)

A set of feature values (Z,Y): $R\,[(Z,Y)] = \{(s_k, m_l) : 1 \leq k \leq r\ ,\ 1 \leq l \leq n\}$ (3)

r_{kl} – frequency of (s_k, m_l) in the sample

r_k – marginal frequency of s_k in the sample

p_l – marginal frequency of m_l in the sample

$$rk = \sum_{l=1}^{n} fkl \qquad\qquad pl = \sum_{k=1}^{r} fkl$$

(4)

The hypotheses can be formulated as follows:

H₁: There is a connection between changes in payments of insured sums and changes in the investment portfolio in the non-life insurance market

H₂: There is a connection between changes in payments of insured sums and changes in the investment portfolio in the life insurance market

By proving H_1/H_2 hypothesis can be stated that $H_1/H_2 \approx \chi^2$ ((r-1) * (n-1))

Results and discussion of the non-life insurance market

The spectrum of services offered by non-life insurance companies is wide and the first forms of insurance were related to the insurance of movable and immovable property. (Alshammari et al., 2018; Tasić et al., 2021). Other forms of insurance and the operations of insurance companies that dealt with other types of insurance took most of their business principles from the operations of these insurance companies. The subject of the analysis will be insurance markets in 20 selected countries where was not achieved the same level of market development. In the six-year period is being considered the percentage change in claims payments based on realized risks compared to the previous year.

Table 2. Annual real growth of claims paiments in non-life insurance sector for the period 2014-2019 in selected countries

Countries	**Year**					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Turkey	3,5	17,8	6,2	9,5	-3,1	4,7
Netherlands	-7,1	-2,2	-6,4	3,9	-1,8	2,0
Finland	-19,9	-2,1	18,4	-4,8	3,7	-3,4
Estonia	2,8	10,7	-4,6	5,7	6,4	5,5
USA	10,0	8,6	2,7	6,3	5,7	4,8
Denmark	8,2	-2,3	-7,1	3,1	-5,9	6,6
Germany	-10,8	6,5	-5,7	-6,8	9,1	-10,3
Austria	0,8	-1,5	-0,5	1,8	-4,7	3,6
Sweden	10,0	-3,5	5,8	-4,6	3,6	-0,7
France	3,4	-0,8	2,4	-0,9	5,4	-4,6

Italy	-6,0	-4,6	-7,6	5,1	-2,4	4,1
Spain	-2,9	1,0	-3,6	3,4	-1,6	5,0
Slovenia	-5,5	-4,8	1,4	-2,9	2,9	4,3
Belgium	15,3	-1,7	0,3	3,8	6,8	-3,4
Norway	17,2	2,2	6,3	-5,7	-4,7	5,7
Poland	-1,7	3,5	15,8	-4,9	5,9	6,3
Israel	8,3	-0,1	14,8	-6,7	2,4	-3,9
Czech Rep	-1,3	7,6	0,8	3,9	3,6	-2,2
Slovakia	6,6	-1,6	3,6	-1,1	2,8	-4,7
Greece	-2,4	-8,5	1,7	-4,8	3,6	-2,8

Source: Authors, based on Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

According to the data from table 1, only on the insurance market of the USA was a continuous increase in claims payments compared to the previous year, annually on the level of more than 5%, with the exception of 2016. There is a noticeable trend on the markets of Germany, Sweden, France, Spain, Israel and Slovakia, which indicates that the year when was recorded the increase in claims payments was followed by the year of the percentage decrease. Thus, although not quite precisely, it can be said that the sum of payments is at a similar level comparing the first and last year of the observed period. The largest percentage drop in claims payments was measured on the Finnish market in 2014, where 19.9% less funds was spent for claims payments than in 2013. However, two years later, that decline was compensated by growth of 18.4%. Significant, double-digit percentage drops was measured in Germany in 2014 and 2019, by 10.8 and 10.3%, respectively. The highest growth in claims payments after Finland was achieved in Belgium and Norway in 2014 by 15.3 and 17.2% respectively, but also on the insurance markets of Poland and Israel in 2016 by 15.8 and 14.8% respectively. The following table presents the investment activity of insurance companies on the capital market, i.e. the stock market and municipality bonds market.

Table 2. Investment portfolio allocation of the non-life insurance sector for the period 2014-2019 in selected countries

Countries	**Year**											
	2014		**2015**		**2016**		**2017**		**2018**		**2019**	
	Stc	Bon	Stc	Bon	Stc	Bon	Stc	Bon	Stc	Bon	Stc	Bon
Turkey	0,6	34,7	0,8	38,3	0,9	27,2	0,6	31,6	0,8	39,5	0,6	41,4
Netherlands	11,5	35,4	8,0	39,5	9,3	40,7	8,4	41,6	9,6	37,9	8,9	38,1
Finland	24,3	64,7	29,6	65,4	18,2	55,6	19,4	54,2	17,6	55,3	18,5	55,4
Estonia	9,1	75,6	6,5	78,3	5,3	72,0	4,3	74,3	3,9	74,6	3,8	74,9

USA	19,6	68,6	23,3	64,2	14,2	73,6	14,1	74,5	13,9	75,0	13,4	75,1
Denmark	28,3	66,9	23,1	71,0	17,1	68,0	15,3	69,4	16,8	63,1	14,6	66,2
Germany	9,2	38,1	10,0	40,1	33,3	43,7	35,9	42,0	34,1	44,5	36,4	42,6
Austria	35,9	31,6	39,6	29,4	54,7	39,9	52,1	40,5	53,2	39,1	51,4	41,5
Sweden	34,6	54,2	38,3	55,6	36,9	55,8	39,5	52,4	38,4	53,6	40,6	51,2
France	20,8	60,4	23,7	61,0	14,8	71,6	14,0	72,6	13,6	72,9	13,9	71,3
Italy	5,9	79,3	6,7	78,2	5,4	84,9	5,1	85,3	5,6	85,0	5,0	86,1
Spain	10,6	42,9	12,1	43,8	9,6	83,3	9,3	83,9	8,9	84,2	8,4	85,1
Slovenia	6,3	69,5	4,2	71,0	5,1	59,7	5,3	58,1	4,9	59,3	4,6	62,5
Belgium	8,9	60,4	9,4	64,6	11,5	54,7	10,5	55,2	9,6	56,9	9,8	56,0
Norway	21,4	70,6	20,8	72,4	19,6	75,4	20,6	74,8	21,5	71,2	18,4	79,1
Poland	16,7	46,8	15.5	47,0	13,6	51,4	18,2	55,9	11,3	59,4	10,2	58,3
Israel	10,0	50,2	8,7	53,8	13,3	49,7	15,3	42,9	13,0	47,1	14,6	41,3
Czech Rep	6,3	61,4	5,0	62,4	8,9	59,8	7,8	61,8	6,9	67,6	8,1	59,4
Slovakia	-	77,3	-	78,9	-	79,5	-	81,3	-	75,3	-	81,6
Greece	1,4	45,8	1,8	47,0	2,3	46,9	3,5	44,1	3,0	47,2	4,1	41,8

Source: Authors, based on Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

The available data from Table 2 indicates the dominant participation of municipality bonds in the investment portfolio of insurance companies. The share of stoks in the portfolio of Turkey, Estonia, Italy, Spain, Slovenia, Belgium, the Czech Republic and Greece is single-digit and therefore negligible compared to the share of municipality bonds. On the Swedish insurance market, in the observed period, stoks are significantly present in the investment portfolio, so their participation exceeded 40% in 2019. In other countries, the range is between 10 and 20%. Comparatively analyzing the data presented in table 1 is noticeable that in the years of increase of claims paiments compared to the previous insurance market, that is, insurance companies as representatives of the offer, are more inclined to safer placements and increased purchases of municipality bonds. On the contrary, in years of declining claims payments, there is a noticeable increase in riskier placements in the form of bigger activity on the stock market.

Analyzed data, according to preliminary analyzes, do not follow a normal distribution, which is not significant for this type of analysis. In the obtained results, the most significant value is the Pearson Chi Square in table 3. The corrected value of the Yates variable is 0.038 with a statistical significance of p = 0.046, which means that the hypothesis H1 can be accepted so it is proved that there is a connection between changes in payments of insured sums and changes in the investment portfolio in the non-life insurance market. The increase in payments of insured sums on the non-life insurance market affects the increased investment activity on the government sector bond market and reduced activity on the stock market. Alternatively, the decrease in payments of insured sums on the non-life insurance market affects the decrease in investment activity on the government sector bond market and the increase in activity on the stock market.

Table 3. Chi-Square tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi Square	.041	1	.039		
Continuity Correction	.038	1	.046		
Fishers Exact Test				.043	.029
Linear-by-Linear Association	.045	1	.036		
N of Valid Cases	40				

Source: Author's calculation in SPSS

In addition to the statistical significance of the obtained result, it is necessary to determine the strength of the connection, that is, the size of the influence. The data in table 4 provides information on whether the demonstrated relationship is strong or weak.

Table 4. Symmetric measures

		Value	Approx Sig.
Nominal by Nominal	Phi	-.028	.039
	Cramer’s V	.028	.039
N of Valid Cases		40	

Source: Author's calculation in SPSS

For this purpose, Cramer's V indicator is used, whose value of 0.028 for tables larger than 2 by 2 indicates a strong influence, that is, a significant relationship between the observed variables. At the end it can be said that not only is the existence of a relationship between the examined variables statistically proven, but the intensity of that relationship is strong, i.e. the influence is great.

Results and discussion of the life insurance market

Life insurance can be understood as a moral obligation towards yourself but also towards surrounding people (Olarewaju, & Msomi, 2021). The fact that confirms the proportionality of the economic level of the company and insurance is especially important here. The disproportionate development of the global life insurance market is more pronounced than in the case of non-life insurance market. The subject of the analysis will be the markets of the same 20 selected countries, as in the example of life insurance. In the six-year considered period is being considered the percentage change in claims payments based on realized risks compared to the previous year..

Table 5. Annual real growth of claims paiments in life insurance sector for the period 2014-2019 in selected countries

Countries	**Year**					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Turkey	-20,5	-6,9	31,6	-5,9	6,1	-8,7
Netherlands	6,2	-12,0	15,3	-8,4	7,5	-3,1
Finland	-5,1	5,9	8,9	6,2	-1,5	5,3
Estonia	3,6	4,9	-5,3	-3,4	2,6	-1,6
USA	-3,8	4,7	1,2	0,7	-1,4	4,8
Denmark	11,3	-8,2	0,0	5,7	-6,8	10,5
Germany	7,9	-3,7	5,4	-2,7	6,5	-3,0
Austria	11,4	17,4	-10,1	13,6	-5,1	4,9
Sweden	-5,5	-0,8	1,3	2,6	-5,9	3,1
France	-0,4	4,7	3,4	-1,9	2,2	-7,9
Italy	-3,4	9,9	-11,6	7,4	5,7	-4,6
Spain	13,1	4,2	-5,7	6,9	5,9	-3,0
Slovenia	2,0	5,9	1,1	-3,6	6,4	-3,2
Belgium	-0,5	7,2	-5,4	6,7	-4,2	5,7
Norway	-1,1	4,8	0,2	-3,3	2,8	-3,9
Poland	-11,4	-3,7	3,5	2,7	-4,1	5,2
Israel	10,0	11,4	6,0	-3,6	5,2	-3,4
Czech Rep	14,7	-12,9	-14,7	2,5	-11,0	5,6
Slovakia	-0,4	-9,6	-6,8	6,4	-2,1	5,4
Greece	15,1	-9,3	-5,9	-1,1	4,3	-7,2

Source: Authors, based on Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

According to the data from table 5, the largest decrease in claims payments was realized in Turkey in 2014, when the payment was 20.5% lower than in 2013. The example of Turkey is also interesting from the perspective of the growth of payments, because 2 years later it was extremely large, by 31.6% compared to the previous year. In the list of all countries, there is no constantly increasing or decreasing trend, while in rare cases, identical trends can be noted in a three-year period. The markets that experienced the least annual changes are Finland, Estonia, Norway, Belgium and Slovakia, which are considered to be one of the most developed life insurance markets. Minimal fluctuations can be attributed to an adequate risk assessment, but also to the business goals of insurance companies regarding stability and constancy in payments of insured sums. The highest cumulative growth in the payment of insured sums is in Israel in the first three years of the observed period, when the payment of insured sums increased by 27.4%, which is still at a lower level than the one-year growth in Turkey in 2016. Also, the largest cumulative decline was in Turkey in the first two years of the observed period, by 27.4%. The following table gives an insight into the investment activity of insurance companies on the capital market, that is, the stock market and municipality bonds market.

Table 6. Investment portfolio allocation of the life insurace sector for the period 2014-2019 in selected countries

Countries	**Year**											
	2014		**2015**		**2016**		**2017**		**2018**		**2019**	
	Stc	Bon	Stc	Bon	Stc	Bon	Stc	Bon	Stc	Bon	Stc	Bon
Turkey	3,3	94,0	1,9	42,9	2,5	63,7	3,4	51,8	2,0	52,4	2,6	47,2
Netherlands	18,6	41,0	21,4	43,7	19,7	51,9	24,1	44,0	21,5	45,2	23,6	40,3
Finland	13,9	25,4	13,2	27,6	14,9	28,5	11,3	34,6	13,6	30,1	12,0	32,4
Estonia	8,8	71,7	8,8	74,7	7,9	73,6	8,9	71,5	7,4	73,6	8,1	70,2
USA	3,7	73,1	3,6	73,4	3,9	74,5	3,1	77,4	3,6	73,2	2,9	75,3
Denmark	49,2	36,2	51,5	35,3	50,2	38,9	44,7	41,5	49,0	37,6	47,1	39,2
Germany	3,3	40,0	3,6	39,5	4,9	37,6	5,2	35,2	4,6	36,1	4,8	34,5
Austria	4,3	88,1	3,6	89,7	4,9	87,9	4,1	90,1	5,0	87,8	4,3	89,6
Sweden	38,9	51,1	41,3	51,8	46,2	52,9	44,5	54,8	47,2	50,2	45,6	51,8
France	11,9	83,0	12,0	82,2	13,1	84,1	15,2	80,4	12,6	82,2	14,7	80,8
Italy	3,2	89,5	2,9	89,9	1,7	90,2	1,4	90,6	1,1	91,2	1,6	89,7
Spain	3,3	77,8	3,4	78,7	2,8	78,6	2,5	79,5	2,0	80,9	2,1	78,4
Slovenia	31,2	58,0	28,2	69,8	30,4	66,4	31,5	64,7	29,8	65,6	30,4	63,2
Belgium	14,1	61,0	10,3	62,7	12,4	60,0	10,3	61,4	11,4	60,0	11,0	60,7
Norway	14,6	63,0	14,3	62,9	16,8	60,7	17,0	59,3	16,1	61,0	18,1	59,8
Poland	4,6	65,7	4,2	65,7	3,5	69,3	3,1	70,2	3,9	68,2	3,4	70,3
Israel	-	62,6	-	90,5	-	80,4	1,1	79,6	0,9	81,2	1,3	80,3
Czech Rep	1,6	74,0	1,9	78,7	2,0	79,3	1,6	81,3	2,9	74,1	2,0	79,6
Slovakia	-	85,3	-	83,3	1,9	82,4	1,4	84,3	1,6	80,2	1,2	82,2
Greece	1,3	43,8	1,4	74,5	1,7	59,6	2,0	55,4	1,5	57,2	1,6	55,4

Source: Authors, based on Global insurance market trends, 2014, 2015, 2016, 2017, 2018, 2019

Insight into the data in table 6 can be concluded that the municipality bonds are dominant in investment portfolio. That statement also applied to non-life insurance, while here the difference between investments in the purchase of stoks and bonds is even more pronounced. The reasons should be sought in the need for more security. Insufficient information, awareness and knowledge about the need and benefits of life insurance as a consequence have the need for low-risk activities. This should send a signal of the safety of business activities to potential insurers, which, as the ultimate goal, should result in the growth of trust. The share of bonds in most observed markets is in the range of 60-90%. In Austria, the most dominant share of bonds in the observed period is at an average level of 90%. On the Turkish market, in 2014, the share of bonds in the portfolio was as high as 94%, after which it declined in the years to come and was at an average level of 50%. In more than 50% of the market, the share of shares is less than 5% (Turkey, America, Germany, Austria, Italy. Spain, Poland, Israel, Slovakia, Czech Republic and Greece). Comparatively analyzing the data presented in Table 2, it can be noted that in the years in which there was an increase in payments in relation to the previous insurance market, that is, insurance companies as representatives of the offer, are more inclined to safer placements and growth in the purchase of government bonds. On the contrary, in the years of declining payments, there is a noticeable increase in riskier placements in the form of greater activity on the stock market.

The preliminary analyzes did not establish a normal distribution, which can be ignored. In the obtained results, the most significant value is the Pearson Chi Square in table 7. The corrected value of the Yates variable is 0.043 with a statistical significance of $p = 0.050$, which allows the hypothesis H2 to be accepted, therefore, it has been proven that there is a connection between changes in payments of insured sums and changes in the investment portfolio in the life insurance market. The increase in payouts of insured sums on the life insurance market affects increased investment activity on the government sector bond market and reduced activity on the stock market. Alternatively, the decline in payments of insured sums in the life insurance market affects the decline in investment activity in the government sector bond market and the increase in activity in the stock market.

Table 7. Chi-Square tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi Square	.049	1	.048		
Continuity Correction	.043	1	.050		
Fishers Exact Test				.049	.038
Linear-by-Linear Association	.049	1	.057		
N of Valid Cases	40				

Source: Author's calculation in SPSS

In addition to the statistical significance of the obtained result, it is necessary to determine the strength of the connection, that is, the size of the influence. The data in table 8 provides information on whether the demonstrated relationship is strong or weak.

Table 8. Symmetric measures

		Value	Approx Sig.
Nominal by Nominal	Phi	-.004	.048
	Cramer's V	.004	.048
N of Valid Cases		40	

Source: Author's calculation in SPSS

For this purpose, Cramer's V indicator is used, whose value of 0.004 for tables larger than 2 by 2 indicates a small influence, that is, a weak connection between the observed variables. In the end, it can be stated that the existence of a relationship between the examined variables is statistically proven, but the intensity of that relationship is weak, that is, the influence is very small. The reasons should be sought in the previously mentioned caution of insurance market holders as a consequence of the exceptional sensitivity of insurance users. Minimal losses or shocks can threaten the life insurance market. Aware of that fact, the conditions for riskier placements have not yet been met. Additionally, taking a safe and long-term position is positively accepted by users in the still early stage of development of this market.

Conclusion

The risks faced by individuals and society requires mechanisms for its management and reduction on the acceptable level. Historically, it can be seen the unequal development of the global market which is still present. The disproportional character makes impossible to draw unique conclusions, but they can only refer to geographically limited areas or organizational units. It is a fact that the level of development of the insurance market follows the achieved level of economic development. As a ubiquitous phenomenon, regardless of its uneven character, the insurance market is developing. This development was accelerated by the market globalization and the free capital movements. For the basic business goal of every insurance company - profit maximization, must be found method of its realization. The activity on the capital market of all insurance companies is the necessity not the choice. However, the sensitivity of this market to shocks and confidence that is easy to lose, highlights the need for more cautious business decisions. Bearing in mind its character and sensitivity, they must be such that they do not jeopardize their business which can shake up the entire insurance market. In this article two hypotheses were confirmed through the analysis. Regardless, a distinction should be made in the interpretation of the obtained results. On the non-life insurance market, the change in the payment of compensation claims has an impact on the activity on the capital market. In addition, this influence is very large and the relationship between the analyzed variables is strong. The confirmation of the second hypothesis must be interpreted in a different way. On the example of life insurance was obtained the statistically significant result of the connection and influence of identical variables. Regardless of this fact, achieved relationship is not strong, but extremely weak and the influence of the variables is very small. Therefore, a single conclusion cannot be adopted on both markets. A disadvantage of this model is the sample made up of countries that do not belong to one area or group of countries, so global and precise conclusion can not be drawn. Additionally, the analysis is time-limited to six years, so it should definitely be extended, which is a recommendation to future authors on this topic. It is also possible to do a comparative analysis of the markets of developed and developing countries, which will show whether there are differences in activities on the capital market and what they are conditioned by. The sample consists of data until 2019 and the analysis covered the period before the COVID-19 pandemic. Market conditions have changed significantly for more than 2 years. The resulting crisis is reflected in all sectors. The definition of the insurance market as highly sensitive to crisis periods points to the conclusion that there have been changes in business conditions for economic entities. In the coming period, it will be a big challenge for the market holders to preserve and strengthen the market position with adequate policies and implemented strategies. For this reason, cooperation between the economy and the scientific sector will be of particular importance.

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MENADŽMENT ORGANIZACIONE BEZBEDNOSTI PLATNOG PROMETA

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Apstrakt

Menadžment rizika u platnom prometu obuhvata identifikovanje, merenje i upravljanje rizicima. Zato je neophodno uspostaviti njegovu efikasnu funkciju u platnom prometu. U poslednjih deset godina, evedentan je razvoj menadžmenta rizika u zemljama u tranziciji. Imajući ove činjenice u vidu, cilj ove istraživačke studije sastoji se u sagledavanju rizika u platnom prometu, sa posebnim osvrtom na analizu upravljanja gotovinom. Rezultati ove pregledne studije pokazuju da svaka banka posluje sa manjim ili većim brojem rizika, pozicionirajući se između dva ekstrema: apsolutno prihvatanje rizika i apsolutno neprihvatanje rizika. Nepohodno je da stepen prihvatanja rizika bude proporcionalan sposobnosti banke da pokrije nastale gubitke, kao i da ostvari prihvatljivu stopu prinosa. Ostvarivanje viših prinosa je moguće ukoliko banka uspostavi efikasnu identifikaciju, merenje i upravljanje rizicima poslovanja. Nosioci narušavanja sigurnosti proizlaze iz vrste izvora iz kojih će kasnije proizići i oblici narušavanja sigurnosti. Da bi se sprovela odbrambeno-zaštitna funkcija, potrebno je da se u njoj uvrstite one mere koje pružaju mogućnost eleminisanja elemenata koji dovode do narušavanja sigurnosti i opasnosti. Te mere moraju da budu sastavni deo institucije i izvođenja radnog procesa. Uslov za sigurno i normalno poslovanje u platnom prometu gotovinom podrazumeva

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neophodnost posedovanja obučenog ljudstva za sprovođenje funkcije sigurnosti. Da bi se sprovela funkcija sigurnosti i da bi se njome uspešno upravljalo, potrebno je da se itegrišu različite norme u postojećim zakonskim propisima.

Metod rada

Sistematski pregled literature je obavljen putem pretrage u bazama podataka PubMed, Google Scholar Advanced Search i Konzorcijuma biblioteka Srbije za objedinjenu nabavku – KoBSON. Radovi su pretraživani prema sledećim ključnim rečima i sintagmama: upravljanje rizikom u finansijskim institucijama, platni promet i rizik, gotovina i sigurnost, izvori rizika u platnom prometu, vrste i intenzitet rizika u platnom prometu. Analizirane su studije na engleskom i srpskom jeziku.

Menadžment rizika u platnom prometu

Radi zaštite banke od svih rizika, uključujući i kreditni rizik, kapitalizacija banke se nameće kao njena trajna orijentacija uz diverzifikaciju porfelja. U svim bankama implementiran je sistem izveštavanja o procentu zastupljenosti rizika. Ovo izveštavanje može biti redovno i periodično. Upravljanje odnosima sa klijentima (engl. Customer relationship managmenet – CRM)(Mansfield-Devine, 2018) odnosno učestvovanjem u procesu odlučivanja kreditnog odbora banke, utvrđuje se potencijalna opasnost od postojanje rizika kod svakog pojedinačnog klijenta ili u grupi klijenata(Kovačević & Gajić, 2019). CRM utvrđuje opasnost od rizika u skladu sa zakonskom regulativom i sastavlja izveštaj na mesečnom nivou, koji se dostavlja članovima uprave banke. Na mesečnom nivou se uprava banke upoznaje i sa stepenom zastupljenosti rizika putem izveštaja o kvantitetu portfolia banke, koji se sastavlja pararelno sa tipom i zakonskim procentom ograničenja. Zbirni bruto bilans banke, zbirna tabela eksponiranosti i analitičke kartice klijenata predstavljaju osnovu za sačinjavanje izveštaja o kvantitetu portfolia banke. Takođe uprava banke daje smernice za otklanjanje konkretnih prekoračenja, upravljanje i kontrolu postojećih i potencijalnih rizika banke(Hull et al., 2019).

Prema ABRS metodologiji banke prate i analiziraju stepen izloženosti kreditnom riziku, koji obuhvata potraživanja po glavnici, kamatama, naknadama, obavezama prema pojedinačnom klijentu ili prema grupi klijenata. Stepen izloženosti kreditnom riziku u obliku izdatih garancija ne sme iznositi preko 100% iznosa osnovnog kapitala banke. Izloženost banke kreditnom riziku prema pojedinačnom klijentu ili prema grupi klijenata ne sme iznositi preko 40% iznosa osnovnog kapitala banke. Osnovni kapital banke, odnosno maksimalna izloženost kreditnom riziku strukturirana je prema sledećim ograničenjima(Živković, 2019):

- Do 5% iznosa osnovnog kapitala banke gde nije kreditni rizik pokriven kolateralom;

- Od 5% do 25% iznosa osnovnog kapitala banke gde je kreditni rizik pokriven kolateralom;
- Preko 25% iznosa osnovnog kapitala banke gde je kreditni rizik pokriven kvalitetnim utrživim zalogom čija je vrednost viša od vrednosti kolaterale.
- Do 20% iznosa osnovnog kapitala banke, ako je kreditni rizik u obliku izdatih garancija, osim garancija za dobro izvršenje posla.

Akreditivi i garancije iskazane u novčanim vrednostima ne uključuju se u ukupnom izlaganju kreditnom riziku do iznosa njihovog pokrića. Ukoliko je ukupna izloženost banke kreditnom riziku prema pojedinačnom klijentu ili prema grupi klijenata viša od 15% iznosa osnovnog kapitala banke smatra se da je izlaganje banke kreditnom riziku velika. Zbir svih velikih izlaganja banke kreditnom riziku ne sme da pređe iznos od 300% iznosa osnovnog kapitala banke(Zhao et al., 2018).

U savremenom svetu, pod uticajem modernizacije tehnologije i elektronskog načina komunikacije, poslovanje banke je pod većim rizikom. Smanjena sposobnost banke da efikasno posluje i da jača svoju poslovnu i finansijsku poziciju, nestalnost zarađivanja i smanjenje kapitala predstavljaju osnovne karakteristike banke koja je izložena riziku. Kako bi banka zadržala svoju solventnost, ona mora da poseduje kapital, koji će pokriti potencijalne gubitke nastale usled nestalnosti zarađivanja. Takođe, neophodno je da banka upravlja svojim rizicima, naročito većim rizicima kojima je izložena.

Razlikujemo dve vrste rizika koji mogu uticati na nestalnost zarađivanja: finansijske i nefinansijske rizike. Finansijski rizici su direktno povezani sa ulogom finansijskog principala i posrednika, dok nefinansijski rizici nastaju kao posledica neadekvatnih procedura, usled eksternih i ljudskih faktora. U finansijske rizike ubrajamo kreditne, tržišne i ALM (engl. Asset-liabiilty management). Operativni, poslovni, reputacioni, strateški, zakonski i drugi rizici smatraju se nefinansijskim rizicima.

Kao vid sigurnosti i obezbeđenje garancije od izloženosti riziku, neophodno je da banke izdvajaju posebni kapital, koji bi služio kao pokriće za potencijalne gubitke prouzrokovane finansijskim i nefinansijskim rizicima. Izuzev identifikacije rizika, njihovog praćenja i kontrole, neophodno je da banke uspostave i sistem kvantifikacije izloženosti riziku odnosno sistem merenja(Li et al., 2019). Primenom sistema identifikacije, praćenja, kontrole i merenja rizika od strane banke, može se reći da je uspostavljen efikasan sistem upravljanja rizicima. Na osnovu Bazelskog komiteta za bankarski nadzor i međunarodnih sporazuma banke razvijaju sofisticirane modele za kvantifikaciju izloženosti riziku. U zavisnosti od izabranog modela, pravi se razlika između očekivanih i neočekivanih gubitaka. Očekivani gubici su oni za koje postoji stepen verovatnoće da će nastati i oni su poznati banci. Oni se procenjuju i za njihovo pokriće se izdvajaju rezerve. Za razliku od očekivanih gubitaka, neočekivane gubitke nije moguće predvideti. Na njih se primenjuje sistem merenja rizika, putem precizne kvantifikacije rizika i izdvajanja kapitala od strane banke u cilju pokrića(Griffiths et al., 2017).

Da bi banka uvek bila solventna i imala mogućnost da se zaštiti od eventualnih gubitaka u određenom periodu, ona mora da vodi računa o veličini ekonomskog kapitala banke. S obzirom da je ekonomski kapital, veliki trošak za banku, potrebno je da njegova veličina bude usaglašena za rizičnim profilom banke(Mihajlović et al., 2020). On predstavlja meru ukupnog rizičnog profila banke, kao i meru promena njenih rizika u vremenu. Koristi se prilikom izračunavanja procenta zarade banke u odnosu na stepen izloženosti riziku. Služi za komparaciju različitih vrsta rizika.

Bilo koja neizvesna situacija u bankarskom poslovanju, odnosno postojanje verovatnoće gubitaka usled obavljanja određenih bankarskih aktivnosti predstavlja rizik. Svaka banka posluje sa manjim ili većim brojem rizika, pozicionirajući se između dva ekstrema: apsolutno prihvatanje rizika i apsolutno neprihvatanje rizika(Vićić, 2016). Nepohodno je da stepen prihvatanja rizika bude proporcionalan sposobnosti banke da pokrije nastale gubitke, kao i da ostvari prihvatljivu stopu prinosa. Ostvarivanje viših prinosa je moguće ukoliko banka uspostavi efikasnu identifikaciju, merenje i upravljanje rizicima poslovanja.

Sigurnost platnog prometa gotovinom

U platnom prometu gotovinom predmeti narušavanja sigurnosti platnog prometa dele se na subjekte i objekte narušavanja sigurnosti. Radnici i klijenti bankarskih institucija čine subjekte narušavanja sigurnosti, dok imovina tj. novac i poslovni procesi predstavljaju objekte narušavaja sigurnosti u platnom prometu gotovinom.

Po prirodi nastanka izvori narušavanja sigurnosti u platnom prometu gotovinom mogu biti prirodni, društveni i tehničko-tehnološki. Nosioci narušavanja sigurnosti proizlaze iz vrste izvora. U prirodne izvore ubrajamo prirodne sile i pojave, dok u društvene izvore ubrajamo pojedince, kriminalne ili terorističke organizacije i nedovoljnu organiziranost društva. Među tehničko-tehnološkim izvorima izdvajamo neorganizovanost poslovanja institucije i/ili društva, nemar i nebrigu(Mirković et al., 2022).

Oblici narušavanja sigurnosti proizlaze iz izvora narušavanja sigurnosti. Pljuskovi, grmljavina, zemljotresi i poplave su oblici narušavanja sigurnosti karakteristični za prirodne izvore. Njih nije moguće predvideti i nastaju kao posledica prirodnih sila(Papp et al., 2019). Teroristički napadi, provale, krađe i protesti su oblici narušavanja sigurnosti karakteristični za društvene izvore. U cilju sprečavanja nastanka takvih pojava, postoji mogućnost njihovog utvrđivanja učestalosti prikupljanjem i analizom informacija, definisanjem mera zaštite i odbrane. Pad informacionih sistema, kvar ili otkazivanje uređaja su oblici narušavanja sigurnosti karakteristični za tehničko-tehnološke izvore. Sprečavanje ovakvih negativnih posledica postiže se redovnim održavanjem i obezbeđivanjem zamenskih delova.

Izvori narušavanja sigurnosti koriste se i za izbor sredstava za realizaciju oblika narušavanja sigurnosti. Prirodni izvori se koriste kao sredstava narušavanja sigurnosti za prirodne pojave za koje se zna da se mogu u budućnosti dogoditi, ali se ne zna u kom trenutku će se dogoditi. Platni promet gotovinom je najviše narušen društvenim izvorima narušavanja sigurnosti npr. napadi na banke, provale i krađe(Raskin, 2017). Sredstva narušavanja sigurnosti koja se mogu koristiti iz društvenih izvora su oružje, noževi, palice i drugo. Sredstva narušavanja sigurnosti mogu biti i iz tehničko-tehnoloških izvora kao što su vatra, električna struja i drugo.

Takođe metode narušavanja sigurnosti platnim prometom gotovine se razlikuju u odnosu na izvore narušavanja sigurnosti. Potresima i poplavama smatraju se metode narušavanja sigurnosti nastale iz prirodnih izvora. Provale, napadi i krađe smatraju se metodama narušavanja sigurnosti nastale iz društenih izvora. Tehničko-tehnološke metode narušavanja sigurnosti nastale su iz tehničko-tehnoloških izvora.

Za izvore i metode narušavanja sigurnosti vezan je vremenski period narušavanja. Vremenski period narušavanja sigurnosti iz prirodnih izvora je trajniji zbog nepredvidljivosti. Vremenski period narušavanja sigurnosti iz društvenih izvora povezuje se sa izvorom narušavanja sigurnosti. Vremenski period narušavanja sigurnosti napadom na finansijske institucije traje tokom vremena boravka zaposlenih u samim objektima finansijskih institucija, zatim prilikom prenosa i transporta novca sa jedne lokacije na drugu.

Iz izvora narušavanja sigurnosti proizilazi i intezitet narušavanja. On takođe zavisi od faze poslovnog procesa upravljanja gotovinom. U zavisnosti od izvora intezitet narušavanja sigurnosti može biti jakog i slabog inteziteta.

Posledice narušavanja sigurnosti platnog prometa gotovinom zavise od načina primene odbrambeno-zaštitnih funkcija institucije. Mogu se klasifikovati po predmetu koji ima za posledicu narušavanje sigurnosti(Avakumović, et al., 2021):

- osoba (smrt, teža ili lakša telesna povreda, psihički slom);

- imovina (gubitak i oštećenje novca);
- poslovni proces (trajni ili privremeni prekid poslovanja).

Analizom napada na finansijske institucije, posmatrajući period u proteklih pedeset godina, evidentan je stalan rast. Međutim ukoliko se posmatra napad na finansijske institucije prilikom transporta gotovine, može se reći da je zabeležen pad. To se opravdava činjenicom da se prilikom transporta gotovine, sistem zaštite stalno implementira i usložava, što dovodi do toga da je napadačima potrebna adekvatnija priprema.

Da bi se sprovela odbrambeno-zaštitna funkcija, potrebno je u njoj uvrstiti one mere koje pružaju mogućnost eleminisanja elemenata koji dovode do narušavanja sigurnosti i opasnosti. Te mere moraju da budu sastavni deo institucije i izvođenja radnog procesa(Stanojević & Milunović, 2020). Primenom propisanih pravila i sprovođenjem mera o zaštiti na radu, zaštiti od požara, zaštiti zivotne sredine i zaštiti zaposlenih uspostavlja se zadovoljavajući stepen sigurnosti. Cilj sprovođenja mera sigurnosti je sprečavanje povreda na radu, profesionalnih bolesti, drugih bolesti u vezi s radom, zaštita radne okoline i zaštita lica i imovine. Odbrambeno-zaštitna funkcija prikazana je prirodnom, društvenom i političkom funkcijom. Prirodna funkcija se ostvaruje spontano i sastavni je deo očuvanja života. Društvena funkcija doprinosi očuvanju društvenih vrednosti i postiže se zajedničkim interesom društva. Politička funkcija čuva političku vlast i postiže se političkim interesom i delovanjem. Odbrambeno-zaštitna funkcija ima dvojaku ulogu. Prva uloga je zaštita, koja preventivno deluje i definiše se kao otpornost prema narušavanju sigurnosti i opasnosti. Druga uloga je odbrana, direktno usmerena na pružanje otpora napadu izvora i nosioca narušavanja sigurnosti. Odbrana predstavlja sposobnost reagiranja na nadvladavanje narušavanju sigurnosti i opasnosti s ciljem uspostavljanja stanja sigurnosti(Elghaish, et al., 2020).

Uslov za sigurno i normalno poslovanje u platnom prometu gotovinom podrazumeva neophodnost posedovanja obučenog ljudstva za sprovođenje funkcije sigurnosti. Da bi se sprovela funkcija sigurnosti i da bi se njome uspešno upravljalo, potrebno je da se itegrišu različite norme u postojećim zakonskim propisima.

Izvori i intenzitet rizika u platnom prometu gotovinom

Zakonom o privatnoj zaštiti regulisane su mere zaštite i odbrane koje samostalno mogu da sprovede finansijske institucije, a njegovim podzakonskim aktima detaljnije je uređena privatna zaštita. Takođe pitanje procene izloženosti riziku, način zaštite lica i imovine, način rada lica koja sprovode zaštitu i nadzor nad njihovim radom regulisani su Zakonom o privatnoj zaštiti(Cartwright, et al., 2019).

Skup aktivnosti kojima se štite lica i njihova imovina od protivpravnih radnji posredstvom sredstava tehnike predstavljaju vid tehničke zaštite. Tehnička zaštita zahteva procenu izloženosti riziku. Ukoliko se štiti objekat kao deo imovine, zahteva se svrstavanje objekta u kategoriju koja sadrži obavezne mere zaštite(Abdul-Rahman, 2014). Pravno lice, koje ima odobrenje za obavljanje poslova privatne zaštite, ima mogućnost da izgradi dojavni centar sistema tehničke zaštite, u kojem će primati signal za intervenciju. Ovakav vid intervencije po dojavnom signalu vrši ekipa koja se sastoji od najmanje dva lica koja poseduju oružje. Za razliku od tehničke zaštite, telesna zaštita obuhvata lično nadgledanje lica i njihove imovine, koja se štiti, bez potrebe korišćenja sredstava tehnike. Telesna zaštita se obavlja na osnovu radnog naloga poslodavca, koji je popunjen u skladu sa propisima (Zekić, Brajković, 2022). Lica koja sprovode telesnu zaštitu imaju mogućnost da upotrebe silu, ali samo u onom trenutku kada je neophodno da bi se zadovoljio cilj.

Narušavanje sigurnosti u platnom prometu podstaknuto je rizicima tj. aktivnostima koje imaju posledice nastanka nekih nuspojava. Izvori narušavanja sigurnosti mogu biti prirodni, društveni i tehničko-tehnološki. Nosioci narušavanja sigurnosti se mogu klasifikovati na interne i eksterne. Klasifikacija je izvršena prema mestu odakle se uočava narušavanje sigurnosti. Interni nosioci su oni koji nastaju u okviru poslovnog procesa finansijskih institucija. Karakterišu se kao nedefinisani poslovni procesi, nastali usled neorganizovanosti institucije (npr. ne sprovode se mere zaštite radi interesa zaposlenih i interesa uslužnih delatnosti), neodgovornog ponašaja zaposlenih i neispravnosti objekta sredstava i opreme(Ristić et al., 2021). Za razliku od internih nosioca, eksterni nosioci narušavanja sigurnosti nastaju van poslovnog procesa kao što su kriminalne radnje, prirodne sile, tehnološke katastrofe i drugo.

U skladu sa Zakonom o minimalnim merama zaštite sprovodi se procena narušavanja sigurnosti u platnom prometu, koja obuhvata analizu kaznenih radnji protiv slobode i prava čoveka, protiv života čoveka i iz koristoljublja. Za razliku od kaznenih radnji, kriminalne radnje se odnose na krađe, razbojništva, otmice, ucene, iznude i vandalizam.

Vremenski period narušavanja sigurnosti dovodi se u vezu sa izvorima i metodama. Vremenski period narušavanja sigurnosti, koja je prouzrokavana pretnjom izvršenja napada na finansijske institucije traje tokom radnog vremena finansijskih institucija, a naročito u uslovima prenosa i transporta gotovine. U izuzetnim slučajevima, kada je u pitanju pretnja provalom, vremenski period narušavanja sigurnosti traje van radnog vremena finansijskih institucija(Ciarko & Paluch-Dybek, 2022).

Intezitet narušavanja sigurnosti zavisi od stepena rizika i oscilira u zavisnosti od: izvora narušavanja sigurnosti, predviđanja adekvatnih situacija za napad na finansijsku instituciju, rizika kažnjavanja, broja lica koja se nalaze u objektu i broja osposobljenih lica, lokacije, faze poslovnog procesa, vremena i mera zaštita koje se sprovode. Može biti različitog inteziteta i dovodi do posledica koje zavise i od sprovedenih aktivnosti odbrambeno-zaštitne funkcije.

Sankcije za napade na bankarske institucije, kao i narušavanje sigurnosti slobode i prava čoveka i njegove društvene vrednosti, zagarantovano je Ustavom Republike Srbije i međunarodnim pravom. Upotreba sile, pretnja licu smrću, ili bilo kojim drugim načinom koji ima za posledicu da lice strahuje za svoj život, oduzimanje licu pokretnih stvari i protivpravno prisvajanje istih su osnovna obeležja krivičnih dela pri napadu na finansijske institucije(Jestrović, & Jovanović, 2022). Poslednjih godina u zemljama Evropske unije, ova obeležja dovedena su u vezu sa iznudom, gde se kod izvršenja napada na finansijske institucije, kao što je na primer otmica članova porodice visokih funkcionera institucije ili postavljanje eksplozivne naprave zahteva od finansijske institucije da izdvoji novčana sredstva i da ih dostavi počiniocima krivičnog dela. Na taj način se silom i pretnjom stvara prinuda da lice koje je zaposleno u finansijskoj instituciji, protivno svojoj volji počini krivično delo, što inače ne bi ni uradilo.

Sprovedena istraživanja u poslednjih deset godina, istakla su da se napadi na finansijske institucije uglavnom dešavaju u velikim gradovima, gde je velika gustina naseljenosti, a time i veća mogućnost za skrivanje počinioca krivičnih dela. Obično se napad sprovodi od strane mlađih osoba, preciznije muškaraca, kako zbog svojih fizičkih sposobnosti, tako i zbog nezrelosti i želje za bogastvom. Napadi na finansijske institucije se mogu razlikovati u zavisnosti da li je napad izvršen u finansijskoj instituciji ili pri prenosu i transportu gotovine. Ukoliko je napad izvršen u finansijskoj instituciji, on može biti napad koji je izvršen u bankama, poštama, menjačnicama, poslovnicama finansijskih agencija, kladionicama i kockarnicama. Napadi na finansijske institucije izvršeni pri prenosu gotovine, uglavnom se dešavaju kad se gotovina prenosi u nepropisanim vrećama ili torbama i bez primene propisanih mera zaštite. Napadi izvršeni pri transportu gotovine su povezani sa napadom pri prenosu gotovine, jer se uglavnom napadi sprovode prilikom utovara i istovara gotovine. Pored napada na finansijske institucije koje se bave platnim prometom gotovine, u poslednje vreme je sve više zastupljenija krađa kreditnih ili bankovnih kartica koje služe za podizanje gotovine na bankomatima. Zabeležne su i krađe gotovine iz bankomata od strane lica koji vrše njihovo punjenje. Krivična dela krađe gotovine u finansijskim institucijama pri prenosu i transportu gotovine, koja su bila medijski pokrivena poslednjih godina, zabeležena su u Holandiji, Brazilu i Sloveniji.

Zaključak

Kako bi se u jednoj finansijskoj instituciji koja se bavi platnim prometom gotovine ostvario uspešan poslovni rezultat neophodno je da se uspostavi adekvatan sistem upravljanja potencijalnim gubitkom i štetom. Neizostavno je da sistem upravljanja rizikom u platnom prometu gotovinom i obezbeđenje sigurnosti budu integrisani u poslovanje finansijske institucije.

Obezbeđenje sigurnosti podrazumeva stanje u kojem se rizici identifikuju, procenjuju, smanjuju ili eleminišu. Neophodno je da se izvrši procena stepena narušavanja sigurnosti, njihovih izvora i vrsta, kritičnih mesta, posledica i primenjenih mera kako bi se obezbedio adekvatan sistem sigurnosti.

Procena stepena narušavanja sigurnosti podrazumeva procenu odnosno sud mogućih opasnosti i pretnji po osobe, gotovinu i poslovne procese. Osnovni cilj procene stepena narušavanja sigurnosti je utvrđivanje izvora i vrste narušavanja sigurnosti, prepoznavanje uzorka i vrste opasnosti, utvrđivanje stepena rizika i njegovo smanjivanje putem primene određenih mera zaštite i jačanja odbrambene moći. Sigurnost svakog poslovnog sistema mora biti uspostavljena na taj način da su njom predviđene moguće štete i rizici koji mogu nastati. Treba voditi računa da se mere za procenu stepena narušavanja sigurnosti i analize rizika utvrde na najobektivniji način. Uspostavljanjem takvog sistema sigurnosti obezbeđuje se efikasnost poslovanja, s jedne strane, dok sistem iziskuje velike troškove, s druge strane.

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MANAGEMENT OF ORGANIZATIONAL PAYMENT SECURITY

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Review paper

Abstract

Risk management in payment transactions includes identifying, measuring and managing risks. That is why it is necessary to establish its effective function in payment transactions. In the last ten years, the development of risk management in countries in transition is evident. Bearing these facts in mind, the aim of this research study is to analyze the risks in payment transactions, with special reference to the analysis of cash management. The results of this overview study show that each bank operates with a smaller or larger number of risks, positioning itself between two extremes: absolute risk acceptance and absolute risk non-acceptance. It is necessary that the level of risk acceptance be proportional to the bank's ability to cover the resulting losses, as well as to achieve an acceptable rate of return. Achieving higher returns is possible if the bank establishes effective identification, measurement and management of business risks. The carriers of security breaches arise from the types of sources from which forms of security breaches will later arise. In order to carry out the defense and protection function, it is necessary to include those measures that provide the possibility of eliminating elements that lead to the violation of security and danger. Those measures must be an integral part of the institution and the execution of the work process. The condition for safe and normal operations in cash payment transactions implies the necessity of having trained personnel for the implementation of the security function. In order to implement

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the security function and manage it successfully, it is necessary to integrate various norms in the existing legal regulations.

Keywords: *risk management, payment transactions, cash and security.*

JEL: *E42, E49.*

Introduction

Due to the globalization of the population, the economy and politics, the growth of foreign investments and cross-border transfers, the integration of stock markets into a single system and the growth of their placements, the abolition of redundant financial processes through the reduction of the influence of the state on financial activities, the establishment of modern technology, the fluctuation of exchange rates and prices of strategic products, comes to increased risk in business for all participants in the financial market. Risk is present in all institutions operating on the market. We define risk as the percentage of probability of occurrence of negative events, which have negative consequences on business. Its main characteristic is constancy. It exists in all institutions to a greater or lesser extent, it is not possible to eliminate it, but it is possible to reduce it.

Traditional financial institutions are exposed to liquidity risk, credit risk, interest rate risk, foreign exchange risk, concentration risk, operational risk and strategic risk. Central banks are also exposed to the same risks, but with a higher degree of protection because their portfolio consists of high security placements. Unlike traditional financial institutions, central banks are non-profit institutions, established with the aim of ensuring the safety of public funds.

Analyzing the relevant literature, in the last ten years, the tendency of central bank risk management, their identification and the development of instruments for risk assessment, i.e. their measurement, is present.

The goal of the work

Given that in recent years there has been a growing trend of attacks on institutions dealing with payment transactions, primarily cash, the aim of this research study is to look at the risks in payment transactions, with special reference to the analysis of cash management.

Method of work

A systematic review of the literature was performed through a search in the databases PubMed, Google Scholar Advanced Search and the Consortium of Serbian Libraries for Unified Procurement - KoBSON. Papers were searched according to the following key words and phrases: risk management in financial institutions, payment traffic and risk, cash and security, sources of risk in payment traffic, types and intensity of risk in payment traffic. Studies in English and Serbian were analyzed.

Risk management in payment transactions

In order to protect the bank from all risks, including credit risk, the bank's capitalization is imposed as its permanent orientation along with portfolio diversification. A system of reporting on the percentage of risk representation has been implemented in all banks. This reporting can be regular or periodic. Customer relationship management (CRM) (Mansfield-Devine, 2018), i.e. participation in the decision-making process of the bank's credit committee, determines the potential danger of risk in each individual client or in a group of clients (Kovačević & Gajić, 2019). CRM determines the danger of the risk in accordance with the legal regulations and prepares a report on a monthly level, which is submitted to the members of the bank's management. On a monthly basis, the bank's management is informed about the level of risk representation through a report on the quantity of the bank's portfolio, which is compiled in parallel with the type and legal percentage of restrictions. The aggregated gross balance of the bank, the aggregated table of exposure and the analytical cards of the clients are the basis for the preparation of the report on the quantity of the bank's portfolio. Also, the bank's management provides guidelines for eliminating specific excesses, management and control of existing and potential risks of the bank (Hull et al., 2019).

According to the ABRS methodology, banks monitor and analyze the degree of exposure to credit risk, which includes claims for principal, interest, fees, liabilities to an individual client or to a group of clients. The degree of exposure to credit risk in the form of issued guarantees may not exceed 100% of the amount of the bank's core capital. The bank's exposure to credit risk to an individual client or to a group of clients must not exceed 40% of the amount of the bank's core capital. The basic capital of the bank, i.e. the maximum exposure to credit risk is structured according to the following restrictions (Živković, 2019):

- Up to 5% of the amount of the bank's core capital where the credit risk is not covered by collateral;
- From 5% to 25% of the amount of the bank's core capital where the credit risk is covered by collateral;
- Over 25% of the amount of the bank's core capital where the credit risk is covered by a high-quality marketable pledge whose value is higher than the value of the collateral.

- Up to 20% of the amount of the bank's core capital, if the credit risk is in the form of issued guarantees, except guarantees for good performance.

Letters of credit and guarantees expressed in monetary values are not included in the total exposure to credit risk up to the amount of their coverage. If the bank's total exposure to credit risk to an individual client or to a group of clients is higher than 15% of the amount of the bank's core capital, it is considered that the bank's exposure to credit risk is high. The sum of all the bank's large exposures to credit risk must not exceed 300% of the bank's core capital (Zhao et al., 2018).

In the modern world, under the influence of modernizing technology and electronic means of communication, bank operations are at greater risk. Reduced ability of the bank to operate efficiently and to strengthen its business and financial position, instability of earnings and reduction of capital represent the basic characteristics of a bank that is exposed to risk. In order for a bank to maintain its solvency, it must have capital, which will cover potential losses caused by the volatility of earnings. Also, it is necessary for the bank to manage its risks, especially the larger risks to which it is exposed.

We distinguish between two types of risks that can affect the volatility of earnings: financial and non-financial risks. Financial risks are directly related to the role of the financial principal and intermediary, while non-financial risks arise as a result of inadequate procedures, due to external and human factors. Financial risks include credit, market and ALM (asset-liability management). Operational, business, reputational, strategic, legal and other risks are considered non-financial risks.

As a form of security and guarantee against risk exposure, it is necessary for banks to set aside special capital, which would serve as cover for potential losses caused by financial and non-financial risks. In addition to risk identification, their monitoring and control, it is necessary for banks to establish a risk exposure quantification system, i.e. a measurement system (Li et al., 2019). By applying the system of identification, monitoring, control and measurement of risks by the bank, it can be said that an effective risk management system has been established. Based on the Basel Committee on Banking Supervision and international agreements, banks are developing sophisticated models for quantifying risk exposure. Depending on the chosen model, a distinction is made between expected and unexpected losses. Expected losses are those for which there is a degree of probability that they will occur and they are known to the bank. They are assessed and reserves are set aside to cover them. Unlike expected losses, unexpected losses cannot be predicted. A system of risk measurement is applied to them, through precise risk quantification and allocation of capital by the bank for the purpose of coverage (Griffiths et al., 2017).

In order for the bank to always be solvent and have the ability to protect itself from possible losses in a certain period, it must take into account the size of the bank's economic capital. Given that economic capital is a large expense for the bank, it is necessary that its size be adjusted to the bank's risk profile (Mihajlović et al., 2020). It represents a measure of the bank's overall risk profile, as well as a measure of changes in its risks over time. It is used when calculating the percentage of the bank's earnings in relation to the degree of exposure to risk. It serves to compare different types of risks.

Any uncertain situation in banking business, i.e. the existence of the probability of losses due to the performance of certain banking activities represents a risk. Each bank operates with a smaller or larger number of risks, positioning itself between two extremes: absolute acceptance of risk and absolute non-acceptance of risk (Vićić, 2016). It is necessary that the level of risk acceptance be proportional to the bank's ability to cover the resulting losses, as well as to achieve an acceptable rate of return. Achieving higher returns is possible if the bank establishes effective identification, measurement and management of business risks.

Security of cash payments

In the case of cash payment transactions, cases of violation of the security of payment transactions are divided into subjects and objects of security violation. Workers and clients of banking institutions are the subjects of security breaches, while property, i.e. money and business processes are objects of security violations in cash payment transactions.

According to the nature of the occurrence, the sources of security violations in cash payment transactions can be natural, social and technical-technological. Carriers of security breaches arise from a variety of sources. Natural sources include natural forces and phenomena, while social sources include individuals, criminal or terrorist organizations, and insufficient organization of society. Among the technical-technological sources, we single out the disorganized operation of the institution and/or society, negligence and carelessness (Mirković et al., 2022).

Shapes security breaches arise from sources of security breaches. Showers, thunderstorms, earthquakes and floods are forms of disruption of security characteristic of natural sources. They cannot be predicted and arise as a result of natural forces (Papp et al., 2019). Terrorist attacks, burglaries, thefts and protests are forms of breach of security characteristic of social sources. In order to prevent the occurrence of such phenomena, there is a possibility of determining their frequency by collecting and analyzing information, defining protection and defense measures. The failure of information systems, breakdown or failure of devices are forms of breach of security characteristic of technical-technological sources. Prevention of such negative consequences is achieved by regular maintenance and provision of replacement parts.

Sources of security breaches are also used for the selection of means for the realization of forms of security breach. Natural resources are used as failsafes for natural phenomena that are known to occur in the future, but do not know when they will occur. Cash payment transactions are most affected by social sources of security violations, i.e. attacks on banks, burglaries and thefts (Raskin, 2017). Resources security breaches that can be used from social sources are guns, knives, clubs and more. Means of breaching security can also be from technical-technological sources such as fire, electric current and others.

Also, the methods of breaching the security of cash payment transactions differ in relation to the sources of breach of security. Earthquakes and floods are considered to be methods of disrupting security arising from natural sources. Burglary, assault and theft are considered methods of breaching security originating from social sources. Technical-technological methods of breaching security arose from technical-technological sources.

The time period of the breach is related to the sources and methods of security breaches. The time period of security breaches from natural sources is more permanent due to unpredictability. The time period of the breach of security from social sources is associated with the source of the breach of security. The time period of breaching security by attacking financial institutions lasts during the time employees stay in the facilities of the financial institutions themselves, then during the transfer and transport of money from one location to another.

The intensity of the violation also comes from the source of security violations. It also depends on the stage of the cash management business process. Depending on the source, the intensity of the security breach can be strong or weak.

The consequences of violating the security of cash payment transactions depend on the way the institution's defense and protection functions are applied. They can be classified according to the subject that has the effect of violating security (Avakumović, et al., 2021):

- person (death, serious or minor physical injury, mental breakdown);
- property (loss and damage to money);

- business process (permanent or temporary business interruption).

Analyzing attacks on financial institutions, looking at the period of the past fifty years, a constant growth is evident. However, if we look at the attack on financial institutions during the transport of cash, it can be said that there has been a decline. This is justified by the fact that when transporting cash, the protection system is constantly being implemented and complicated, which means that attackers need more adequate preparation.

In order to implement the defense and protection function, it is necessary to include those measures that provide the possibility of eliminating elements that lead to the violation of security and danger. Those measures must be an integral part of the institution and the execution of the work process (Stanojević & Milunović, 2020). By application prescribed rules and the implementation of measures on occupational safety, fire protection, environmental protection and employee protection establish a satisfactory level of safety. The goal of implementing safety measures is to prevent injuries at work, occupational diseases, other work-related diseases, protection of the working environment and protection of persons and property. The defense-protective function is shown as a natural, social and political function. The natural function is realized spontaneously and is an integral part of preserving life. The social function contributes to the preservation of social values and is achieved by the common interest of society. Political function preserves political power and is achieved through political interest and action. The defensive-protective function has a dual role. The first role is protection, which acts preventively and is defined as resistance to the violation of security and danger. The second role is defense, directly aimed at resisting the attack of the source and carrier of the security breach. Defense represents the ability to react to overcoming security violations and threats with the aim of establishing a state of security (Elghaish, et al., 2020).

Condition for safe and normal business operations in cash payments implies the necessity of having trained personnel to implement the security function. In order to implement the security function and manage it successfully, it is necessary to integrate various norms in the existing legal regulations.

Sources and intensity of risk in cash payment transactions

The law on private protection regulates protection and defense measures that financial institutions can implement independently, and its by-laws regulate private protection in more detail. Also, the issue of risk exposure assessment, the way to protect people and property, the way of work of persons who carry out protection and the supervision of their work are regulated by the Law on Private Protection (Cartwright, et al., 2019).

A set of activities that protect persons and their property from illegal actions by means of technical means is a form of technical protection. Technical protection requires risk exposure assessment. If the object is protected as part of the property, it is required to classify the object into a category that contains mandatory protection measures (Abdul-Rahman, 2014). A legal entity, which is authorized to perform private security services, has the possibility to build a notification center of the technical protection system, where it will receive a signal for intervention. This type of intervention following a warning signal is carried out by a team consisting of at least two persons who possess weapons. Unlike technical protection, physical protection includes personal monitoring of persons and their property, which is being protected, without the need to use technical means. Physical protection is performed on the basis of the employer's work order, which is completed in accordance with the regulations (Zekić, Brajković, 2022). Persons who carry out physical protection have the possibility to use force, but only at that moment when it is necessary to satisfy the goal.

Violation of security in payment transactions is encouraged by risks, i.e. activities that have the consequences of some side effects. Sources of security violations can be natural, social and technical-technological. The carriers of security breaches can be classified into internal and external. The classification was made according to the place from where the violation of security is observed. Internal carriers are those that arise within the business process of financial institutions. They are characterized as undefined business processes, caused by the disorganization of the institution (e.g. protection measures are not implemented for the interests of employees and the interests of service activities), irresponsible behavior of employees and malfunctioning of facilities and equipment (Ristić et al., 2021). Unlike internal carriers, external carriers of security breaches occur outside the business process, such as criminal acts, natural forces, technological disasters, and others.

In accordance with the Law on Minimum Protection Measures, an assessment of the violation of security in payment transactions is carried out, which includes the analysis of criminal actions against human freedom and rights, against human life and for self-interest. Unlike criminal acts, criminal acts refer to theft, robbery, kidnapping, blackmail, extortion and vandalism.

The time period of the security breach is related to the sources and methods. The time period of breach of security, which is caused by the threat of an attack on financial institutions, lasts during the working hours of financial institutions, especially in the conditions of transfer and transport of cash. In exceptional cases, when it comes to the threat of a break-in, the time period of the security breach lasts outside the working hours of financial institutions (Ciarko & Paluch-Dybek, 2022).

The intensity of the security breach depends on the degree of risk and fluctuates depending on: the source of the security breach, the prediction of adequate situations for an attack on the financial institution, the risk of punishment, the number of persons in the facility and the number of trained persons, location, stage of the business process, time and measures protection that are implemented. It can be of different intensity and lead to consequences that also depend on the implemented activities of the defense-protective function.

Sanctions for attacks on banking institutions, as well as the violation of the security of freedom and rights of man and his social values, are guaranteed by the Constitution of the Republic of Serbia and international law. The use of force, the threat of death to a person, or any other way that causes a person to fear for his life, confiscation of movable property from a person and illegal appropriation of the same are the basic characteristics of criminal acts in the attack on financial institutions (Jestrović, & Jovanović, 2022). In recent years, in the countries of the European Union, these characteristics have been linked to extortion, where when carrying out attacks on financial institutions, such as kidnapping family members of high officials of the institution or planting an explosive device, the financial institution is required to allocate funds and deliver them to the perpetrators of the crime. In this way, coercion is created by force and threat, so that a person who is employed in a financial institution, against his will, commits a criminal act, which otherwise he would not have done.

Researches conducted in the last ten years have pointed out that attacks on financial institutions mostly take place in big cities, where there is a high population density, and thus a greater possibility for the perpetrators of criminal acts to hide. Usually, the attack is carried out by younger persons, more specifically men, both because of their physical abilities, and because of their immaturity and desire for wealth. Attacks on financial institutions can differ depending on whether the attack is carried out at a financial institution or during the transfer and transport of cash. If the attack was carried out in a financial institution, it can be an attack carried out in banks, post offices, exchange offices, branches of financial agencies, betting shops and casinos. Attacks on financial institutions carried out during the transfer of cash, mostly occur when the cash is transferred in non-prescribed sacks or bags and without the application of prescribed protection measures. Attacks carried out during the transport of cash are related to the attack during the transfer of cash, because mainly the attacks are carried out during the loading and unloading of cash. In addition to attacks on financial institutions that deal with cash payments, the theft of credit or bank cards used to withdraw cash from ATMs has become more common recently. Thefts of cash from ATMs by the persons filling them have also been recorded. Crimes of theft of cash in financial institutions during the transfer and transport of cash, which have been covered by the media in recent years, have been recorded in the Netherlands, Brazil and Slovenia.

Conclusion

In order to achieve a successful business result in a financial institution dealing with cash payments, it is necessary to establish an adequate management system for potential loss and damage. It is essential that the risk management system in cash payment transactions and security assurance be integrated into the operations of the financial institution.

Ensuring security means the state in which risks are identified, assessed, reduced or eliminated. It is necessary to assess the degree of security breaches, their sources and types, critical places, consequences and applied measures in order to ensure an adequate security system.

The assessment of the degree of security breach implies an assessment, i.e. a judgment of possible dangers and threats to persons, cash and business processes. The main goal of assessing the degree of security breach is to determine the source and type of security breach, identify the pattern and type of danger, determine the degree of risk and reduce it through the application of certain protection measures and strengthening of defense power. The security of every business system must be established in such a way that it foresees possible damages and risks that may arise. Care should be taken to determine the measures for assessing the degree of security breach and risk analysis in the most objective way. By establishing such a security system, business efficiency is ensured, on the one hand, while the system requires large costs, on the other hand.

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ULOGA SOCIJALNOG MENADŽMENTA U POSLOVNIM ORGANIZACIJAMA

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Apstrakt

Značaj socijalnog menadžmenta orijentisanog na smanjenje socijalnih razlika i uanpređenje radnog ambijenta zaposlenih povećava se u uslovima rastuće tržišne konkurencije. Uvažavajući osnovne principe socijalnog menadžmenta, preduzeća mogu da razviju posebne strategije kojima će uticati na povećanje konkurentskih prednosti i sveukupnu dobrobit društva. U vezi sa tim cilj ovog istraživanje je da ukaže na značaj društveno odgovornog poslovanja koje treba da bude organizovano tako da se ne ugoržava životna sredina i društvo, kao i prava zaposlnenih, a da se osiguraju pozitivni rezultati poslovanja.

Ključne reči: *socijalni menadžment, preduzeće, društveno odgovorno poslovanje.*

JEL*: Z13, Z19.*

Uvod

Primenom socijalnog menadžmenta u poslovnim organizacijama razvijaju se međuljudski odnosi kojima se ostvaruje smanjenje ekonomskih, socijalnih i rodnih nejednakosti. Socijalni menedžment se karakteriše činjenicom da je je prisutan kako u javnom, tako i u privatnom sektoru, što uslovljava potrebu za sprovođenjem korporativne društvene odgovornosti unutar poslovnih organizacija(Hofman et al., 2017). Da bi se socijalni menadžment uspešno implementirao, njegov osnovni zadatak je da se uoče društveni problemi i sačini

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plan njihovog rešavanja. U prethodnom periodu društveno odgovorno poslovanje postalo je predmet interesovanja velikog broja istraživača iz najrazličitijih oblasti. U osnovi ovaj koncept podrazumeva konstantnu posvećenost preduzeća da se ponaša etički i da doprinosi sveukupnom ekonomskom razvoju, kao i kvalitetu života svojih zaposlenih i njihovih porodica i celokupne lokalne zajednice(Watts & Holme, 2003).

Socijalni menadžment u osnovi podrazumeva društveno odgovorno poslovanje što je uslovljeno osnovnim društvenim verednostima kao što su etičnost, transparentnost poslovanja, poštovanje osnovnih ljudskih prava, poštovanje prava radnika i poštovanje međunarodnih pravnih normi. Sa druge strane, poštovanje ovih normi omogućava bolje poslovne rezultate, rast ugleda preduzeća, privrženost zaposlenih preduzeću kao i značajno veće poslovne performanse.

Poslovna praksa u Republici Srbiji ne nudi značajne rezultate kojima bi se moglo zaključiti da se društveno odgovorno poslovanje široko primenjuje, već su prisutni pojedinačni slučajevi gde je akcenat na pokrivanju samo nekih pitanja kao što su: korporativna etika, zaštita životne sredine, upravljanje ljudskim resursima, poštovanje ljudskih prava i dr. I pored velikih napora da se ova oblast normativno reguliše, malo je urađeno na smoj implementaciji istog u praksi.

Primena koncepta korporativne društvene odgovornosti u zemljama u tranzicicji zahteva angažovanje svih važnih subjekata. Najznačajniju ulogu u čitavom procesu ima država koja svojom normativnom regulativom treba da stvori uslove za društveno odgovorno poslovanje. Preduslovi za sprovođenje korporativne društvene odgovornosti jeste vladavina prava, demokratizacija društva, slobode kretanja i izražavanja i sve ostale tekovine savremenog društva.

Pregled literature

Savremeni uslovi poslovanja obezbeđuju ekonomske benefite poslovnim subjektima koji se ponašaju odgovorno kako prema svojim stejkholderima, tako i prema društvu u celini. Korporativna društvena odgovornost mora biti deo ukupne poslovne politike preduzeća, sa naglašavanjem potrebe za dostizanje društvenih i ekoloških standarda uz težnju i napore da se ostvare maskimalni poslovni rezultati. Prema Cramer (2017) preduzeća trebaju da osim prihoda kao ciljeve poslovanja postave brigu o zaposlenima, životnoj sredini i društvu u celini. Moon te al., (2017) smatraju da koncept korporativne društvene odgovornosti služi kao sredstvo za stvaranje profita usaglašavujući socioekonomske i ekološke principe sa interesima preduzeća. U takvom poslovnom okruženju ovaj koncept se koristi kao sredstvo za posredovanje između različitih suprotstavljenih interesa.

Fernandno & Lawrence (2014) objašnjavaju da je za razumevanje kocepta korporativne društvene odgovornosti neophodno poći od tri osnovna teorijska stanovišta: teorije legitimiteta, teorije stejkholdera i teorije institucija. Savremeni uslovi poslovanja nameću rigorozne uslove konkurecije u kojima je veoma teško obezbediti opstanak i profit. Prema Zientara et al., (2015) preduzeća treba da svoje poslovne strategije usmere na prihvatanje koncepta korporativne društvene odgovornosti kako bi povećale svoju konkurentnost i zadovoljstvo zaposlenih. Rashe et al, (2017) uvažavajući osnovne principe korporativne društvene odgovornosti zaključuju da se radi o konceptu sa velikim brojem aktera i da je njegova suština izražena kroz socijalnu komponentu, pa ga smatraju osnovnim vidom socijalnog menadžmenta.

Battaglia et al., (2014) su u svom istraživanju došli do zaključka da društveno odgovorno poslovanje obuhvata četiri osnovne kategorije: korporativnu društvenu odgovornost vezanu za životnu sredinu; korporativnu društvenu odgovornost vezanu za zaposlene; korporativnu društvenu odgovornost vezanu za širu društvenu zajednicu i marketinški aspekt korporativne društvene odgovornosti vezano za odgovorno i etičko oglašavanje. Da bi se ostvario ovakav način poslovanja država treba svojim instrumentima da postavi jasan pravni okvir(Stojanović et al., 2021), u kome bi poslovni ambijent omogućavao ostvarivanje poslovnih rezultata uz uvažavanje prethodno nabrojanih kategorija.

U uslovima recesije i sveobuhvatne ekonomske krize, koncept korporativne društvene odgovornosti posebno dobija na značaju. Ovaj koncept poslovanja neprestano trpi određene izmene, zbog svoje dinamičnosti što uslovljava potrebu da se vrši prilagođavanje poslovanja preduzeća. Da bi se preduzeća uspešno prilagodila promenama poslovnog ambijenta neophodna je sinergija države i potrošača(Fan et al., 2016). Ovo će u značajnoj meri uticati na organizovanje feri i pravednih odnosa i poštovanje poslovnih, etičkih i društvenih normi. Koncept korporativnog društveno odgovornog ponašanja obezbeđuje brojne koristi, utiče na redukciju troškova, jačanje tržišne pozicije, što u značajnoj meri utiče na poslovne rezultate, čime se potvrđuje aktuelnost i značaj ovog istraživanja.

Geneza korporativne društvene odgovornosti

Koncept korporativne društvene odgovornosti datira još iz vremena na stanka privih oblika poslvnih odnosa, sa genezom i razvojem koji us pratile velike promene. današnji njegov oblik je vezan za drugu polovinu dvadestog veka, kada mu se posvećuje mnogo više pažnje(Lau et al., 2016). Njegov razvoj pratilo je i normativno uređenje te oblasti i uključivanje države u samu regulaciju funkcionisanja. Polazeći od osnovnog motiva poslovanja svakog preeduzeća, odnosno ostvarivanje maksimalnog profita, postavlja se pitanje kako ga upodobiti sa opštim interesima društva. Ovde se postavlja pre svega pitanje etičnosti poslovanja i moralne odgovrnosti svakog poslovnog subjekta. Ovo se pre svega odnosi na odgovornost poslovanja u odnosu na ostale subjekte, uvažavajući njihove stavove, poštovanje osnovnih prava proisanih zakonom i međunarodnim pravnim normama, odnosno uvažavanje načela propisanih politikom poslovanja(Avakumović et al., 2021).

Posebna pažnja u konceptu korporativne društvene odgovornosti jeste usmerena na zaposlene kao nosioce poslovnog procesa. Imajući u vidu da je radna snaga ključni faktor uspeha svakog poslovnog subjekta, odgovoran i etički odnos kompanije prema onima koji rade za nju i ostvaruju profit je obaveza uslovljena ulogom koju imaju u primeni samog koncepta. U osnovi ovog koncepta, kada se posmatra sa stanovišta internih resursa u preduzeću, nalaze se zaposleni jer se uzročno-posledično organizacija rada zasniva na njihovoj motivisanosti za rad. Značaj ljudskih resursa su prepoznali svi savremeni poslovni subjekti, koji razvijaju posebne metode za privlačenje kvalitetnog kadra, obezbeđuju kontinurirano učenje i usavršavanje, utiču na motivaciju zaposlenih i na taj način stvaraju sinergiju adekvatnog radnog ambijenta i ciljeva poslovanja koji terba da se realizju.

Značaj i uloga zaposlenih u poslovnom procesu prepozaniti su u savremenom menadžmentu i biznisu(Jovanović, 2021), pa i savremena ekonomska teorija im posvećuje posebnu pažnju. To podrazumeva konstantna ulaganja u ljudski kapital, kroz „obrazovanje za ceo život“, kako bi se stimulisali i motivisali za pružanje maksimuma poslovnoj organizaciji(Cho et al., 2015; Radovanović et al., 2021). Ostvarivanje konkurentske prednosti upravo se postiže razvijanjem znanja i veština zaposlenih uz uvažavanje savremenih dostignuća teorije i prakse(Dakić et al., 2021; Pinter Feješ et al., 2021). Da bi se realizovao koncept korporacijske društvene odgovornosti neophodno je ostvariti odgovajući oblik pristupa ukupnim sposobnostima ljudskog činioca unutar organizacije, što zahteva značajnu fleksibilnost. Upravo je to prednost preduzeća u razvijenim tržišnim ekonomijama, gde razvijena poslovna kultura i etički standardi predstavljaju presudan faktor u odabiru poslodavca.

Jedan od osnovnih činilaca korporativne društvene odgovornosti jeste menadžment ljudskih resursa, obezbeđujući prava iz radnog odnosa što se manifestuje kroz sve faze i postupke od planiranja, regrutovanja i selekcije kadrova, preko obuke i razvoja zaposlenih, odnosno razvoja karijere, do materijalnih i nematerijalnih vrsta motivacije(Zhang et al., 2013). Na ovaj način poslovna organizacija treba da brine o zaposlenima, njihovoj kontinuiranoj edukaciji, mogućnosti napredovanja, a posebno zaštiti na radu. Briga o zaposlenima i etički kodeks poslovne organizacije mora da se poštuje od samog početka, odnosno procesa selekcije kadrova uz izbegavanje svakog oblika diskriminacije. Stvaranje vrednosti ljudskog kapitala postiže se uvažavanjem različitosti i potreba svakog pojedinca u poslovnoj organizaciji.

Sprovođenje koncepta korporacijske društvene odgovornosti manifestuje se i kroz razvoj karijere zaposlenih usklađenog sa ciljevima poslovne organizacije i strategijom razvoja. Usaglašavanje razvoja zaposlenih sa potrebama radnog mesta, praćenje ostvarenih rezultata rada i ulaganje u razvoj njihovih veština i znanja, povećava produktivnost i ekonomičnost poslovnih procesa. Zato je neophodan strategijski pristup razvoja ljudskih resursa, kroz planiran i organizovan sistem kvalitetne ikontinuirane obuke i treninga, kako na nivou same organizacije, tako i van nje.

Metodologija istraživanja

Ovaj rad se zasniva na istraživanju sprovedenom u preduzećima u Republici Srbiji, sa ciljem da se utvrdi uticaj korporativne društvene odgovornosti na poslovne rezultate preduzeća. Rastuće interesovanje širom sveta za oblast korporativne društvene odgovornosti prisutno je kako u razvijenim, tako i u zemljama u razvoju.

Istraživanje je sprovedeno u Republici Srbiji uzimajući u obzir institucionalno uređenje i pravni okvir. Posle decenija nestabilnosti političke i ekonomske od 2013. godine Republika Srbija postaje prva zemlja u regionu po rastu BDP(Avakumović et al., 2021)(a)). To je uslovilo mnogobrojne analize uticaja ovakvog privrednog rasta ponašanje pravnih subjekata u oblasti društveno odgovornog poslovanja.

Uvažajući činjenicu da poslovno i insitucionalno okruženje u značajnoj meri utiču na aktivnosti vezane za korporativno odgovorno poslovanje, u radu se analizira uloga i značaj države, kroz elemente socijalnog menadžmenta na obavljanje društveno odgovornih poslovnih aktivnosti(Ivanova & Ristić, 2020). U Republici Srbiji, korporativna društvena odgovornost se primenjuje u poslovnom sektoru, od početka 21. veka. Njena pojava je uslovljena povećanjem stranih direktnih investicija i ulaskom na tržište Republike Srbije stranog kapitala, koje su u svom poslovanju donele proverenu praksu(Adžić et al., 2022).

Veliki broj istraživanja u vezi korporativne društvene odgovornosti vezano za preduzeća u Republici Srbiji pokazala su na nedostatak adekvatne normativne regulative i nedosledno sprovođenje mera, radnji i postupaka koji su proizvodili neadekvatno ponašanje poslovnih subjekata. Uvažavajući činjenicu da je Srbija zemlja kandidat za članstvo u Evropskoj Uniji (EU), usvajanje i sprovođenje propisa koji su važeći za ovu ekonomsku zajednicu u oblasti korporativne društvene odgovornosti je obaveza kako bi se obezbedio socijalni napredak i održiva konkurentnost privrednog razvoja(Tešić et al., 2021). U vezi sa tim država mora svojim odlukama da uskladi politiku veznau za oblast korporativne društvene odgovornosti, naglašavajući primenu i praćenje rezultata poslovanja preduzeća. Simbioza poslovnih organizacija i države je suština ovog koncepta, gde država stvara ambijent za implementaciju ovog koncepta donošenjem zakonskih propisa, usklađivanjem stimulativne fiskalne politike i aktivnim delovanjem svih državnih subjekata sa odgovornim ponašanjem poslovnih organizacija.

Na osnovu toga Ministarstvo rada i socijalne politike Srbije 2009. godine pokreće postupak za donošenje državne strategije u oblasti društveno odgovornog poslovanja. Pravna regulativa Republike Srbije prvi put tumači ovaj pojam 2008. godine u Nacionalnoj strategiji održivog razvoja. Vlada Republike Srbije je 2010. godine usvojila Strategiju razvoja i promocije društveno odgovornog poslovanja u Republici Srbiji za period od 2010. do 2015. godine. Ovom strategijom pokušano je da se definiše oblast društvene odgovornosti kroz određene aktivnosti iz domena različitih državnih subjekata.

Cilj državne regulacije u oblasti društveno odgovornog poslovanja bio je da se iskoriste znanje i skustva iz evropskih zemalja, u oblastima politike zapošljavanja i socijalnih pitanja, politike preduzeća, politike zaštite životne sredine, potrošačke politike, politike javnih nabavki i politike inostranih odnosa, prepoznaje važan potencijal u strategiji rasta i zapošljavanja i u održivom razvoju zemlje(Jestrović & Jovanović, 2022). Na ovaj način država pokušava da se uskladi sa tekućim trendovima u globalnoj ekonomiji i u EU, ali i da njima poboljša konkurentnost, socijalnu inkluziju, privuče inostrane investicije i nastavi proces približavanja i pridruživanja EU.

Posebno značajno prilikom implementacije ovog koncepta je neophodnost da se on približi poslovnim subjektima na način da ga shvate i prihvate u obliku koji je neophodan za funkcionisanje poslovnih organizacija i društva kao celine(Yu et al., 2018). Ovaj koncept u Srbiji je prisutan u značajnijoj meri tek u poslednjoj deceniji, promocijom ovog koncepta kroz različite vidove akcija preduzeća-

U istraživanju je sprovedena on-line anketa kompanija, pri čemu je sagledavano ukupno poslovanje. Upitnici su se sastojali iz nekoliko celina. Prvi deo upitnika je bio vezna za opšte informacije o preduzeću, dok su se ostali delovi odnosili strategije društveno odgovornog poslovanja koje se realizuje u poslovnoj praksi. Preduzeća su ocenjivala 58 parametara koristeći Saaty-jevu skalu (Saaty, 1980).

Rezultati istraživanja i diskusija

Istraživanje sprovedeno od 2016. do 2021. godine vezano za oblast korporativne društvene odgovornosti pokazalo je značajan napredak u prihvatanju i impelmentaciji ovog kocepta u odnosu na deceniju koja je prethodila. Prvi zaključak koji se mogao izvesti na osnovu sprovedene ankete bio je da su preduzeća u odnosu na prethodni vremenski period bila značajno upoznata sa samim konceptom korporativne društvene odgovornosti. To je bila posledica pre svega državnog uređenja i propisa donešenih u ovoj oblasti. Ovo dokazuje činjenicu da se dešavaju promene u stavovima preduzeća i njihovom postepenom prihvatanju i shvatanju koristi i značaja društveno odgovornog ponašanja.

Drugi rezultat istraživanja vezan je za podatak da se u većoj meri (60%) društveno odgovorno ponašaju preduzeća iz drugih država koja posluju na teritoriji Republike Srbije, što se odovodi u vezu sa praksom njihovog poslovanja u domicilnim državama i dužom tradicijom vezanom za korporativnu kulturu. Mnoge aktivnosti vezane za zaštitu životne sredine i zaštititu prava potrošača, marketinškim aktivnostima su prezentovane javnosti.

Procena uticaja i doprinosa koji poslovni subjekti imaju na društvo u celini, na lokalnom i nacionalnom nivou vršena je setom pitanja vezanih za transparentnost sprovođenja društveno odgovornog ponašanja. Podaci su pokazali da dobru društva doprinose međunarodne kompanije sa 58%, u odnosu na 42% što je verovatno uslovljeno i većim angažovanjem stranih preduzeća i većom transparentnošću aktvnosti i države u oblasti korporativne društvene odgovornosti.

Parametri vezani za implementaciju strategije društveno odgovornog ponašanja ocenjeni su prosečnom ocenom 3,2, što je prilično mali nivo adekvatne primene u praksi. Uvažavajući stanje svetske ekonomije i posledice korona virusa, u periodu kada se istraživanje sprovodilo, kao i neophodnost većeg vremenskog ciklusa za sprovođenje strategije ovakvi rezultati su bili realnost koji ukazuju ipak na perspektivu daljeg razvoja u oblasti društveno odgovornog poslovanja.

Oblast u kojoj su preduzeća stavila prednost u svojim strategijama korporativnog društveno odgovornog poslovanja je bila bezbednost i zdravlje radnika, odnosno briga o zaposlenima (68%). Međutim, ovakav podatak nije u skladu sa realnom situacojom i stanjem u privrednim društvima u Republici Srbiji, gde postoje značajne pritužbe radnika na odnos poslodavca prema zaposlenima. Posebno značajna oblast prema kojoj preduzeća pokazuju interesovanje u strategiji jeste odnos prema poslovnim partnerima i dobavljačima, ali procenat odgovornosti je i tu nizak (33%). Za razliku od prethodnih istraživanja, najveći broj anketiranih preduzeća daje prednost poštovanju normativnih akata (69%) i transparentnosti poslovanja (71%). Istraživanje je pokazalo da preduzeća značajno manje sredstava ulažu u humanitarne akcije (19%) i obrazovanje zaposlenih (29%) . Takođe, ulaganja preduzeća u kulturu i umetnost (9%) i sport (7%), se teško prepoznaju u obastima ulaganja društveno odgovornih preduzeća, što je vezano za stepen razvoja države i nivo ekonomskog standarda.

Indikatori vezani za zaštitu životne sredine po oceni preduzeća, dobijaju u uslovima zelene konomije sve veći značaj, ali još uvek nisu u prioritetu poslovnih organizacija u Republici Srbiji, sa svega 17% Ovako nizak nivo se objašnjava niskom stopom profita i nemogućnošću da se izdvajaju značajnija sredstva za ovu oblast.

Rezultati istraživanja, koji pokazuju kontradiktornost u pojedinim segmentima, dovode do zaključka da i posle perioda od jedne decenije od donošenja prvih normativnih akata u ovoj oblasti, koncept korporativne društvene odgovornosti još uvek nije prihvaćen u celini. To ističe neophodnost i potrebu intenzivnijeg uključivanja svih stejkholdera u prihvatanje i implementaciju koncepta korporativne društvene odgovornosti u preduzeća u Srbiji.

Zaključak

Korporativna društvena odgovornost je prisutna u poslovnim organizacijama kao dobrovoljna aktivnost i etička obaveza da deo svojih prihoda namene unapređenju društvenog ambijenta i internog poslovnog okruženja, uvažavajući pozitivnu regulativu. Da bi se sprovela veoma je važno prisustvo države kroz usvajanje odgovarajućih propisa vezanih za regulisanje odnosa poslovnih organizacija prema životnoj sredini i zaposlenima. Različiti oblici podsticaja u vidu poreskih olakšica ili promocije preduzeća treba da ih podstaknu da budu partneri u raspodeli odgovornosti u ukupnom društvenom okruženju.

Sprovedena istraživanja u ovoj oblasti, među preduzećima koja ostvaruju svoju delatnost na teritoriji Republike Srbije pokazuju da se prihvata koncept korporativne društvene odgovornosti i da su preduzeća usmerena da u svojim poslovnim strategijama uključuju društveno odgovorne aktivnosti. Veoma značajan korak u razvijanju koncepta korporativne društvene odgovornosti jeste marketing i širenje znanja o ovom konceptu radi shvatanja njegovog značaja od strane društva kao celine.

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THE ROLE OF SOCIAL MANAGEMENT IN BUSINESS ORGANIZATIONS

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Review paper

Abstrct

The importance of social management oriented to the reduction of social differences and the improvement of the working environment of employees increases in the conditions of growing market competition. Respecting the basic principles of social management, companies can develop special strategies that will influence the increase of competitive advantages and the overall welfare of society. In this regard, the goal of this research is to point out the importance of socially responsible business, which should be organized in such a way as not to harm the environment and society, as well as the rights of employees, and to ensure positive business results.

Keywords: *social management, enterprise, socially responsible business.*

JEL: *Z13, Z19.*

Introduction

By applying social management in business organizations, interpersonal relationships are developed, which reduce economic, social and gender inequalities. Social management is characterized by the fact that it is present in both the public and private sectors, which conditions the need for the implementation of corporate social responsibility within business organizations (Hofman et al., 2017). In order to successfully implement social management, its basic task is to identify social problems and create a plan to solve them. In

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the previous period, socially responsible business became the subject of interest of a large number of researchers from various fields. Basically, this concept implies a constant commitment of the company to behave ethically and to contribute to the overall economic development, as well as the quality of life of its employees and their families and the entire local community (Watts & Holme, 2003).

Social management basically means socially responsible business, which is conditioned by basic social values such as ethics, business transparency, respect for basic human rights, respect for workers' rights and respect for international legal norms. On the other hand, compliance with these norms enables better business results, the growth of the company's reputation, the commitment of employees to the company, as well as significantly higher business performance.

Business practice in the Republic of Serbia does not offer significant results that could lead to the conclusion that socially responsible business is widely applied, but there are individual cases where the emphasis is on covering only some issues such as: corporate ethics, environmental protection, human resources management, respect for human rights, etc. Despite great efforts to normatively regulate this area, little has been done to implement it in practice.

The application of the concept of corporate social responsibility in countries in transition requires the engagement of all important entities. The most important role in the entire process is played by the state, which should create the conditions for socially responsible business with its normative regulations. The prerequisites for the implementation of corporate social responsibility are the rule of law, democratization of society, freedom of movement and expression and all other achievements of modern society.

Literature review

Modern business conditions provide economic benefits to business entities that behave responsibly both towards their stakeholders and towards society as a whole. Corporate social responsibility must be part of the company's overall business policy, emphasizing the need to achieve social and environmental standards with the aspiration and efforts to achieve maximal business results. According to Cramer (2017), companies should, in addition to income, take care of employees, the environment and society as a whole as business goals. Moon et al., (2017) believe that the concept of corporate social responsibility serves as a means to generate profits by harmonizing socioeconomic and environmental principles with the interests of the company. In such a business environment, this concept is used as a means of mediating between various conflicting interests.

Fernandno & Lawrence (2014) explain that in order to understand the concept of corporate social responsibility, it is necessary to start from three basic theoretical points of view: the theory of legitimacy, the theory of stakeholders and the theory of institutions. Modern business conditions impose rigorous conditions of competition in which it is very difficult to ensure survival and profit. According to Zientara et al., (2015) companies should focus their business strategies on accepting the concept of corporate social responsibility in order to increase their competitiveness and employee satisfaction. Rashe et al, (2017) respecting the basic principles of corporate social responsibility conclude that it is a concept with a large number of actors and that its essence is expressed through the social component, so they consider it a basic form of social management.

Battaglia et al., (2014) in their research came to the conclusion that socially responsible business includes four basic categories: corporate social responsibility related to the environment; corporate social responsibility related to employees; corporate social responsibility related to the wider social community and the marketing aspect of corporate social responsibility related to responsible and ethical advertising. In order to realize this way of doing business, the state should use its instruments to set a clear legal framework (Stojanović et al., 2021), in which the business environment would enable the achievement of business results while respecting the previously listed categories.

In the conditions of recession and comprehensive economic crisis, the concept of corporate social responsibility gains particular importance. This concept of business is constantly undergoing certain changes, due to its dynamism, which conditions the need to adapt the business of the company. In order for companies to successfully adapt to changes in the business environment, the synergy of the state and consumers is necessary (Fan et al., 2016). This will significantly affect the organization of fair and just relations and respect for business, ethical and social norms. The concept of corporate social responsibility provides numerous benefits, it affects the reduction of costs, the strengthening of the market position, which significantly affects the business results, which confirms the relevance and importance of this research.

The genesis of corporate social responsibility

The concept of corporate social responsibility dates back to the time of the hiatus of private forms of business relations, with its genesis and development accompanied by major changes. its current form is related to the second half of the twentieth century, when much more attention was paid to it (Lau et al., 2016). Its development was accompanied by the normative regulation of that area and the involvement of the state in the very regulation of functioning. Starting from the basic motive of the business of every enterprise, i.e. the realization of maximum profit, the question arises as to how to align it with the general interests of society. Here, first of all, the question of business ethics and moral responsibility of each business entity is raised. This primarily refers to the responsibility of business in relation to other subjects, respecting their views, respect for basic rights promulgated by law and international legal norms, i.e. respect for principles prescribed by business policy (Avakumović et al., 2021).

Special attention in the concept of corporate social responsibility is focused on employees as carriers of the business process. Bearing in mind that the workforce is a key factor in the success of any business entity, the company's responsible and ethical attitude towards those who work for it and make a profit is an obligation conditioned by the role they play in implementing the concept itself. At the base of this concept, when viewed from the point of view of internal resources in the company, there are employees because the causal organization of work is based on their motivation for work. The importance of human resources has been recognized by all modern business entities, which develop special methods for attracting quality staff, provide continuous learning and training, influence the motivation of employees and thus create a synergy of an adequate working environment and business goals that need to be realized.

The importance and role of employees in the business process are recognized in modern management and business (Jovanović, 2021), and modern economic theory also pays special attention to them. This implies constant investments in human capital, through "lifelong education", in order to stimulate and motivate them to provide the maximum to the business organization (Cho et al., 2015; Radovanović et al., 2021). Achieving a competitive advantage is precisely achieved by developing the knowledge and skills of employees while respecting the modern achievements of theory and practice (Dakić et al., 2021; Pinter Fejeshet al., 2021). In order to realize the concept of corporate social responsibility, it is necessary to achieve an appropriate form of access to the overall capabilities of the human factor within the organization, which requires significant flexibility. This is precisely the advantage of companies in developed market economies, where developed business culture and ethical standards are a decisive factor in choosing an employer.

One of the basic elements of corporate social responsibility is the management of human resources, ensuring rights from the employment relationship, which is manifested through all phases and procedures from planning, recruitment and selection of personnel, through training and development of employees, i.e. career development, to material and non-material types of motivation (Zhang et al., 2013). In this way, the business organization should take care of employees, their continuous education, advancement opportunities, and especially safety at work. Care for employees and the code of ethics of the business organization must be respected from the very beginning, that is, the personnel selection process while avoiding any form of discrimination. Creating the value of human capital is achieved by respecting the diversity and needs of each individual in a business organization.

The implementation of the concept of corporate social responsibility is also manifested through the career development of employees aligned with the goals of the business organization and the development strategy. Harmonizing the development of employees with the needs of the workplace, monitoring the achieved work results and investing in the development of their skills and knowledge, increases the productivity and economy of business processes. That is why a strategic approach to the development of human resources is necessary, through a planned and organized system of quality continuous training, both at the level of the organization itself and outside it.

Research methodology

This paper is based on research conducted in companies in the Republic of Serbia, with the aim of determining the impact of corporate social responsibility on the business results of companies. A growing worldwide interest in the field of corporate social responsibility is present in both developed and developing countries.

The research was conducted in the Republic of Serbia, taking into account the institutional arrangements and the legal framework. After decades of political and economic instability since 2013, the Republic of Serbia has become the first country in the region in terms of GDP growth (Avakumović et al., 2021)(a)). This caused numerous analyzes of the impact of such economic growth on the behavior of legal entities in the field of socially responsible business.

Acknowledging the fact that the business and institutional environment significantly influence activities related to corporately responsible business, the paper analyzes the role and importance of the state, through elements of social management, on the performance of socially responsible business activities (Ivanova & Ristić, 2020). In the Republic of Serbia, corporate social responsibility has been applied in the business sector since the beginning of the 21st century. Its appearance is conditioned by the increase of foreign direct investments and the entry into the market of the Republic of Serbia of foreign capital, which have brought proven practices in their operations (Adžić et al., 2022).

A large number of researches regarding corporate social responsibility related to companies in the Republic of Serbia have shown the lack of adequate normative regulation and the inconsistent implementation of measures, actions and procedures that produced inadequate behavior of business entities. Acknowledging the fact that Serbia is a candidate country for membership in the European Union (EU), the adoption and implementation of regulations that are valid for this economic community in the field of corporate social responsibility is an obligation in order to ensure social progress and sustainable competitiveness of economic development (Tešić et al., 2021). In this regard, the state must use its decisions to harmonize the policy related to the area of corporate social responsibility, emphasizing the implementation and monitoring of the results of the company's operations. The symbiosis of business organizations and the state is the essence of this concept, where the state creates an environment for the implementation of this concept by passing legal regulations, harmonizing the stimulating fiscal policy and the active action of all state entities with the responsible behavior of business organizations.

Based on that, in 2009, the Ministry of Labor and Social Policy of Serbia initiated the procedure for the adoption of a state strategy in the area of socially responsible business. The legal regulation of the Republic of Serbia interpreted this term for the first time in 2008 in the National Strategy for Sustainable Development. In 2010, the Government of the Republic of Serbia adopted the Strategy for the Development and Promotion of Socially Responsible Business in the Republic of Serbia for the period from 2010 to 2015. With this strategy, an attempt was made to define the area of social responsibility through certain activities from the domain of various state entities.

The goal of state regulation in the area of socially responsible business was to use knowledge and experience from European countries, in the areas of employment policy and social issues, company policy, environmental protection policy, consumer policy, public procurement policy and foreign relations policy, it recognizes an important potential in the strategy of growth and employment and in the sustainable development of the country (Jestrović & Jovanović, 2022). In this way, the state tries to harmonize with the current trends in the global economy and in the EU, but also to improve competitiveness, social inclusion, attract foreign investments and continue the process of approaching and joining the EU.

Especially important during the implementation of this concept is the necessity to bring it closer to business entities in such a way that they understand and accept it in a form that is necessary for the functioning of business organizations and society as a whole (Yu et al., 2018). This concept in Serbia has been present to a significant extent only in the last decade, with the promotion of this concept through various types of company actions -

In the research, an online survey of companies was carried out, in which the overall business was considered. The questionnaires consisted of several parts. The first part of the questionnaire was related to general information about the company, while the other parts related to the strategy of socially responsible business implemented in business practice. Companies rated 58 parameters using Saaty's scale (Saaty, 1980).

Research results and discussions

Research conducted from 2016 to 2021 related to the field of corporate social responsibility showed significant progress in the acceptance and implementation of this concept compared to the previous decade. The first conclusion that could be drawn based on the conducted survey was that compared to the previous time period, companies were significantly familiar with the very concept of corporate social responsibility. This was primarily a consequence of the state regulation and regulations adopted in this area. This proves the fact that there are changes in the attitudes of companies and their gradual acceptance and understanding of the benefits and importance of socially responsible behavior.

The second result of the research is related to the fact that to a greater extent (60%) companies from other countries that operate in the territory of the Republic of Serbia behave in a socially responsible manner, which is related to the practice of their business in their domicile countries and a longer tradition related to corporate culture. Many activities related to environmental protection and consumer rights protection were presented to the public through marketing activities.

The assessment of the impact and contribution that business entities have on society as a whole, at the local and national level, was carried out with a set of questions related to the transparency of the implementation of socially responsible behavior. The data showed that international companies contribute to the good of society with 58%, compared to 42%, which is probably due to greater involvement of foreign companies and greater transparency of activity and the state in the field of corporate social responsibility.

The parameters related to the implementation of the strategy of socially responsible behavior were assessed with an average score of 3.2, which is a rather low level of adequate application in practice. Taking into account the state of the world economy and the consequences of the corona virus, in the period when the research was carried out, as well as the necessity of a longer time cycle for the implementation of the strategy, these results were a reality that nevertheless indicate the perspective of further development in the field of socially responsible business.

The area in which companies prioritized their corporate social responsibility strategies was worker safety and health, i.e. employee care (68%). However, this information is not in accordance with the real situation and the state of business companies in the Republic of Serbia, where there are significant complaints from workers about the employer's relationship with employees. A particularly important area in which companies show interest in strategy is the relationship with business partners and suppliers, but the percentage of responsibility is also low (33%). In contrast to previous surveys, the largest number of surveyed companies prioritize compliance with normative acts (69%) and business transparency (71%). The research showed that companies invest significantly less funds in humanitarian actions (19%) and employee education (29%). Also, company investments in culture and art (9%) and sports (7%) are difficult to recognize in the areas of socially responsible companies' investments, which is related to the state's level of development and the level of economic standards.

Indicators related to environmental protection, according to the company's assessment, are gaining more and more importance in the conditions of the green economy, but they are still not in the priority of business organizations in the Republic of Serbia, with only 17%. Such a low level is explained by the low rate of profit and the inability to allocate significant funds for this area.

The research results, which show contradictions in certain segments, lead to the conclusion that even after a period of a decade since the adoption of the first normative acts in this area, the concept of corporate social responsibility is still not accepted as a whole. This highlights the necessity and need for more intensive involvement of all stakeholders in the acceptance and implementation of the concept of corporate social responsibility in companies in Serbia.

Conclusion

Corporate social responsibility is present in business organizations as a voluntary activity and an ethical obligation to use part of their income to improve the social environment and internal business environment, respecting positive regulations. In order to implement it, the presence of the state through the adoption of appropriate regulations related to the regulation of the relationship of business organizations towards the environment and employees is very important. Different forms of incentives in the form of tax breaks or promotion of companies should encourage them to be partners in the distribution of responsibility in the overall social environment.

Conducted research in this area, among companies that carry out their activities on the territory of the Republic of Serbia, show that the concept of corporate social responsibility is accepted and that companies are directed to include socially responsible activities in their business strategies. A very important step in developing the concept of corporate social responsibility is marketing and spreading knowledge about this concept in order to understand its importance by society as a whole.

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EVOLUCIJA PRAKSE UPRAVLJANJA DOBITKOM: NOVA PRETNJA KVALITETU FINANSIJSKIH IZVEŠTAJA

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Apstrakt

Mehanizmi upravljanja dobitkom mogu se realizovati primenom računovodstvenih tehnika ili preduzimanjem realnih transakcija. U prvom slučaju, oportunističko ponašanje usmereno je ka obračunskim komponentama računovodstvenih rezultata, dok manipulacije realnim transakcijama imaju reperkusije na novčane tokove. Na bazi kvalitativne analize relevantne međunarodne i domaće literature koja se odnosi na problematiku upravljanja dobitkom, u radu su predstavljene posledice, ograničenja i rizici povezani sa različitim tehnikama upravljanja dobitkom. U velikom broju istraživanja sprovedenih u razvijenim privredama potvrđena je evolucija prakse upravljanja dobitkom od računovodstvenih manipulacija ka manipulacijama putem realnih transakcija. Kako su metodološki instrumenti za procenu realnih manipulacija i dalje oskudni, cilj rada je da skrene pažnju javnosti na praksu upravljanja dobitkom putem realnih transakcija jer je reč o perfidnijem obliku koji značajno redukuje rizik detekcije. Osim toga rad doprinosi definisanju novog područja istraživanja ka kome bi u budućnosti akademska računovodstvena zajednica trebalo da usmeri svoje napore.

Ključne reči: *Upravljanje obračunskim komponentama dobitka, upravljanje dobitkom putem realnih transakcija, kvalitet finansijskih izveštaja.*

JEL: M41, M49

Uvod

Na globalnom nivou akademska zajednica, regulatorna tela i eksperti iz prakse veliku pažnju posvećuju problematici kreativnog računovodstva i analizi posledica upravljanja dobitkom (*earnings management*). Uprkos tome, opšteprihvaćena definicija, koja bi obuhvatila sve aspekte ovog brzo

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evoluirajućeg procesa, još uvek ne postoji, iako je reč o pojavi koja u velikoj meri ugrožava verodostojno prikazivanje kao osnovni postulat finansijskog izveštavanja. Naslućujući negativne konsekvence, Artur Levit, dugogodišnji predsednik SEC (U.S. Securities and Exchange Commission), skrenuo je pažnju zainteresovane javnosti na primetno urušavanje kvaliteta računovodstvenih informacija i finansijskih izveštaja do kojeg dovode sve češći primeri prelaženja nejasno definisane granice između upravljanja računovodstvenim dobitkom i manipulacija (Levitt, 1998). Samo tri godine nakon ovog eksplicitnog upozorenja, dogodio se jedan od najvećih skandala u novijoj ekonomskoj istoriji koji je rezultovao bankrotstvom kompanije Enron. S jedne strane, pripadnici računovodstvene profesije saglasni su oko činjenice da je praksa upravljanja dobitkom prilično ukorenjena u procese finansijskog izveštavanja. Nasuprot tome, istraživanja u relevantnoj literaturi su pružila samo nekonzistentne zaključke i oskudne dokaze negativnih efekata takve prakse. Neka od ograničenja sa kojima se susreću istraživači u ovoj oblasti svako jesu nedovoljno jasna i primenljiva definicija ovog fenomena i nedostaci do sada razvijene metodologije u njegovom merenju, što posledično otežava detektovanje prakse upravljanja dobitkom.

Velika većina autora pod upravljanjem dobitkom podrazumeva manji ili veći stepen odstupanja od neutralne računovodstvene prakse koji je motivisan ostvarivanjem unapred definisanih ciljeva. Ipak, u literaturi se sporadično pojavljuju i autori koji ostavljaju mogućnost pozitivne interpretacije upravljanja dobitkom. Ukoliko menadžment koristi računovodstvenu fleksibilnost isključivo u cilju komuniciranja insajderskih informacija o budućim performansama eksternim korisnicima finansijskih izveštaja i eliminisanja konfuzije korisnika do kojih bi dovelo dosledno objavljivanje neutralnih rezultata (ili njihovih tranzitornih šokova), upravljanje dobitkom moglo bi se posmatrati kao aktivnost usmerena ka zaštiti interesa svih stejkholdera. Na drugom kraju spektra aktivnosti upravljanja dobitkom je korišćenje računovodstvene fleksibilnosti do krajnjih granica, bilo kroz neuobičajene realne transakcije ili agresivne računovodstvene tehnike i politike, sračunato na prikazivanje željenih performansi izveštajnog entiteta ili prikrivanje ostvarenih nepovoljnih računovodstvenih rezultata.

Upravljanje obračunskim komponentama dobitka

U praksi favorizovana obračunska osnova računovodstva nametnula je potrebu iscrpnog istraživanja obračunskih veličina, područja kontroverznog kako zbog velikog informacionog značaja sa jedne strane, tako i zbog povećanog rizika od manipulacija, sa druge strane. Američki odbor za standarde finansijskog računovodstva preferira informacionu sadržinu računovodstvenih rezultata koji su autput obračunskog računovodstvenog procesa u odnosu na informacionu sadržinu neto novčanih tokova koji proizilaze iz gotovinske osnove, sugerišući time da pružaju bolji uvid u finansijske i rentabilitetne performanse izveštajnih entiteta. Obračunska osnova omogućava priznavanje finansijskih efekata ekonomskih događaja, transakcija i okolnosti u obračunskim periodima njihovog nastanka nevezano za to kada se realizuju sa njima povezani novčani tokovi (Statement of Financial Accounting Concepts No. 1, Paragraf 44, FASB). Stavovi FASB-a očigledno su podržani praktičnom verifikacijom informacionog doprinosa obračunskih veličina u procesima merenja i iskazivanja performansi izveštajnih entiteta i informacionom dominacijom široko zastupljenih finansijskih izveštaja sastavljenih na obračunskoj osnovi nad finansijskim izveštajima sastavljenih na gotovinskoj osnovi. Međutim, ranjivost obračunskih veličina na manipulacije, potvrđena kroz korporativne skandale koji su obeležili početak 21. veka, može ih okarakterisati sredstvom koje je u funkciji oblikovanja računovodstvenih rezultata u oportunističkom maniru.

Kako je računovodstveni rezultat razlika između prihoda i rashoda perioda (rentabilitetnih tokova), a ne razlika između novčanih priliva i odliva (novčanih tokova), može se zaključiti da će jedan deo računovodstvenog rezultata koincidirati sa realizovani novčanim tokovima, dok će drugi deo tog rezultata biti isključivo zasnovan na obračunskim veličinama.

Posledično, jedan od načina iskazivanja željenog iznosa izveštajnog dobitka svakako se odnosi na oblikovanje njegove obračunske komponente i podrazumeva eksploatisanje diskrecije u različitim fazama procesa finansijskog izveštavanja. Kako obračunske veličine apsorbuju posledice odabranih računovodstvenih politika ali i sve subjektivne elemente koji su neraskidivi deo vrednovanja bilansnih pozicija, rizici da će biti instrumentalizovane zarad deformisanja fundamentalnih performansi nisu zanemarljivi. Upravljanje računovodstvenim politikama trebalo bi da omogući odabir onih koje najbolje odražavaju ekonomsku realnost i realizovane transakcije, a sve u duhu finansijskog izveštavanja najvišeg mogućeg kvaliteta u postojećim okolnostima. Međutim, upravo zbog računovodstvene regulative zasnovane na principima, a ne na jasno definisanim pravilima, često se dešava da izveštajni entiteti prilikom oblikovanja svojih računovodstvenih politika od mogućih računovodstvenih metoda tendenciozno biraju kombinaciju koja, iako ne izlazi iz okvira profesionalne regulative, menja percepciju korisnika o finansijskim i rentabilitetnim ostvarenjima. Ako računovodstvenu politiku ili računovodstveni izvor definišemo kao „bilo koju odluku čiji je primarni cilj uticaj na (formu ili suštinu) autputa računovodstvenog sistema na tačno određeni način" (Fields et al., 2001), nosioci ovakvih odluka, uz neka ograničenja, itekako mogu posredno i neposredno uticati na visinu izveštajnoj rezultata a da pri tome ne iniciraju promene u dinamici i/ili strukturi uobičajene poslovne prakse. U literaturi često navođeni primeri računovodstvenih politika, metoda i procena koje se dovode u vezu sa deformisanjem obračunskih komponenti dobitka odnose se na (Miletić, 2021, p. 192):

- Odabir dozvoljenih računovodstvenih metoda: za disponiranje zaliha - LIFO vs. FIFO; za obračun troškova amortizacije/depresijacije i promene procenjene dužine korisnog veka upotrebe stalnih sredstava; politike priznavanja prihoda;
- Tehnike i pretpostavke procenjivanja: fer vrednosti stalne imovine; iznosa obezvređenja; vrednosti nenaplativih potraživanja;
- Donošenje odluka: o trenutku od kojeg se počinje sa primenom novog računovodstvenog standarda i o načinu priznavanja efekata koji proizilaze iz primene uvedenog standarda.

Mnogobrojne računovodstvene tehnike manipulisanja izveštajnim rezultatima mogu se klasifikovati u sedam diferenciranih ali međusobno povezanih kategorija. Klasifikaciju preko trideset detektovanih tehnika prikazanu u Tabeli 1. je inicijalno postavio Centar za finansijska istraživanja i analize (CFRA - Center for Financial Research and Analysis) profesionalnoj javnosti poznat kao nezavisna organizacija koja na globalnom nivou pruža usluge investicionih istraživanja i investicionog savetovanja. Većina definisanih kategorija targetira precenjivanje tekućih dobitaka, mada neke od njih za posledicu imaju potcenjivanje računovodstvenih rezultata tekućeg perioda kako bi se postigla realizacija oportunističkih ciljeva u narednim obračunskim periodima u kojima dođe do priznavanja tih dobitaka.

Tabela 1. Strategije manipulisanja rezultatom i kategorije tehnika manipulacije

STRATEGIJE MANIPULISANJA REZULTATOM	
Precenjivanje rezultata tekućeg perioda	**Potcenjivanje rezultata tekućeg perioda**
(**1**) Prevremeno priznavanje prihoda u tekućem periodu (pre nego što su stvarno nastali)	(**6**) Umanjenje tekućih prihoda odlaganjem priznavanja na buduće obračunske periode
(**2**) Priznavanje nerealizovanih prihoda (fiktivni prihodi)	(**7**) Prevremeno priznavanje budućih rashoda u tekućem obračunskom periodu
(**3**) Precenjivanje tekućih prihoda preko tranzitornih dobitaka	

(**4**) Umanjenje tekućih rashoda njihovom alokacijom u prethodne ili naredne obračunske periode	
(**5**) Potcenjivanje ili nepriznavanje obaveza	

Izvor: Prikaz autora, prema Schilit (2002, p. 27)

U prvoj kategoriji se nalaze tehnike manipulisanja računovodstvenim rezultatom zasnovane na priznavanju prihoda pre završetka procesa realizacije i ispunjavanja svih obaveza koje je prodavac preuzeo ugovorom, kao i tehnike u čijoj je osnovi priznavanje prihoda sumnjivog kvaliteta ili iznosa. Uzročno-posledična veza ovih tehnika i tehnika iz pete kategorije pojavljuje se, na primer, u situacijama kada se primljeni avansi, umesto kao obaveze za primljene avanse, priznaju kao prihodi od prodaje. Osim što se ovakvim knjiženjima prihodi tekućeg perioda precenjuju, izostaje i priznavanje nastalih obaveza. Primena tehnika iz ove kategorije može značiti i istovremenu primenu tehnika iz pete kategorije, kao što je slučaj sa knjiženjem primljenog avansa kao prihoda, kada izostaje priznavanje obaveze za primljeni avans. Priznavanje prihoda koji nisu ostvareni (fiktivni prihodi/prihodi koji ne ispunjavaju kriterijume za priznavanje) podrazumeva računovodstveno evidentiranje prodaja bez ekonomske suštine, pogrešno klasifikovanje prihoda ili priznavanje kao prihoda uplate pozajmljenih sredstava (umesto priznavanja obaveza). Analogno, tehnike klasifikovane u šestu kategoriju (odlaganje priznavanja tekućih prihoda) suštinski dovode do evidentiranja fiktivnih prihoda u periodima kada dođe do priznavanja tih prihoda. Prodaja imovinskih delova čije su knjigovodstvene vrednosti potcenjene ili klasifikacija tako nastalih jednokratnih dobitaka u poslovne prihode primeri su tehnika grupisanih u okviru treće kategorije. Primeri četvrte kategorije tehnika manipulacija obuhvataju: neopravdanu kapitalizaciju poslovnih rashoda, precenjivanje korisnog veka upotrebe materijalne i nematerijalne stalne imovine, nepriznavanje rashoda po osnovu nastalog obezvređenja, kao i izostanak otpisivanja određenih delova imovine u posmatranom periodu. Na kraju, u sedmoj kategoriji su tehnike koje često koriste novoimenovani menadžeri. Usmerene su na priznavanju budućih rashoda u tekućem periodu (prevremeno), čime se budući periodi oslobađaju tih troškova, a menadžeri stvaraju pretpostavke za uspeh u kreiranju budućih finansijskih performansi. Načini na koje se to ostvaruje u praksi su priznavanja obezvređenja precenjene imovine, smanjenja obima aktivnosti i broja zaposlenih, sprovođenje planova reorganizacije i slično.

Regulatorna tela u razvijenim privredama i mnogobrojni istraživači su empirijskom analizom otkrivenih slučajeva manipulacija dobitkom putem računovodstvenih tehnika ustanovili da se izveštajni entiteti najčešće opredeljuju za tehniku precenjivanja prihoda. Primera radi, na uzorku koji je brojao nešto manje od trista slučajeva manipulativnog finansijskog izveštavanja a koje je otkrila Komisija za hartije od vrednosti i berze (SEC) i o tome izdala javna saopštenja, Dechow i Schrand (2004, p. 42) su utvrdili da je dominantno (u više od dve trećine kompanija) eksploatisano precenjivanje prihoda. Kada su u pitanju predmeti u vezi sa kojima je SEC pokrenuo sudske postupke, tehnika precenjivanja prihoda je bila prisutna u 55% slučajeva, s tim da neka preduzeća nisu prezala ni od simultanog potcenjivanja rashoda (Dechow et al., 1996, p. 10). Zanimljivo je i to da se percepcija revizora u pogledu redosleda najzastupljenijih tehnika manipulisanja dobitkom ipak razlikuje. Prema iskustvu revizora koji su opisali peko pet stotina pokušaja uobličavanja dobitka sa materijalno značajnim efektima, tehnike manipulisanja prihodima nalaze se na drugom mestu po učestalosti javljanja, dok su na prvom mestu tehnike manipulisanja rashodima koje su korišćene u gotovo svakom drugom slučaju pokušaja manipulativnog delovanja (Nelson, Elliott i Tarpley, 2003).

Tehnike oblikovanja obračunskih komponenti dobitka su brojne i uzajamno povezane. Efekti primene ovih tehnika su prisutni u više obračunskih perioda. Međutim, ne smeju se zanemariti ni njihovi reverzibilni efekti. Imajući u vidu organsku povezanost izveštaja o finansijskoj poziciji sa izveštajem o ukupnom rezultatu nije teško izvesti zaključak da će se obračunske komponente računovodstvenih rezultata po automatizmu odraziti i na vrednosti neto imovine preduzeća. Zapravo, izbor neutralnih računovodstvenih politika vodiće privremenom iskazivanju nižih vrednosti neto imovine od onih dobijenih implementacijom računovodstvenih metoda i tehnika usmerenih na precenjivanje obračunskih komponenti izveštajnih dobitaka. Vrednosti će samo privremeno biti niže jer su u narednim obračunskim periodima, smanjene mogućnosti za izdašne računovodstvene procene pa se, pod pretpostavkom ostajanja u okvirima profesionalne regulative, prostor za precenjivanje računovodstvenih dobitaka sužava upravo u onoj meri u kojoj je neto imovina već precenjena (Miletić, 2021, p. 193). Ova pojava je u literaturi poznata pod nazivom „reverzibilni efekti“. Naime, diskrecione obračunske komponente izveštajnog rezultata kreirane u tekućem obračunskom periodu se po pravilu razlažu u x narednih obračunskih perioda, poništavajući prethodno postignute efekte, odnosno, delujući u suprotnom smeru na računovodstvene rezultate budućih perioda. Opisani reverzibilni efekti su zato faktor koji ograničava domete upravljanja dobicima a inherentan je prirodi računovodstvenog sistema. Prema Baber et al. (2011), reperkusije reverzibilnosti su funkcija dve komponente: mere u kojoj eksploatisana računovodstvena diskrecija u deformisanju računovodstvenih rezultata prethodnih perioda i brzine realizacije reverzibilnih efekata diskrecionih komponenti obračunskih veličina sadržanih u prošlim računovodstvenim dobicima. Zbog ovoga se upravljanje izveštajnim dobicima može posmatrati i kao proces neujednačenih nivoa u korišćenju računovodstvene diskrecije kroz vreme (Barton, Simko, 2002, p. 3). Razlog što menadžeri, uprkos reverzibilnim efektima svojih odluka i postupaka, koriste upravljanje obračunskim komponentama rezultata jeste što im omogućava iskazivanje potrebnog nivoa računovodstvenog rezultata u periodu dospevanja na realizaciju opcija i bonusa a time i ostvarenje određenih ličnih ekonomskih i reputacionih koristi. Osim toga, nisu retka istraživanja koja referišu na optimistična menadžerska očekivanja pa se i u slučaju upravljanja obračunskim veličinama, posebno njihovim diskrecionim komponentama, očekivanjem takvog rasta računovodstvenih rezultata u budućim obračunskim periodima koji će anulirati reverzibilni karakter ranijih odluka, mogu opravdati tendenciozno precenjeni iznosi dobitaka. (Graham et al., 2005, p. 41). Ipak, ne sme se izgubiti iz vida da je upravljanje obračunskim komponentama dobitka racionalno isključivo u okolnostima kada su očekivane negativne posledice reverzibilnih efekata manje od očekivanih koristi upravljanja obračunskim veličinama tekućeg obračunskog perioda.

U nedavnoj prošlosti brojni su primeri u kojima su se poznate kompanije, poprilično odvažno udaljavale od granica postavljenih profesionalnom i zakonskom regulativom. Epilog je u najvećem broju slučajeva podrazumevao bankrotstvo kompanije i ozbiljne finansijske gubitke njenih investitora. Slučaj kompanije WorldCom koji je potresao globalno tržište, uključivao je precenjivanje dobitaka za sedam milijardi dolara koje je postignuto neopravdanom i nedozvoljenom kapitalizacijom troškova za isti iznos. Nakon saznanja o neregularnostma, cena akcija je pala za skoro 98% nakon čega je kompanija i bankrotirala (Lev, 2003).

Studija sistemskih razlika u nivoima upravljanja računovodstvenim dobitkom koja je sprovedena na uzorku od 215 velikih srpskih preduzeća iz realnog sektora u devetogodišnjem periodu (2009. – 2017.) pokazala je rasprostranjenost upravljanja dobitkom primenom računovodstvenih tehnika u privredi Republike Srbije. Rezultatima ove analize još jednom je potkrepljena tvrdnja da je ovaj mehanizam upravljanja dobitkom karakterističan za privrede sa nerazvijenim tržištima kapitala, neadekvatnom zaštitom investitora, učestalim izmenama zakona i neefikasnim sudstvom (Miletić, Vučković Milutinović, 2020).

Upravljanje dobitkom putem realnih transakcija

Krajem devedesetih godina prošlog veka poljuljano je poverenje u finansijske izveštaje usled velikih finansijsko-računovodstvenih skandala. Konsekventno, aktuelizovana je potreba unapređenja korporativnog upravljanja i kvalitetnijeg regulisanja računovodstvene profesije. U tom cilju u SAD je u julu 2002. godine usvojen Sarbanes-Oxley Act (SOX). Cilj formulisanja i stupanja na snagu ovakvog zakona bio je da se profesionalna odgovornost svih aktera u procesima kreiranja, analize, revizije i korišćenja javno dostupnih finansijskih informacija podigne na značajno viši nivo. U narednim godinama pojavile su se istraživačke studije motivisane ispitivanjem efekata ove temeljne reforme, jedne od najznačajnijih u eri savremenog poslovanja, na praksu manipulisanja računovodstvenim rezultatima. Zapažena studija iz pomenute oblasti (Cohen et al., 2008) je rasvetlila nekoliko bitnih činjenica. Prvo, računovodstvene tehnike usmerene ka iskazivanju željene visine dobitaka ekstenzivno su eksploatisane i ranije (pre usvajanja SOX-a), a pomenuta praksa je kulminirala u doba eskalacije korporativnih skandala (2000-2001). Drugo, vremenski su se podudarile kulminacija primene pomenute strategije upravljanja dobitkom i rast učešća akcija i opcija na akcije u menadžerskim kompenzacijama. Treće, posle uvođenja SOX-a došlo je do smanjenja značaja prakse upravljanja obračunskim komponentama dobitka, kao i do rasta značaja prakse upravljanja dobitkom putem realnih transakcija. Empirijski dokazi su potvrdili da je nakon donošenja SOX-a strategija upravljanja obračunskim komponentama dobitka u značajnoj meri zamenjena strategijom upravljanja putem realnih transakcija. Međutim, nije bilo moguće pouzdano zaključiti da li je uvođenjem strožije zakonske regulative smanjen ukupan obim prakse manipulisanja dobitkom.

Manipulisanje putem preduzimanja realnih transakcija implicira obavljanje ekonomskih aktivnosti koje po prirodi, obimu ili načinu izvršenja odstupaju od uobičajene poslovne prakse, a koje za cilj imaju ostvarenje poželjnog nivoa računovodstvenog rezultata. Najveći rizici ove strategije odnose se na njen nezanemarljiv uticaj na novčane tokove. Ako se pretpostavi da se isforsirane transakcije pravilno evidentiraju, implementiranjem ove strategije ostaje se u okvirima zahteva profesionalne regulative, a samim tim izostaje i uticaj ovih transakcija na revizorsko mišljenje. Oblikovanje realnih transakcija u svrhe ostvarenja računovodstvenih ciljeva je strategija u kojoj je rizik otkrivanja minimalan jer je teško dokazati postojanje namere kojom su transakcije motivisane. Takođe, proceniti efekte alternativnih scenarija koje bi kompanija primenila na računovodstveni rezultat je jako složeno (scenarija u kojima nema oportunističkih namera). Sve to za posledicu ima stanje u kojem revizori i regulatorna tela teško mogu otkriti i dokazati ovakve manipulativne aktivnosti i sankcionisati ih. Dodatno, oblikovanje računovodstvenog rezultata putem realnih transakcija omogućava izmene koje nisu moguće kada se deluje isključivo računovodstvenim tehnikama raspoloživim u domenu aktuelne profesionalne regulative (Miletić, 2021, p. 194).

S druge strane, upravljanje dobitkom putem realnih transakcija podrazumeva takođe preuzimanje određenih rizika i troškova. Preduzetim investicionim i poslovnim aktivnostima, koje kao motiv imaju ostvarivanje kratkoročnih ciljeva u domenu iznosa rezultata tekućeg perioda, mogu biti izazvane negativne posledice na buduće novčane tokove i na procenjenu vrednost izveštajnih entiteta. U nastavku su opisani samo neki oblici manipulisanja realnim transakcijama na koje literatura najčešće referiše, imajući u vidu da primeri manipulacija u poslovnoj praksi mogu biti još maštovitiji.

Prvi primer podrazumeva odobravanje visokih popusta kupcima/povoljnih uslova kreditiranja, kako bi se značajno povećao obim prodaje, prihodi od prodaje i konačno računovodstveni rezultat. Osim pozitivnog uticaja povoljnih prodajnih uslova na tekuće prihode od prodaje, ovakve aktivnosti podstiču i očekivanju u pogledu njihovog održavanja u budućnosti, pa pritisak kupaca može ugroziti očekivane dobitne marže budućih prodaja. Praksa farmaceutske kompanije Bristol-Myers predstavlja pravi primer veštačkog uvećavanja računovodstvenog dobitka putem iznuđenih prodaja kako bi se dostigle prognoze finansijskih analitičara i ostvarili dobitni ciljevi. Kompanija je pune dve godine (2000-2001) zalihama punila svoje distribucione kanale iako sa druge strane nije bilo odgovarajuće tražnje. Po tom osnovu priznat je prihod od prodaje u iznosu od 1,5 milijardi US dolara za lekove isporučene distributerima, uz garantovan prinos na ulaganje u periodu dok distributeri ne prodaju lekove. Nakon što je slučaj otkriven, a po okončanju postupka pred nadležnim organima, kompanija je platila odštetu u visini od 150 miliona dolara (www.sec.gov).

Drugi primer manipulacije realnim transakcijama je nepotrebno povećanje obima proizvodnje koje za posledicu ima nižu cenu koštanja prodatih proizvoda i veću prodajnu maržu (usled efekta ekonomije obima). Aktivnost takvog povećanja obima proizvodnje prati rizik gomilanja zaliha koje se zatim prenose u naredne obračunske periode, čime se povećavaju troškovi skladištenja, troškovi rashodovanja zaliha kojima je istekao rok trajanja i sl. U literaturi postoje empirijski dokazi koji potvrđuju uticaj primene navedene strategije na profitabilnost u tekućem periodu (Thomas i Zhang, 2002). Međutim, u tim istraživanjima nije u potpunosti isključen uticaj promene u tražnji kao moguće objašnjenje rezultata istraživanja (što je, na primer, pokazano u Hribar, 2002).

Sledeći primer iz literature se može okarakterisati kao značajno smanjenje diskrecionih troškova, odnosno troškova čiji nastanak nije praćen istovremenim priznavanjem prihoda. Primeri takvih troškova su troškovi istraživanja i razvoja, troškovi reklame, troškovi održavanja i dr. Oni svakako predstavljaju povoljan poligon za oportunističko povećanje rezultata i redukciju tekućih odliva novca.

Paralelno, povećan je rizik od smanjenih budućih novčanih priliva. U 438 američke proizvodne kompanije sprovedena je studija u periodu od deset godina (Baber, Fairfield i Haggard, 1991). Studija je otkrila da se ulaganje u istraživanje i razvoj značajno smanjuje u godinama kada bi iskazivanje ovih troškova u nekim višim iznosima ugrozilo iskazivanje dobitaka ili onemogućilo iskazivanje dobitaka koji su viši od dobitaka prethodnog obračunskog perioda.

Vremensko podešavanje trenutka prodaje stalne imovine se neretko primenjuje kao tehnika iskazivanja željene visine računovodstvenog dobitka. Kako koncept istorijskih troškova ne dozvoljava priznavanje u bilansu uspeha promena u tržišnoj vrednosti stalne imovine sve do trenutka njene prodaje, tempiranje trenutka prodaje pojavljuje se kao primer diskrecione odluke sa reperkusijom na visinu iskazanog računovodstvenog dobitka. Da menadžeri koriste vremensko podešavanje perioda prodaje delova stalne imovine kako bi se realizovale latentne rezerve koje su sa njima u vezi, a u cilju uravnotežavanja periodičnih rezultata, kao i ublažavanja posledica restriktivnih kreditnih klauzula, u svom istraživanju je pokazao Bartov (1993).

Finansijski skandali u kojima su računovodstvene manipulacije imale značajnu ulogu nesumnjivo su izazvali zapaženu reakciju regulatornih tela i veću opreznost investicione javnosti. Međutim, praksa upravljanja rezultatima prezentovanim u finansijskim izveštajima nije nestala, uprkos naporima regulatornih tela. Diskutabilno je i to da li je njen obim značajnije smanjen uvođenjem novih regulatornih zahteva u razvijenim tržišnim ekonomijama. Detaljnija analiza prakse računovodstvenih manipulacija pokazala je tendenciju supstitucije računovodstvenih tehnika upravljanja dobitkom kompleksnijim tehnikama upravljanja putem realnih transakcija kod kojih je značajno smanjen rizik otkrivanja. Posledično, rast sklonosti ka riziku od povećanja dugoročnih troškova izazvanih forsiranim realnim transakcijama kompenzovan je manjim rizikom detekcije oportunističkog ponašanja.

Zaključak

Forsirane realne transakcije kao strategija dostizanja željene visine računovodstvenog dobitka izazov su ne samo za regulatorna tela i revizore, već i za pripadnike akademske zajednice. Fokusirani na računovodstvene manipulativne tehnike, istraživači su napravili ozbiljan progres u usavršavanju ekonometrijskih modela koji aproksimiraju atribute upravljanja obračunskim komponentama računovodstvenog rezultata. Bilo zbog relativno svežih empirijskih dokaza u pogledu sve učestalijeg praktikovanja tehnika uobličavanja dobitaka putem realnih transakcija ili zbog nemogućnosti njihovog detektovanja, metodologija procenjivanja realnih manipulacija i dalje je na rudimentarnim osnovama. Trenutno su raspoložive samo manje modifikacije originalnog Roychowdhury (2006) modela, bez primetnog napretka u prevazilaženju njegovih brojnih ograničenja. Model identifikuje devijacije troškova proizvodnje, diskrecionih troškova i novčanih tokova iz poslovne aktivnosti izveštajnog entiteta u odnosu na prosečne vrednosti u sektoru u kojem entitet posluje. Na osnovu utvrđenih devijacija se procenjuje obim upravljanja računovodstvenim dobitkom putem realnih transakcija. Na prvi pogled jasna su i ograničenja ovako postavljenog modela. U pitanje se može dovesti bitna pretpostavka modela da u normalnim okolnostima entiteti koji posluju u istom sektoru imaju iste trendove novčanih tokova i troškova proizvodnje, kao i sličnu sklonost ka investicijama u marketing ili istraživanje i razvoj. Pored toga, na pretpostavku da su prihodi od prodaje jedini pokretač rashoda i profitabilnosti se takođe može uložiti opravdan prigovor (detaljnije u Srivastava (2019)).

Primetan je nedostatak empirijskih istraživanja koja aproksimiraju distribuciju aktivnosti upravljanja računovodstvenim rezultatima forsiranim realnim transakcijama u okviru posmatranog obračunskog perioda, a imajući u vidu da se ove aktivnosti ne mogu realizovati „promptno", tik pred sastavljanje finansijskih izveštaja. Još uvek ne postoji ni odgovor na pitanje da li se frekvencija forsiranih transakcija usmerenih ka ciljanoj visini računovodstvenog dobitka povećava kako se bliži kraj izveštajnog perioda, što je istovremeno i period u kome menadžeri prepoznaju potreban smer i obim delovanja kako bi se realno ostvarene performanse transformisale u poželjne. Ne sme se izgubiti iz vida ni mogućnost kombinovanja strategija realnih i računovodstvenih manipulacija zarad realizacije definisanih ciljeva, što će svakako postaviti mnogo metodoloških i istraživačkih izazova. Reakcije korisnika finansijskih izveštaja, posebno investitora, otvaraju mogućnost analize njihove percepcije i razumevanja kako tekućih, tako i budućih posledica upravljanja dobitkom primenom različitih strategija ili njihovom kombinacijom. Evolucija prakse upravljanja dobitkom, empirijski potvrđena, pokrenula je i talas novih pitanja. U visokorazvijenim tržišnim ekonomijama regulatorna tela su, u pokušaju prevazilaženja jednog problema, dala inicijalnu kapislu primeni perfidnijih metoda upravljanja dobitkom, koje izmiču revizorskom sudu i ostalim detekcionim metodama. Usled toga je neizbežno da se posledice primenjivanih strategija upravljanja dobitkom posmatraju kao neodvojivi aspekt kvaliteta finansijskih izveštaja na kojima se zasnivaju odluke o alokaciji resursa.

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EVOLUTION OF EARNINGS MANAGEMENT PRACTICE: A NEW THREAT TO THE QUALITY OF FINANCIAL REPORTS

***Snežana Miletić* [35], *Siniša Radić*[36]**

Review paper

Abstract

Profit management mechanisms can be realized by applying accounting techniques or by undertaking real transactions. In the first case, opportunistic behavior is directed towards the calculation components of accounting results, while manipulations of real transactions have repercussions on cash flows. Based on a qualitative analysis of relevant international and domestic literature related to the problem of profit management, the paper presents the consequences, limitations and risks associated with different profit management techniques. In many researches conducted in developed economies, the evolution of profit management practices from accounting manipulations to manipulations through real transactions has been confirmed. As methodological instruments for assessing real manipulations are still scarce, the aim of the paper is to draw the public's attention to the practice of profit management through real transactions because it is a more perfidious form that significantly reduces the risk of detection. In addition, the paper contributes to the definition of a new area of research towards which the academic accounting community should direct its efforts in the future.

Keywords: *management of calculation components of profit, management of profit through real transactions, quality of financial reports.*

JEL: M41, M49

Introduction

At the global level, the academic community, regulatory bodies and experts from practice pay great attention to the problem of creative accounting and the analysis of the consequences of earnings *management*. Despite this, a generally accepted definition, which would cover all aspects of this rapidly evolving process, still does not exist, even though it is a phenomenon that greatly threatens credible presentation as a basic postulate of financial reporting.

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Foreseeing the negative consequences, Arthur Levitt, the long-time chairman of the SEC (US Securities and Exchange Commission), drew the attention of the interested public to the noticeable collapse of the quality of accounting information and financial reports, which is caused by increasingly frequent examples of crossing the vaguely defined boundary between accounting profit management and manipulations (Levitt, 1998). Just three years after this explicit warning, one of the biggest scandals in recent economic history occurred, resulting in the bankruptcy of Enron. On the one hand, members of the accounting profession agree on the fact that the practice of earnings management is quite ingrained in financial reporting processes. In contrast, research in the relevant literature has provided only inconsistent conclusions and scant evidence of the negative effects of such practices. Some of the limitations faced by researchers in this field are the insufficiently clear and applicable definition of this phenomenon and the shortcomings of the methodology developed so far in its measurement, which consequently makes it difficult to detect the practice of profit management.

The vast majority of authors under profit management mean a smaller or larger degree of deviation from neutral accounting practice, which is motivated by the achievement of predefined goals. Nevertheless, authors who leave the possibility of a positive interpretation of profit management appear sporadically in the literature. If management uses accounting flexibility solely for the purpose of communicating insider information about future performance to external users of financial statements and eliminating the confusion of users that would lead to the consistent publication of neutral results (or their transitory shocks), earnings management could be viewed as an activity aimed at protecting the interests of all stakeholders. At the other end of the spectrum of profit management activities is the use of accounting flexibility to the extreme, either through unusual real transactions or aggressive accounting techniques and policies, calculated to show the desired performance of the reporting entity or to conceal realized unfavorable accounting results.

Management of accounting components of profit

In practice, the favored calculation basis of accounting imposed the need for exhaustive research of calculation quantities, an area controversial both because of the great information importance on the one hand, and because of the increased risk of manipulations, on the other hand. The American Financial Accounting Standards Board prefers the information content of accounting results that are the output of the accrual accounting process over the information content of net cash flows derived from the cash basis, suggesting that they provide better insight into the financial and profitability performance of reporting entities. The accounting basis enables the recognition of the financial effects of economic events, transactions and circumstances in the accounting periods of their origin regardless of when the related cash flows are realized (Statement of Financial Accounting Concepts No. 1, Paragraph 44, FASB). FASB's views are apparently supported by the practical verification of the informational contribution of accounting quantities in the processes of measuring and reporting the performance of reporting entities and the informational dominance of widely represented financial statements prepared on an accrual basis over financial statements prepared on a cash basis. However, the vulnerability of accounting quantities to manipulations, confirmed through the corporate scandals that marked the beginning of the 21st century, can characterize them as a means of shaping accounting results in an opportunistic manner.

As the accounting result is the difference between income and expenses of the period (profitability flows), and not the difference between cash inflows and outflows (cash flows), it can be concluded that one part of the accounting result will coincide with the realized cash flows, while the other part of that result will be exclusively based on calculation quantities.

Consequently, one of the ways of expressing the desired amount of reported profit certainly refers to the design of its calculation component and implies the exploitation of discretion in different stages of the financial reporting process. As the calculation quantities absorb the consequences of selected accounting policies, but also all the subjective elements that are an inseparable part of the valuation of balance positions, the risks that they will be instrumentalized for the sake of deforming the fundamental performance are not negligible. The management of accounting policies should enable the selection of those that best reflect economic reality and realized transactions, all in the spirit of financial reporting of the highest possible quality under existing circumstances. However, precisely because of the accounting regulation based on principles and not on clearly defined rules, it often happens that reporting entities, when formulating their accounting policies, tend to choose a combination of possible accounting methods that, although it does not go beyond the scope of professional regulation, changes the user's perception of financial and profitability achievements. If we define accounting policy or accounting source as "any decision whose primary goal is to influence the (form or substance) of the output of the accounting system in a precisely defined way" (Fields et al., 2001), the bearers of such decisions, with some limitations, may very well indirectly and directly influence the level of the reported results without initiating changes in the dynamics and/or structure of usual business practices. In the literature, examples of accounting policies, methods and assessments that are often cited in connection with the deformation of the accounting components of profit refer to (Miletić, 2021, p. 192):

- Selection of allowed accounting methods: for inventory management - LIFO vs. FIFO; for the calculation of amortization/depreciation costs and changes in the estimated useful life of fixed assets; revenue recognition policies;
- Appraisal techniques and assumptions: fair value of fixed assets; amount of impairment; the value of uncollectible claims;
- Decision-making: on the moment from which the application of the new accounting standard begins and on the way of recognizing the effects resulting from the application of the introduced standard.

The many accounting techniques for manipulating reported results can be classified into seven distinct but interrelated categories. The classification of over thirty detected techniques shown in Table 1 was initially set by the Center for Financial Research and Analysis (CFRA - Center for Financial Research and Analysis), known to the professional public as an independent organization that provides investment research and investment advisory services on a global level. Most of the defined categories target the overestimation of current gains, although some of them result in the underestimation of the accounting results of the current period in order to achieve the realization of opportunistic goals in the following accounting periods in which these gains are recognized.

Table 1. Score manipulation strategies and categories of manipulation techniques

RESULT MANIPULATION STRATEGIES	
Overstating the results of the current period	**Underestimation of the results of the current period**
(**1)** Premature recognition of income in the current period (before it actually occurred)	(**6)** Reduction of current income by postponing recognition to future accounting periods
(**2)** Recognition of unrealized income (fictitious income)	(**7)** Premature recognition of future expenditures in the current accounting period
(**3)** Overestimation of current income through transitory gains	
(**4)** Reduction of current expenditures by their allocation in previous or subsequent accounting periods	

(**5)** Underestimation or non-recognition of obligations	

Source: Author's report, according to Schilit (2002, p. 27)

In the first category, there are techniques of manipulating the accounting result based on the recognition of income before the completion of the process of realization and fulfillment of all obligations undertaken by the seller under the contract, as well as techniques based on the recognition of income of dubious quality or amount. The cause-and-effect relationship between these techniques and techniques from the fifth category appears, for example, in situations where received advances, instead of as liabilities for received advances, are recognized as sales revenue. In addition to the fact that the current period's income is overestimated by such postings, there is also a lack of recognition of the obligations incurred. The application of techniques from this category may also mean the simultaneous application of techniques from the fifth category, such as the case of recording the received advance as income, when there is no recognition of the obligation for the received advance. Recognition of income that has not been realized (fictitious income/income that does not meet the criteria for recognition) implies accounting recording of sales without economic substance, misclassification of income or recognition as income of payment of borrowed funds (instead of recognition of liabilities). Analogously, the techniques classified in the sixth category (delaying the recognition of current revenues) essentially lead to the recording of fictitious revenues in the periods when those revenues are recognized. The sale of property parts whose book values are undervalued or the classification of such one-time gains as business income are examples of techniques grouped within the third category. Examples of the fourth category of manipulation techniques include: unjustified capitalization of business expenses, overestimation of the useful life of use of tangible and intangible fixed assets, non-recognition of expenses based on the resulting impairment, as well as the absence of write-off of certain parts of assets in the observed period. Finally, in the seventh category are techniques that are often used by newly appointed managers. They are aimed at recognizing future expenses in the current period (prematurely), which frees future periods from those expenses, and managers create prerequisites for success in creating future financial performances. The ways in which this is achieved in practice are the recognition of the impairment of overvalued assets, the reduction of the scope of activities and the number of employees, the implementation of reorganization plans and the like.

Regulatory bodies in developed economies and numerous researchers have established through empirical analysis of discovered cases of profit manipulation through accounting techniques that reporting entities most often opt for the technique of overstating income. For example, in a sample of just under three hundred cases of manipulative financial reporting disclosed by the Securities and Exchange Commission (SEC) and issued public statements, Dechow and Schrand (2004, p. 42) found that dominant (in more than two thirds of companies) exploited overestimation of income. When it comes to the cases in connection with which the SEC initiated legal proceedings, the technique of overstating revenues was present in 55% of the cases, with some companies not even avoiding simultaneous understating of expenses (Dechow et al., 1996, p. 10). It is also interesting that the perception of the auditors regarding the order of the most represented techniques of profit manipulation differs. According to the experience of auditors who described more than five hundred attempts to shape profits with materially significant effects, income manipulation techniques are in the second place in terms of frequency of occurrence, while in the first place are expenditure manipulation techniques, which were used in almost every other case of attempted manipulative action (Nelson, Elliott and Tarpley, 2003).

Techniques for shaping the calculation components of profit are numerous and interrelated. The effects of applying these techniques are present in several accounting periods. However, their reversible effects should not be neglected either. Bearing in mind the organic connection of the report on the financial position with the report on the total result, it is not difficult to conclude that the calculation components of the accounting results will automatically be reflected in the value of the company's net assets. In fact, the choice of neutral accounting policies will lead to the temporary presentation of lower values of net assets than those obtained by the implementation of accounting methods and techniques aimed at overestimating the accounting components of reported profits. The values will only temporarily be lower because in the following accounting periods, the opportunities for generous accounting estimates are reduced, so, assuming that they remain within the framework of professional regulations, the space for overestimating accounting profits narrows precisely to the extent that net assets are already overestimated (Miletić, 2021, p. 193). This phenomenon is known in the literature as "reversible effects". Namely, the discretionary accounting components of the reporting result created in the current accounting period are, as a rule, decomposed into x subsequent accounting periods, canceling previously achieved effects, that is, acting in the opposite direction on the accounting results of future periods. The described reversible effects are therefore a factor that limits the scope of profit management and is inherent in the nature of the accounting system. According to Baber et al. (2011), repercussion of reversibility is a function of two components: the extent to which accounting discretion is exploited in deforming accounting results of previous periods and the speed of realization of reversible effects of discretionary components of accounting quantities contained in past accounting profits. Because of this, the management of reported earnings can be seen as a process of uneven levels in the use of accounting discretion over time (Barton, Simko, 2002, p. 3). The reason that managers, despite the reversible effects of their decisions and actions, use the management of accounting components of results is that it enables them to show the required level of accounting results in the period of maturity for the realization of options and bonuses and thus the realization of certain personal economic and reputational benefits. In addition, researches that refer to optimistic managerial expectations are not rare, so even in the case of management of accounting quantities, especially their discretionary components, the expectation of such growth of accounting results in future accounting periods that will nullify the reversible character of earlier decisions, can justify tendentially overestimated amounts of profits. (Graham et al., 2005, p. 41). Nevertheless, one must not lose sight of the fact that the management of accounting components of profit is rational only in circumstances when the expected negative consequences of reversible effects are less than the expected benefits of managing the accounting quantities of the current accounting period.

In the recent past, there are numerous examples in which well-known companies quite boldly moved away from the limits set by professional and legal regulations. The epilogue in most cases meant the bankruptcy of the company and serious financial losses of its investors. The WorldCom case that rocked the global market involved an overstatement of profits by seven billion dollars achieved by unjustified and impermissible capitalization of costs by the same amount. After learning about the irregularities, the share price fell by almost 98%, after which the company went bankrupt (Lev, 2003).

The study of systemic differences in the levels of accounting profit management, which was conducted on a sample of 215 large Serbian companies from the real sector in a nine-year period (2009 - 2017), showed the prevalence of profit management using accounting techniques in the economy of the Republic of Serbia. The results of this analysis once again support the claim that this profit management mechanism is characteristic of economies with underdeveloped capital markets, inadequate investor protection, frequent changes in the law and inefficient judiciary (Miletić, Vučković Milutinović, 2020).

Profit management through real transactions

At the end of the nineties of the last century, trust in financial reports was shaken due to major financial and accounting scandals. Consequently, the need to improve corporate governance and better regulation of the accounting profession has been actualized. To this end, the Sarbanes-Oxley Act (SOX) was adopted in the USA in July 2002. The goal of formulating and entering into force of this law was to raise the professional responsibility of all actors in the processes of creation, analysis, revision and use of publicly available financial information to a significantly higher level. In the following years, research studies appeared motivated by examining the effects of this fundamental reform, one of the most significant in the era of modern business. to the practice of manipulating accounting results. A notable study in the aforementioned area (Cohen et al., 2008) shed light on several important facts. First, accounting techniques aimed at expressing the desired amount of profits were extensively exploited earlier (before the adoption of SOX), and the aforementioned practice culminated in the era of escalating corporate scandals (2000-2001). Second, the culmination of the implementation of the aforementioned earnings management strategy and the growth of shares and stock options in managerial compensation coincided in time. Third, after the introduction of SOX, there was a decrease in the importance of the practice of managing the accounting components of profit, as well as an increase in the importance of the practice of managing the profit through real transactions. Empirical evidence has confirmed that after the enactment of SOX, the strategy of managing accrual components of earnings has been largely replaced by the strategy of managing through real transactions. However, it was not possible to reliably conclude whether the introduction of stricter legislation reduced the overall scope of the practice of profit manipulation.

Manipulation through the undertaking of real transactions implies the performance of economic activities that by nature, scope or method of execution deviate from usual business practice, and which aim to achieve a desirable level of accounting results. The biggest risks of this strategy are related to its non-negligible impact on cash flows. If it is assumed that the forced transactions are properly recorded, implementing this strategy remains within the framework of the requirements of professional regulation, and therefore the impact of these transactions on the audit opinion is also absent. Designing real transactions for the purpose of achieving accounting goals is a strategy in which the risk of detection is minimal because it is difficult to prove the existence of the intention that motivated the transactions. Also, evaluating the effects of alternative scenarios that the company would apply to the accounting result is very complex (scenarios in which there are no opportunistic intentions). All this results in a situation in which auditors and regulatory bodies can hardly detect and prove such manipulative activities and sanction them. Additionally, shaping the accounting result through real transactions enables changes that are not possible when acting exclusively with accounting techniques available in the domain of current professional regulation (Miletić, 2021, p. 194).

On the other hand, profit management through real transactions also implies the assumption of certain risks and costs. Undertaken investment and business activities, which are motivated by the achievement of short-term goals in the domain of the current period's results, may have negative consequences on future cash flows and on the estimated value of reporting entities. In the following, only some forms of manipulation of real transactions are described, which the literature most often refers to, bearing in mind that examples of manipulation in business practice can be even more imaginative.

The first example involves granting high discounts to customers/favorable credit terms, in order to significantly increase sales volume, sales revenue and finally the accounting result. In addition to the positive impact of favorable sales conditions on current sales revenues, such activities also encourage expectations regarding their maintenance in the future, so customer pressure can threaten the expected profit margins of future sales. The practice of the pharmaceutical company Bristol-Myers is a real example of artificially increasing accounting profits through forced sales in order to meet the forecasts of financial analysts and achieve profit targets. For two full years (2000-2001), the company filled its distribution channels with stock even though there was no corresponding demand from the other side. On this basis, sales revenue in the amount of 1.5 billion US dollars was recognized for drugs delivered to distributors, with a guaranteed return on investment in the period until the distributors sell the drugs. After the case was discovered, and after the proceedings before the competent authorities, the company paid compensation in the amount of 150 million dollars (www.sec.gov).

Another example of manipulation of real transactions is an unnecessary increase in the volume of production, which results in a lower cost price of sold products and a higher sales margin (due to the effect of economies of scale). The activity of such an increase in the volume of production is accompanied by the risk of accumulating stocks that are then transferred to the next accounting periods, which increases storage costs, costs of disposing of stocks that have expired, etc. There is empirical evidence in the literature that confirms the impact of applying the above strategy on profitability in the current period (Thomas and Zhang, 2002). However, in those researches, the impact of changes in demand as a possible explanation of the research results was not completely excluded (which, for example, was shown in Hribar, 2002).

The following example from the literature can be characterized as a significant reduction of discretionary costs, i.e. costs whose occurrence is not accompanied by the simultaneous recognition of income. Examples of such costs are research and development costs, advertising costs, maintenance costs, etc. They certainly represent a favorable training ground for an opportunistic increase in results and reduction of current cash outflows. At the same time, the risk of reduced future cash inflows has increased. A study was conducted in 438 American manufacturing companies over a period of ten years (Baber, Fairfield and Haggard, 1991). The study revealed that the investment in research and development is significantly reduced in years when reporting these costs in some higher amounts would threaten the reporting of profits or make it impossible to report profits that are higher than the profits of the previous accounting period.

Timing of the moment of sale of fixed assets is often used as a technique for expressing the desired amount of accounting profit. As the concept of historical costs does not allow recognition in the profit and loss account of changes in the market value of a fixed asset until the moment of its sale, the timing of the moment of sale appears as an example of a discretionary decision with repercussion on the amount of accounting profit reported. Bartov (1993) showed in his research that managers use the timing of the period of sale of parts of fixed assets in order to realize the latent reserves related to them, with the aim of balancing periodic results, as well as mitigating the consequences of restrictive credit clauses.

Financial scandals in which accounting manipulations played a significant role undoubtedly caused a noticeable reaction from regulatory bodies and greater caution from the investment public. However, the practice of managing results presented in financial statements has not disappeared, despite the efforts of regulatory bodies. It is also debatable whether its scope has been significantly reduced by the introduction of new regulatory requirements in developed market economies. A more detailed analysis of the practice of accounting manipulations showed a tendency to replace accounting techniques of profit management with more complex management techniques through real transactions, where the risk of detection is significantly reduced. As a result, the increase in the risk appetite of increasing long-term costs caused by forced real transactions is compensated by a lower risk of detection of opportunistic behavior.

Conclusion

Forced real transactions as a strategy to reach the desired level of accounting profit are a challenge not only for regulatory bodies and auditors, but also for members of the academic community. Focused on accounting manipulative techniques, researchers have made serious progress in perfecting econometric models that approximate the management attributes of accounting components of accounting results. Either because of the relatively fresh empirical evidence regarding the increasingly frequent practice of profit shaping techniques through real transactions or because of the impossibility of detecting them, the methodology of assessing real manipulations is still on rudimentary foundations. Only minor modifications of the original Roychowdhury (2006) model are currently available, with no notable progress in overcoming its many limitations. The model identifies deviations of production costs, discretionary costs and cash flows from the business activity of the reporting entity in relation to the average values in the sector in which the entity operates. Based on the determined deviations, the scope of accounting profit management through real transactions is estimated. At first glance, the limitations of this model are clear. An important assumption of the model that under normal circumstances entities operating in the same sector have the same trends in cash flows and production costs, as well as a similar tendency to invest in marketing or research and development, can be questioned. In addition, the assumption that sales revenue is the only driver of expenditure and profitability can also be legitimately objected to (more details in Srivastava (2019)).

There is a noticeable lack of empirical research that approximates the distribution of accounting results management activities by forced real transactions within the observed accounting period, bearing in mind that these activities cannot be implemented "immediately", just before the preparation of financial statements. There is still no answer to the question of whether the frequency of forced transactions aimed at the target amount of accounting profit increases as the end of the reporting period approaches, which is also the period in which managers recognize the necessary direction and scope of action in order to transform realistically achieved performances into desirable. We must not lose sight of the possibility of combining strategies of real and accounting manipulations for the realization of defined goals, which will certainly pose many methodological and research challenges. The reactions of users of financial statements, especially investors, open the possibility of analyzing their perception and understanding both current and future consequences of profit management by applying different strategies or their combination. The evolution of the practice of profit management, empirically confirmed, also raised a wave of new questions. In highly developed market economies, regulatory bodies, in an attempt to overcome one problem, gave the initial impetus to the application of more perfidious methods of profit management, which escape the audit court and other detection methods. As a result, it is inevitable that the consequences of applied profit management strategies are viewed as an inseparable aspect of the quality of financial statements on which resource allocation decisions are based.

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ULOGA LOGISTIKE U STVARANJU VREDNOSTI PREDUZEĆA

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Apstrakt

Menadžment proizvodnih kompanija kao dinamičan i složen proces, usmeren je pre svega ka efikasnom i efektivnom korišćenju ograničenih resursa radi realizacije postavljenih ciljeva. Na taj način uspešna konkurentska pozicija kompanija uslovljena je adekvatnim i sposobnim menadžmentom koji prati promene u okruženju, koje se manifestuju kao mogućnosti i rizici za kompanijiu.

U savremenim uslovima poslovanja, kao oblast sa izuzetno velikim potencijalom za stvaranje povoljne konkurentske pozicije jeste logistika, odnosno lanci snabdevanja, kao težnja poslovnih subjekata da integrišu svoje poslovne aktivnosti i proširе njihov uticaj sve do potrošača. Ovakav otvoreni sistem utiče na proces stvaranja vrednosti i nudi mnogo veće potencijale za ostvarivanje profita.

Ključne reči: *logistika, proizvodna kompanija, lanac snabdevanja.*

JEL*: R41, R49.*

Uvod

Uloga i značaj efikasnog upravljanja logistikom na poslovne rezultate proizvodnih kompanija postalo je predmet brojnih istraživanja u svetu i kod nas. Porter (1985) je naglašavao činjenicu da je menadžment poslovnim subjektima dinamičan i složen proces, koji je pre svega usmeren ka korišćenju ograničenih resursa radi realizacije ciljeva definisanih poslovnom strategijom. Na taj način konkurentnost nekog poslovnog subjekta uslovljena je efikasnošću korišćenja

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prednosti poslovnog okruženja i njihovog usaglašavanja sa sa internim snagama i sposobnostima.

U savremenim uslovima poslovanja, kao oblast koja pruža velike mogućnosti za povećanje konkurentske pozicije kompanije i strategijskog pozicioniranja, posebno se izdvaja oblast logistike. Prema Chen et al., (2017), logistika je nastala kao potreba kompanija da usklade svoje poslovne aktivnosti i povećaju efikasnost poslovanja. Dolgui et al. (2018) ovakav način obavljanja poslovnih aktivnosti, koji podrazumeva saradnju sa ostalim elementima lanca snabdevanja, koji svojim aktivnostima takođe utiču na proces kreiranja vrednosti, daje značajno veću mogućnost za stvaranje profita.

Mnogi autori razlikuju pojmove interne i eksterne logistike. Prema Sekerezi (2009) proces interne logistike podrazumeva skup aktivnosti koje se odvijaju unutar proizvodnih kompanija, sa ciljem da se omogući neometani tok materijala, delova, nedovršene proizvodnje i gotovih proizvoda prema njihovim kupcima i krajnjim potrošačima. Logistika je kompleksan sistem koji se satoji iz većeg broja elemenata i to: nabavke, prijema, skladištenja i rukovanja materijalom i delovima, zatim operacije ili aktivnosti proizvodnje, montaže i testiranja, i konačno izlazne logističke aktivnosti pakovanja, transporta, isporuke i postprodajnih usluga(Mihajlović i dr., 2020).

Eksterna logistika vezana je za samo funkcionisanje lanca snabdevanja, jer su njegove aktivnosti vezane za stejkoldere, odnosno uspostavljnje čvrstih uzajamnih veza i saradnje sa ostalim činiocima poput kupaca i dobavljača. To znači da logistika čini jedan deo lanca snabdevanja sasatavljen iz niza aktivnosti koje se realizuju postepeno unutar i izvan kompanije, uz zahtev da se isporuči vrednost krajnjem potrošaču.

Pregled literature

Prema De Giovanni (2018) efekasno upravljanje internom logistikom znači povezanost i saradnju više poslovnih procesa unutar kompanije. Pored toga važna je i povezanost drugih elemenata u lancu snabdevanja sa osnovnim ciljem da se obezbedi maksimalna vrednost sa minimiziranjem troškova. Cai et al., (2021) smatraju da svi relevantni faktori unutar lanca vrednosti, bez obzira na poziciju unutar lanca, moraju da budu organizovani tako da što efikasnije i efektivnije obavljaju zajedničke aktivnosti, čime bi se obezbedilo ostvarivanje efekta sinergije, odnosno da vrednost krajnjih proizvoda i usluga, koje kreira dati lanac, bude veća od prostog zbira vrednosti koje bi ostvarile njegove individualne karike. Uspostavljanje ovako čvrstih kooperacija i saradnje, baziranih na poverenju i međusobnoj razmeni ideja i informacija, treba da bude podržano svešću da korist koju ostvari neko od učesnika u lancu vrednosti neminovno donosi koristi i svim ostalim njegovim učesnicima, odnosno da uski sebični interesi jedne od karika, pre ili kasnije, mogu da umanje sveukupnu vrednost koju produkuje lanac kao celina.

Istraživanje Zhao et al. (2013) smatra se prvim istraživanjem, u kome je predstavljen međusobni odnos integracije lanaca snabdevanja i performansi kompanija. Oni su na uzorku od 288 kompanija, čija je osnovna delatnost proizvodnja, istražili uticaj rizika na integarciju lanaca snabdevanja i uticaj lanaca snabdevanja na performanse kompanije. Jedinice ispitivanja u ovom slučaju su kompanije i one su izabrane u deset različitih zemalja. Dobijeni rezultati istraživanja pokazali su da rizici negativno utiču na integraciju lanaca snabdevanja, među kojima je značajan rizik isporuke. Takođe, utvrđeno je da uticaj lanaca snabdevanja na performanse kompanije može biti pozitivan i negativan, što zavisi od vrste integracije lanaca snabdevanja.

Značajnim istraživanjem smatra se i istraživanje Tešić i dr. (2021), koji su utvrdili značajnu vezu na nivou kompanije između konkurentske prednosti i strateške nabavke. Istraživanje je obuhvatilo uzorak od 124 proizvodnih kompanija. Oni su imali za cilj da ispitaju model nabavke u kompaniji kojim se postiže konkurentska prednost. Utvrdili su da se korišćenjem modela strateške nabavke, ostvaruje konkurentska prednost i to putem ograničavanja broja poslovnih partnera, promovisanja bolje poslovne saradnje između kompanije i njenih partnera u lancu snabdevanja i uspostavljanja modela upravljanja kojim bi svi učesnici u lancu snabdevanja ostvarivali dobit na duži rok.

Wang et al. (2020), definišu integarciju lanaca snabdevanja kao deo ukupne logistike koja nastaje u međusobnom odnosu između dobavljača i kupaca, koji predstavljaju jednu kariku u lancu snabdevanja. Svaka karika u lancu snabdevanja istovremeno je i kupac i dobavljač, npr. proizvođač bitnih delova računara istovremeno je i kupac sitnijih delova i dobavljač nekog velikog proizvođača računara, koji nije poslednji kupac u lancu snabdevanja. U lancu snabdevanja na konkretnom tržištu, kao karika mogu se naći i kompanije koje vrše prodaju na malo i veliko, a čiji broj zavisi od strukture samog lanca snabdevanja odnosno od kanala prodaje i distribucije.

Prema Lahane et al. (2020), integarcija lanaca snabdevanja se češće koristi u brojnim literaturama, jer se za izraz logistika ne može reći da predstavlja međusobnu relaciju između organizacija u okviru određenog sektora. Integracija lanaca snabdevanja je širi pojam od logistike i obuhvata nabavku, prodaju i odnose koji nastaju u ovim aktivnostima. Kod istraživanja čiji predmet obuhvata integarciju lanaca snabdevanja, za uzorak se najčešće uzimaju proizvodne kompanije, koje imaju značajnu mrežu svojih poslovnih partnera, kako kupaca, tako i dobavljača.

Tang et al. (2020), iz ugla proizvodnih kompanija, logistiku posmatraju kao neproduktivan proces. Oni iznose stav da je logistika proces, u kojem su uspostavljeni čvrsti kanali distribucije sa konstantnim brojem dobavljača i kupaca. S druge strane, savremen način poslovanja, dovodi do zastarevanja procesa logistike, što onemogućava ostvarivanje konkurentske prednosti na duži rok. Na taj način, proizvodne kompanije ne smeju da se prepuste ustaljenom procesu logistike, već treba da smanje zavisnost od konstantnog uskog broja dobavljača i kupaca i da pronađu druge mogućnosti za procese nabavke, a u skladu sa svojim potrebama i uslovima tržišta. Takođe savremeno poslovanje utiče na tržišta, čini ih složenijama, što omogućava da se proces logistike primeni u raznim oblicima. Dovodi do toga da jedna kompanija može da bude istovremeno učesnik na tržištu, a u različitim tržišnim relacijama. Takođe, jedna kompanija može da bude učesnik više različitih lanaca snabdevanja, a u zavisnosti od načina poslovanja, raznolikosti sopstvenih proizvoda i usluga i uspostavljenog odnosa sa svojim poslovnim partnerima.

Proces logistike, koji je u poslednje vreme sve prisutniji u industriji i u raznim tržišnim segmentima, Goffnett (2018) objašnjava postojanjem velikog broja tržišnih relacija i raznih odnosa učesnika unutar industrijskih lanaca snabdevanja. Izdvaja dve grupe lanca snabdevanja, od kojih je jedna usmerena na proces nabavke i uspostavljanje dobrog odnosa sa dobavljačima. Druga grupa lanca snabdevanja usmerava se na ispunjenje zahteva tražnje i uspostavljanje dobrog odnosa sa kupcima. Kako u današnjem svetu, proizvodi i usluge treba da budu „vučeni” trenutnim tržišnim zahtevima, pre nego li „gurani” ka kupcima, važno je napomenuti da dostignut nivo performansi, koji se odnosi na nabavku robe i njen transport od dobavljača do kupca, obuhvata prikupljanje podataka iz maloprodaje (engl. point of sale) u realnom vremenu. Time se postiže da podaci budu efektivno transmitovani svim učesnicima u lancu snabdevanja (Sekereza, 2009).

Metodologija istraživanja

Different scientific methods will be used for the purposes of research. Within the scope of the research, special attention is focused on the application of methods and techniques that are commonly used in research practice to collect, process, analyze and synthesize data in the field of logistics. The methods of scientific research will be combined in such a way as to contribute to the realization of a real permanent verification of the scientific basis of the research and the assumptions made in it.

General scientific methods, as well as special methods characteristic for the investigation of phenomena in the field of economics, will be used in the RSDA.

The subject of the research will be researched on the basis of expert studies, original documents, as well as information from scientific disciplines that study the phenomenon of logistics and supply chains from different aspects.

Uticaj menadžmenta lanca snabdevanja na performanse proizvodnih kompanija

Menadžment lanaca snabdevanja (engl. Supply chain management) predstavlja tržišni koncept koji treba da pravovremeno, ekspeditivno i verodostojno zadovolji očekivanja krajnjih potrošača. U današnjem svetu konkurentska prednost na tržištu se ostvaruje putem menadžmenta lanaca snavdevanja. Pozicioniranje na konkurentskom tržištu se vrši prema stepenu zadovoljenja krajnjih potrošača, odnosno konkurentusku prednost će ostvariti onaj lanac snabdevanja koji najuspešnije zadovolji zahteve potrošača.

Bitan uslov za ostvarivanje konkurentske prednosti određenog lanca snabdevanja na tržištu je da svi učesnici lanaca snabdevanja imaju odličnu međusobnu komunikaciju i istu viziju za zadovoljenje krajnjih potrošača (Baske, 2012). Učesnici moraju da prate zahteve potrošača, da ispitaju šta je to što žele i na koji način im to omogućiti. Zbog sve jače konkurencije na tržištu i većih zahteva korisnika proizvoda i usluga, komunikacija između učesnika u lancu snabdevanja mora da bude odlična, moraju da pojačano rade na aktivnostima i načinima za zadovoljenje tražnje krajnjih potrošača. Rezultat uspešnosti partnera u lancu snabdevanja, se u tom pogledu posmatra iz ugla stvaranja vrednosti za krajnjeg potrošača. Usvajanjem principa „pravi proizvod na pravom mestu i u pravo vreme“, proizvodne kompanije se odlučuju za integraciju svojih lanaca snabdevanja(Ilić & Tasić, 2021). Glavni cilj menadžmenta lanaca snabdevanja podrazumeva prilagođavanje tržišnim uslovima, a u cilju smanjenja troškova proizvodnim kompanijama i generisanja vrednosti krajnjim potrošačima.

Prema Yang et al. (2019), potrebno je da učesnici u lancu snabdevanja uspostave češću komunikaciju sa krajnjim potrošačima, koja će obezbediti neprikidan tok u oba pravca lanca snabdevanja, a time ispuniti i osnovni cilj svih učesnika na tržištu. Detaljna analiza svih zahteva na tržištu i njihovo tumačenje kroz lanac snabdevanja smatra se neophodnim korakom u menadžmentu lanca snabdevanja. Takođe, bitnim korakom smatra se i raščlanjavanje tržišnih zahteva, što podrazumeva grupaciju potrošača prema karakteristikama proizvoda i usluga, koji su ponuđeni na tržištu(Avakumović i dr., 2021). Od izuzetnog značaja, je uspostaviti kontrolu na sposobnost lanca snabdevanja da na zahtevani način održava odeređenu ciljnu tržišnu nišu. Tržišna niša označava mali deo tržišta, na kojem učesnici imaju slične karakteristike i potrebe.

Uspostavljanjem kontrole i praćenjem aktivnosti stvara se most koji povezuje proizvodne, organizacione i marketinške sposobnosti celog lanca snabdevanja uključujući svakog dobavljača i kupca u tom lancu. Masteika & Cepinskis (2015) tvrde da vizija marketinga treba da bude sprovodljiva u logističku realnost. Abbey & Guide (2018) definišu dizajn i organizaciju lanca snabdevanja, koji bi mogao da pruži podršku svojim konačnim proizvodima i uslugama. Putem dizajna i organizacije lanca snabdevanja, informacije o zahtevima prikupljene sa ciljnih tržišnih niša, treba da posluže da se svi učesnici angažuju na zadovoljenju tih zahteva. Poslednjih godina značajna pažnja sa prednjeg lanca snadevanja, usmerena je ka zadnjem lancu snabdevanja, odnosno od dobavljača ka kupcima tj. krajnjim potrošačima. Kupci imaju najveću moć na tržištu u današnjem svetu i od njihovih zahteva i potreba se definiše organizacija i struktura lanca snabdevanja. Na taj način se kupci tj. krajnji potrošači stavljaju na prvo mesto. Brojni autori menadžment lanca snabdevanja tretiraju kao menadžment lanca tražnje (engl. Demand chain management)(Jovanović, 2021).

Stvaranje vrednosti u lancu snabdevanja

Pored stalnog angažovanja proizvodnih kompanija na planu poboljšanja snabdevanja uz (engl. upstream) određeni lanac, proizvodne kompanije su paralelno angažovane i na planu efektivnog sprovođenja menadžementa tražnje niz (engl. downstream) lanac vrednosti. Osnovni cilj za paralelno angažovanje proizvodnih kompanija, sastoji su u postojanju potrebe za korigovanjem negativnih uticaja koje imaju informacije o tržišnoj tražnji na performanse lanaca snabdevanja. To se postiže uspostavljanjem odlične komunikacije sa kupcima i razvijanjem saradnje između kupaca i dobavljača. U današnjem svetu proizvodne kompanije usaglašavaju procese snabdevanja i tražnje, na taj način što investiraju u pouzdane i verodostojne informacije o stvarnim tržišnim potrebama(Bevanda i dr., 2021). To čine, jer dolazi do negativnih posledica kod budućih predviđanja tržišne tražnje, što se odražava na postojanje veće ili manje potrebne količine zaliha, usporenim postupcima rešavanja problema zaliha i stvaranjem većih troškova svih transakcija u lancu snabdevanja(Ivanova & Ristić, 2020). Pojavom interneta i informacionih tehnologija, proizvodnim kompanijama se omogućava stalan kontakt sa kupcima, blagovremeno prikupljanje informacija o njihovim potrebama i formiranje baza podataka, koje će koristiti svi učesnici u određenom lancu snabdevanja.

Proizvodne kompanije posmatranjem linije tražnje na određenom tržištu smanjuju negativne posledice koje mogu da nastanu u predviđaju tražnje. Posmatranje linije tražnje se sprovodi uspostavljanjem bolje saradnje sa učesnicima u lancu snabdevanja i međusobnom razmenom informacija između njih što mora da bude ispraćeno promenom i rekonstrukcijom internih sposobnosti u kompaniji(Ilić i dr., 2022). To znači, da svaka promena preferencije potrošača, mora da bude ispraćena promenom marketing strategije i pristupima upravljanja tražnjom. Brojne studije su pokazale, da brzo prilagođavanje proizvodnih kompanija zahtevima tržišta, pruža značajan porast profitabilnosti praćen rastom obima prodaje.

To dovodi do pomeranja fokusa lanca snabdevanja, sa njihovog tradicionalnog pristupa „guranja" proizvoda prema potrošačima, ka pristupu „vuče" proizvoda tražnji. Pristup „vuče" proizvoda tražnji usklađen je zahtevima tržišta, što znači da se informacije o tražnji šalju suprotnim smerom uz (engl. upstream) lance snabdevanja. Putem procesa distribucije, proizvodnje i nabavke informacije se šalju dobavljačima, koji dobijene informacije koriste za proizvodnju raznih materijala i delova i pružanje određenih usluga. Stalno korišćenje ovog pristupa usled proteka određenog vremena smanjuje potrebu predviđanja tražnje, odnosno korišćenje pristupa „guranja", koji ima brojne nedostatke. Vreme reagovanja na zahteve krajnjih potrošača je značajan pokazatelj uspešnosti funkcionisanja lanca snabdevanja, pri primeni pristupa „vuče" proizvoda tražnji. Kupci vreme smatraju najbitnijim pokazateljem, kojim se ostvaruje konkurentska prednost na tržištu. Proizvodne kompanije se u lancu snabdevanja, pre odlučuju za dobavljača koji može da im isporuči materijal i delove ili pruži uslugu u najkraćem vremenu. Za razliku od proizvodnih kompanija, potrošaču će umesto vremena bitni pokazatelj za odlučivanje biti brend dostupnih proizvoda na tržištu(Sekereza, 2009)..

Svi učesnici u lancu snabdevanja treba da imaju za cilj povećanje vremena reagovanja i smanjenje ukupnog vremena poslovnog procesa. Ovom cilju značajan doprinos pružaju zahtevi JIT (just in time) isporuke i pretencioznost smanjenja životnog ciklusa proizvoda. Stepen reagibilnosti na tražnju smatra se najvažnijim pokazateljem kvaliteta pruženih usluga u lancu snabdevanja. On je predstavljen vremenom za koje je dobavljač u stanju da isporuči proizvode i usluge kupcima na tržištu. Vreme je bitan faktor u respondibilnom lancu snabdevanja, jer se zahteva od proizvodne kompanije da se brzo prilagodi tržišnim zahtevima, uz smanjenje troškova. Smanjenje troškova se postiže povećanjem obrta i smanjenjem prosečne količine zaliha delujući na smanjenje zastoja, kvarova i gubitaka (Gligor et al., 2016). Da bi se smanjili troškovi i vreme reagovanja uz bolju funkcionalnost i konkurentnost potrebno je da se sprovedu aktivnosti u proizvodnoj kompaniji koje utiču na kvalitet performansi proizvoda i usluga. Bitno oruđe za ostvarivanje konkurentske prednosti na tržištu, proizvodne kompanije ističu menadžment lanca snabdevanja (Dubey et al., 2019). Putem neprikidnog širenja i usklađivanja odnosa u lancu snabdevanja, proizvodne kompanije ostvaruju određenu poziciju na konkurentskom tržištu. Radi smanjenja troškova u okviru jednog lanca snabdevanja na nivou proizvodne kompanije i stvaranja vrednosti za njene stejkholdere, dobavljači i kupci ističu da je potrebno uspostaviti poverenje i međusobnu interakciju između učesnika u lancu snabdevanja.

Da bi proizvodne kompanije ispunile zahteve svojih akcionara za što većim povraćajem uloženih sredstava i istovremeno zahteve potrošača za dominantnom vrednošću proizvoda, u obavezu su da pronalaze načine za uspostavljanje kontrole troškova u celom lancu snabdevanja. U automobilskoj ili kompjuterskoj industriji do 80% troškova proizvoda odnosi se na one troškove koji su nastali u vezi nabavke resursa. Da bi se učešće tih troškova u ukupnim troškovima proizvoda smanjilo neophodno je povećati intezitet saradnje i uspostaviti odličnu direktnu komunikaciju između učesnika u lancu snabevanja odnosno između dobavljača i kupaca prilikom određenih transakcija. Komunikacija između učesnika može biti i preko specijalizovanih organizacija na tržištu, međutim to prouzrokuje veći procenat eksternih troškova, koji su od posebnog značaja za konkurentsko pozicioniranje proizvoda i usluga na tržištu, a time i pozicioniranje i samih proizvodnih kompanija.

Najproblematičniji deo kod pozicioniranja proizvodih kompanija u istoj industriji na tržištu jeste analiza lanaca snabdevanja u kompanijama sa identičnim aktivnostima, procesima, kupcima i dobavljačima. S tim u vezi proučavanje svih aktivnosti i procesa zahteva izgradnju održive konkurentske prednosti. Ona se izvodi od početka do kraja lanca snabdevanja, odnosno od proizvodnje primarnih zaliha i materijala do njihove isporuke i prodaje. To ima za cilj da se formiraju zajednički proizvodi i usluge, koji će odgovoriti na zahteve krajnjih potrošača. Proizvodne kompanije, lanac snabdevanja koji se sastoji od niza poslovnih aktivnosti, shvataju kao sistem za stvaranje vrednosti, bez obzira da li on stvara ili ne stvara vrednost za kupce. To se može objasniti na primeru jedne velike proizvodne kompanije, koja nije u stanju da obavlja sve aktivnosti u jednom lancu snabdevanja, iako je osnovana sa ciljem pružanja mnogobrojnih aktivnosti (istraživačkih, razvojnih, proizvodnih i distrubutivinih). Međutim, kako bi bile pokrivene sve aktivnosti, u jednoj industriji može da postoji veći broj manjih proizvodnih kompanija čija je delatnost usmerena na obavljanje samo jedne aktivnosti.

Analiza troškova u lancu snabdevanja

Na osnovu do sada iznetog možemo zaključiti da je konkurenska prednost proizvodne kompanije uslovljena diferencijacijom ili smanjenjem troškova, koji predstavljaju dva glavna strategijska pravca delovanja. Od davnina je Porter (1985) isticao da se faktori konkurentske prednosti ogledaju u stvaranju uslova pružanja veće vrednosti kupcima uz iste troškove proizvodne kompanije. U skladu sa tim osnovni cilj analize lanca snabdevanja podrazumeva uočavanje segmenata čiji troškovi mogu biti umanjeni, a vrednost uvećana. Identifikovanjem brojnih uzročnika logističkih troškova i analizom njihovog delovanja stvaraju se uslovi regulacije troškova i uspostvaljanja ravnoteže u odnosu na ostale faktore poslovnog uspeha. U ove faktore uspeha proizvodne kompanije ubrajamo fleksibilnost, pouzdanost, vreme i kvalitet. Ovi faktori u sebi sadrže aktivnosti koje prouzrokuju troškove, a promenom načina njihovog delovanja stvaraju se uslovi za jačanje konkurentske prednosti i profitabilnosti poslovne kompanije.

Sveobuhvatno upravljanje troškovima, pored procesa identifikovanja industrijskog lanaca snabdevanja uključuje utvrđivanje i ispitivanje načina za ostvarivanje konkurentske prednosti. Proces utvrđivanja i ispitivanja načina za ostvarivanje konkurentske prednosti ogleda se kroz unapređenje kontrole faktora uspeha proizvodne kompanije. U skladu sa tim primarni cilj konkurentske prednosti kompanije treba da bude smanjenje troškova uz mogućnost stvaranja vrednosti na odgovarajućem nivou.

Prema najnovijim istraživanjima koje su sproveli Jain et al. (2020) sveobuhvatna analiza troškova treba da stvori uslove za produkciju vrednosti, odnosno rekonstrukciju aktivnosti koje ne doprinose održavanju kvaliteta vrednosti koja se plasira na tržištu. Na taj način mogu da se eliminišu one aktivnosti u proizvodnim kompanijama, koje ne pružaju odgovarajuće uslove kvaliteta i stvaraju nepotrebne troškove.

Povezivanje procesa nabavke, proizvodnje i distribucije u jedan sistem, u kojem se za kupce stvara dodatna vrednost, tako što proizvode mogu da kupe po najnižim cenama podrazumeva upravljanje trošovima na adekvatan način u procesu lanca snabdevanja (Zhou, 2017). To dovodi do zanemarivanja tradicionalnog pristupa praćenja materijalnih tokova. Veoma je bitno da se troškovi posmatraju iz šireg ugla, kao stanje koje nastaje u svim proizvodnim kompanijama odnosno kod svih učesnika u lancu snabdevanja. Troškovi ne nastaju u zidinama kompanije, već su široko rasprostranjeni u svim kompanijama. Pojedinačni troškovi koju su nastali u individualnoj proizvodnoj kompaniji, utiču na ukupne troškove u lancu snabdevanja, kao i na proizvode i usluge koji su dostupni na tržištu krajnjim potrošačima. Vrednost dostupnih proizvoda i usluga na tržištu dobija se izračunavanjem vrednosti troškova svih aktivnosti u procesu lanca snabdevanja. Poseban značaj praćenja i kontrole troškova je neophodan u uslovima naglog povećanja primene outsourcing strategije. U slučaju kada se sve tradicionalne aktivnosti koje se sprovode u okviru proizvodne kompanije, pružaju eksterno, dolazi do „zamagljivanja i brisanja“ okvira poslovanja pojedinačne proizvodne kompanije.

Pojavom holističke perspektive posmatranja lanaca snabdevanja u industriji, dolazi do propuštanja u sprovođenju većeg broja poslovnih aktivnosti koje utiču na performanse kompanije (Wolf, 2014). Proizvodne kompanije se na tržištu ne mogu posmatrati kao individualni entiteti, jer su svi učesnici u lancu snabdevanja izloženi brojnim rizicima (npr. naglo smanjenje prihoda ili povećanje troškova).

Integracija lanca snabdevanja i koncept stvaranja vrednosti pružaju dobru organizacionu podlogu za efikasno upravljanje troškovima, kao i podlogu za formulisanje i implementaciju konkurentskih strategija na tržištu (De Angelis et al., 2018). Pojavom informacione tehnologije, brojni koncepti su formirani unutar sveobuhvatnog strategijskog pristupa, kao što su obračun i upravljanje troškovima na bazi aktivnosti (engl. Activity based costing/management – ABC/ABM), obračun troškova životnog ciklusa proizvoda (engl. Total life cycle costing - TLCC) i upravljanje ciljnim troškovima (engl. Target cost management - TCM) (Goffnett, 2018).

Zaključak

Osnovni preduslov za ostvarivanje konkurentske prednosti proizvodne kompanije podrazumeva njen sveobuhvatan pristup troškovima. Najvažnije merilo nadgradnje ili očuvanja sistema vrednosti produkta ogleda se u tome da se troškovi proizvodnje ne svode na minimum i to na uštrb narušavanja kvaliteta proizvoda koji se na tržištu plasira. U skladu sa tim može se istaknuti da se na savremenom tržištu monopolističkom proizvodnom kompanijom ne smatra kompanija koje prodaje najjeftinije proizvode vršeći korekciju cene po osnovu rušenja funkcionalnosti proizvoda, već proizvodna kompanija koja pažljivo i inteligentno pristupa eliminaciji troškova uz očuvanje osnovne vrednosti produkta. Pored sveobuhvatnog pristupa troškovima, konkurentska prednost kompanije zavisi i od poznavanja svesti ciljnih kupaca. Analizom očekivanja kupaca uviđa se da namerni kupac ima cilj koji se ogleda u kupovini proizvoda adekvatnog kvaliteta kojim će moći da zadovolji svoje potrebe. To sa druge strane ne znači da će kupac kupiti preterano skup proizvod, jer današnji kupac podrazumeva da je proizvod prošao odgovarajuće provere kvaliteta. Pogrešno je iz ovoga zaključiti da će najjeftiniji proizvod imati kraći put do potrošačke korpe bez odgovarajućeg marketinga. Imajući u vidu tradicionalne pristupe konkurentskih kompanija, plasiranje produkta odgovarajuće vrednosti uz minimalne troškove proizvodnje i očekivanje kupaca da i jeftiniji produkt ima odgovarajući kvalitet, savremeni pristupi treba da nastoje da kooperativnim načinom ova dva pristupa objedine. Na taj način se može osigurati odgovarajuća konkurentska prednost kompanije u savremenim uslovima jake konkurencije i velikih očekivanja kupaca.

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THE ROLE OF LOGISTICS IN CREATING COMPANY VALUE

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Review paper

Abstract

The management of production companies as a dynamic and complex process is aimed primarily at the efficient and effective use of limited resources in order to realize the set goals. In this way, the successful competitive position of the company is conditioned by an adequate and capable management that follows the changes in the environment, which manifest as opportunities and risks for the company.

In modern business conditions, as an area with extremely high potential for creating a favorable competitive position is logistics, i.e. supply chains, as the aspiration of business entities to integrate their business activities and extend their influence all the way to consumers. Such an open system influences the value creation process and offers much greater potential for profit.

Keywords: *logistics, manufacturing company, supply chain.*

JEL: *R41, R49.*

Introduction

The role and importance of efficient logistics management on the business results of manufacturing companies has become the subject of numerous researches in the world and in our country. Porter (1985) emphasized the fact that the management of business entities is a dynamic and complex process, which is primarily directed towards the use of limited resources in order to realize the goals defined by the business strategy. In this way, the competitiveness of a business entity is conditioned by the efficiency of using

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the advantages of the business environment and their alignment with internal strengths and capabilities.

In modern business conditions, as an area that provides great opportunities for increasing the company's competitive position and strategic positioning, the area of logistics stands out. According to Chen et al., (2017), logistics arose as a need for companies to coordinate their business activities and increase business efficiency. Dolgui et al. (2018) this way of performing business activities, which implies cooperation with other elements of the supply chain, which with their activities also influence the process of value creation, gives a significantly greater opportunity for profit creation.

Many authors distinguish the concepts of internal and external logistics. According to Sekereza (2009), the process of internal logistics implies a set of activities that take place within manufacturing companies, with the aim of enabling the smooth flow of materials, parts, unfinished production and finished products to their customers and end consumers. Logistics is a complex system that consists of a number of elements, namely: procurement, reception, storage and handling of material and parts, then operations or activities of production, assembly and testing, and finally the outgoing logistics activities of packaging, transport, delivery and after-sales services (Mihajlović et al., 2020).

External logistics is related to the functioning of the supply chain itself, because its activities are related to stakeholders, that is, the establishment of strong mutual ties and cooperation with other factors such as customers and suppliers. This means that logistics is a part of the supply chain composed of a series of activities that are implemented gradually inside and outside the company, with the requirement to deliver value to the end consumer.

Literature review

According to De Giovanni (2018), the effective management of internal logistics means the connection and cooperation of several business processes within the company. In addition, the connection of other elements in the supply chain with the basic goal of providing maximum value while minimizing costs is also important. Cai et al., (2021) believe that all relevant factors within the value chain, regardless of their position within the chain, must be organized so that they perform joint activities as efficiently and effectively as possible, which would ensure the realization of the synergy effect, i.e. that the value of the final of products and services, created by a given chain, will be greater than the simple sum of values that would be realized by its individual links. The establishment of such strong cooperation and collaboration, based on trust and the mutual exchange of ideas and information, should be supported by the awareness that the benefit achieved by one of the participants in the value chain inevitably benefits all other participants, that the narrow selfish interests of one of the links, sooner or later, they can reduce the overall value produced by the chain as a whole.

Research by Zhao et al. (2013) is considered the first research, in which the mutual relationship between supply chain integration and company performance is presented. They investigated the impact of risk on the integration of supply chains and the impact of supply chains on company performance on a sample of 288 companies whose primary activity is manufacturing. The units of investigation in this case are companies and they are selected in ten different countries. The obtained results of the research showed that risks negatively affect the integration of supply chains, among which the risk of delivery is significant. Also, it was determined that the impact of supply chains on company performance can be positive or negative, depending on the type of supply chain integration.

The research by Tešić et al. is also considered a significant research. (2021), who found a significant relationship at the firm level between competitive advantage and strategic acquisitions. The survey included a sample of 124 manufacturing companies. They aimed to examine a company's procurement model that achieves competitive advantage. They determined that by using the strategic procurement model, a competitive advantage is achieved by limiting the number of business partners, promoting better business cooperation between the company and its partners in the supply chain, and establishing a management model in which all participants in the supply chain would achieve profit in the long term.

Wang et al. (2020), define the integration of supply chains as part of the overall logistics that arises in the mutual relationship between suppliers and customers, who represent one link in the supply chain. Each link in the supply chain is both a customer and a supplier at the same time, e.g. a manufacturer of essential computer parts is at the same time a buyer of smaller parts and a supplier of a large computer manufacturer, who is not the last customer in the supply chain. In the supply chain on the specific market, as a link, you can also find companies that carry out retail and wholesale sales, the number of which depends on the structure of the supply chain itself, that is, on the sales and distribution channels.

According to Lahane et al. (2020), supply chain integration is more often used in numerous literatures, because the term logistics cannot be said to represent the mutual relationship between organizations within a specific sector. Supply chain integration is a broader term than logistics and includes procurement, sales and the relationships that arise in these activities. In research whose subject includes the integration of supply chains, production companies that have a significant network of their business partners, both customers and suppliers, are most often taken as samples.

Tang et al. (2020), from the perspective of manufacturing companies, see logistics as an unproductive process. They state that logistics is a process in which solid distribution channels are established with a constant number of suppliers and customers. On the other hand, the modern way of doing business leads to the obsolescence of the logistics process, which makes it impossible to achieve a competitive advantage in the long term. In this way, manufacturing companies must not surrender to the established logistics process, but should reduce their dependence on a constant narrow number of suppliers and customers and find other opportunities for procurement processes, in accordance with their needs and market conditions. Also, modern business affects the markets, makes them more complex, which allows the logistics process to be applied in various forms. It leads to the fact that one company can be a participant in the market at the same time, and in different market relations. Also, one company can be a participant in several different supply chains, depending on the way of doing business, the diversity of its own products and services, and the established relationship with its business partners.

Goffnett (2018) explains the logistics process, which has recently been increasingly present in the industry and in various market segments, with the existence of a large number of market relations and various relations of participants within industrial supply chains. It distinguishes two supply chain groups, one of which is focused on the procurement process and establishing a good relationship with suppliers. Another group of supply chain focuses on fulfilling demand requirements and establishing a good relationship with customers. As in today's world, products and services should be "pulled" by current market requirements, rather than "pushed" towards customers, it is important to note that the achieved level of performance, which refers to the procurement of goods and their transport from the supplier to the customer, includes collection of data from retail (eng. point of sale) in real time. This ensures that data is effectively transmitted to all participants in the supply chain (Sekereza, 2009).

The impact of supply chain management on the performance of manufacturing companies

Supply chain management is a market concept that should meet the expectations of end consumers in a timely, expeditious and reliable manner. In today's world, competitive advantage in the market is achieved through supply chain management. Positioning on the competitive market is done according to the degree of satisfaction of the end consumers, that is, the competitive advantage will be achieved by the supply chain that most successfully satisfies the consumer's requirements.

An essential condition for realizing the competitive advantage of a certain supply chain in the market is that all participants of supply chains have excellent mutual communication and the same vision for the satisfaction of end consumers (Baske, 2012). Participants must follow the demands of consumers, examine what it is they want and how to make it possible for them. Due to the increasingly strong competition on the market and greater demands of users of products and services, communication between participants in the supply chain must be excellent, they must work harder on activities and ways to satisfy the demand of end consumers. The result of the success of the partners in the supply chain, in this regard, is viewed from the point of view of creating value for the end consumer. By adopting the principle of "the right product at the right place and at the right time", manufacturing companies decide to integrate their supply chains (Ilić & Tasić, 2021). The main goal of supply chain management involves adapting to market conditions, with the aim of reducing costs for manufacturing companies and generating value for end consumers.

According to Yang et al. (2019), it is necessary for participants in the supply chain to establish more frequent communication with end consumers, which will ensure an uninterrupted flow in both directions of the supply chain, thus fulfilling the basic goal of all market participants. Detailed analysis of all market requirements and their interpretation through the supply chain is considered a necessary step in supply chain management. Also, the analysis of market requirements is considered an important step, which implies the grouping of consumers according to the characteristics of the products and services offered on the market (Avakumović et al., 2021). Of extreme importance is to establish control over the ability of the supply chain to maintain a certain target market niche in the required manner. A market niche means a small part of the market, where the participants have similar characteristics and needs. Establishing control and monitoring activities creates a bridge that connects the production, organizational and marketing capabilities of the entire supply chain, including every supplier and customer in that chain. Masteika & Cepinskis (2015) claim that the vision of marketing should be implemented into logistical reality. Abbey & Guide (2018) define the design and organization of a supply chain, which could support its final products and services. Through the design and organization of the supply chain, the information about the requirements collected from the target market niches should serve to engage all participants in the satisfaction of those requirements. In recent years, significant attention from the front supply chain has been directed towards the back supply chain, i.e. from suppliers to customers, i.e. end consumers. Customers have the greatest power in the market in today's world and their demands and needs define the organization and structure of the supply chain. In this way, customers, i.e. end consumers put first. Numerous authors treat supply chain management as demand chain management (Jovanović, 2021).

Creating value in the supply chain

In addition to the continuous engagement of manufacturing companies in the plan of improving supply along the (eng. upstream) specific chain, manufacturing companies are also engaged in the plan of effective implementation of demand management down the (eng. downstream) value chain. The main goal for the parallel engagement of production companies is the existence of the need to correct the negative effects that information about market demand has on the performance of supply chains. This is achieved by establishing excellent communication with customers and developing cooperation between customers and suppliers. In today's world, manufacturing companies harmonize supply and demand processes by investing in reliable and credible information about real market needs (Bevanda et al., 2021). They do so, because there are negative consequences in future predictions of market demand, which is reflected in the existence of a larger or smaller required amount of inventory, slow procedures for solving inventory problems and the creation of higher costs for all transactions in the supply chain (Ivanova & Ristić, 2020). With the advent of the Internet and information technologies, production companies are enabled to have constant contact with customers, timely collection of information about their needs and the formation of databases, which will be used by all participants in a certain supply chain.

Manufacturing companies, by observing the demand line in a certain market, reduce the negative consequences that can arise in forecasting demand. Monitoring the demand line is carried out by establishing better cooperation with participants in the supply chain and mutual exchange of information between them, which must be accompanied by a change and reconstruction of internal capabilities in the company (Ilić et al., 2022). This means that any change in consumer preferences must be accompanied by a change in marketing strategy and demand management approaches. Numerous studies have shown that rapid adaptation of manufacturing companies to market demands provides a significant increase in profitability followed by growth in sales volume.

This is leading to a shift in the focus of supply chains, from their traditional approach of "pushing" products to consumers, to a "pulling" approach of products to demand. A product-pull approach to demand is aligned with market demands, meaning that demand information is sent upstream in supply chains. Through the process of distribution, production and procurement, information is sent to suppliers, who use the information obtained to produce various materials and parts and provide certain services. Constant use of this approach due to the passage of time reduces the need to forecast demand, i.e. using the "push" approach, which has numerous disadvantages. The response time to the demands of end consumers is a significant indicator of the success of the functioning of the supply chain, when applying the approach of "pulling" products to demand. Customers consider time to be the most important indicator, which is used to achieve a competitive advantage in the market. In the supply chain, manufacturing companies first decide on a supplier who can supply them with material and parts or provide service in the shortest possible time. Unlike manufacturing companies, instead of time, the brand of available products on the market will be an important indicator for the consumer to decide (Sekereza, 2009).

All supply chain participants should aim to increase response time and decrease overall business process time. A significant contribution to this goal is provided by the requirements of JIT (just in time) delivery and the pretentiousness of reducing the product life cycle. The degree of responsiveness to demand is considered the most important indicator of the quality of services provided in the supply chain. It is represented by the time for which the supplier is able to deliver products and services to customers in the market. Time is an important factor in a responsive supply chain, as it requires a manufacturing company to quickly adapt to market demands while reducing costs. Cost reduction is achieved by increasing turnover and reducing the average amount of inventory, acting to reduce downtime, breakdowns and losses (Gligor et al., 2016). In order to reduce costs and response time with better functionality and competitiveness, it is necessary to implement activities in the production company that affect the quality of product and service performance. An essential tool for achieving competitive advantage in the market, manufacturing companies emphasize supply chain management (Dubey et al., 2019). By continuously expanding and harmonizing relationships in the supply chain, manufacturing companies achieve a certain position in the competitive market. In order to reduce costs within a supply chain at the level of a manufacturing company and create value for its stakeholders, suppliers and customers emphasize that it is necessary to establish trust and mutual interaction between participants in the supply chain.

In order for manufacturing companies to meet the demands of their shareholders for the highest possible return on investment and at the same time the demands of consumers for the dominant value of the product, they are obliged to find ways to establish cost control throughout the supply chain. In the automotive or computer industry, up to 80% of product costs refer to those costs incurred in connection with the acquisition of resources. In order to reduce the share of these costs in the total costs of the product, it is necessary to increase the intensity of cooperation and establish excellent direct communication between participants in the supply chain, that is, between suppliers and customers during certain transactions. Communication between participants can also be through specialized organizations on the market, however, this causes a higher percentage of external costs, which are of particular importance for the competitive positioning of products and services on the market, and thus the positioning of the production companies themselves.

The most problematic part of positioning the products of companies in the same industry in the market is the analysis of supply chains in companies with identical activities, processes, customers and suppliers. In this regard, the study of all activities and processes requires building a sustainable competitive advantage. It is performed from the beginning to the end of the supply chain, that is, from the production of primary supplies and materials to their delivery and sale. It aims to create common products and services that will meet the demands of end consumers. Manufacturing companies understand the supply chain, which consists of a series of business activities, as a value-creating system, regardless of whether or not it creates value for customers. This can be explained by the example of a large manufacturing company, which is not able to perform all activities in one supply chain, although it was founded with the aim of providing numerous activities (research, development, production and distribution). However, in order to cover all activities, in one industry there may be a large number of smaller production companies whose activity is focused on performing only one activity.

Supply chain cost analysis

Based on what has been presented so far, we can conclude that the competitive advantage of a manufacturing company is conditioned by differentiation or cost reduction, which represent two main strategic directions of action. Since ancient times, Porter (1985) has pointed out that the factors of competitive advantage are reflected in the creation of conditions for providing greater value to customers at the same costs of the manufacturing company. Accordingly, the main goal of supply chain analysis involves identifying segments whose costs can be reduced and value increased. By identifying numerous causes of logistics costs and analyzing their operation, conditions are created for cost regulation and establishing a balance in relation to other factors of business success. We include flexibility, reliability, time and quality in these success factors of a manufacturing company. These factors contain activities that cause costs, and by changing the way they operate, conditions are created for strengthening the competitive advantage and profitability of a business company.

Comprehensive cost management, in addition to the process of identifying the industrial supply chain, involves identifying and examining ways to achieve competitive advantage. The process of determining and examining ways to achieve a competitive advantage is reflected in the improvement of the control of the success factors of the manufacturing company. Accordingly, the primary goal of a company's competitive advantage should be cost reduction with the ability to create value at an appropriate level.

According to the latest research conducted by Jain et al. (2020) a comprehensive cost analysis should create conditions for the production of value, that is, the reconstruction of activities that do not contribute to maintaining the quality of the value placed on the market. In this way, those activities in production companies that do not provide appropriate quality conditions and create unnecessary costs can be eliminated.

Connecting the procurement, production and distribution processes into one system, in which additional value is created for customers, so that they can buy products at the lowest prices, implies adequate cost management in the supply chain process (Zhou, 2017). This leads to the neglect of the traditional approach of monitoring material flows. It is very important to look at costs from a wider angle, as a situation that arises in all production companies, that is, with all participants in the supply chain. Costs do not arise within the walls of the company, but are widely distributed throughout all companies. Individual costs incurred in an individual manufacturing company affect the overall costs in the supply chain, as well as the products and services available on the market to end consumers. The value of available products and services in the market is obtained by calculating the cost value of all activities in the supply chain process. The special importance of cost monitoring and control is necessary in the conditions of a sudden increase in the application of the outsourcing strategy. In the case when all the traditional activities carried out within the manufacturing company are provided externally, there is a "blurring and erasing" of the business framework of the individual manufacturing company.

With the emergence of a holistic perspective of observing supply chains in the industry, there is an omission in the implementation of a number of business activities that affect the company's performance (Wolf, 2014). Manufacturing companies cannot be seen as individual entities in the market, because all participants in the supply chain are exposed to numerous risks (eg, a sudden decrease in income or an increase in costs).

Supply chain integration and the concept of value creation provide a good organizational basis for effective cost management, as well as a basis for formulating and implementing competitive strategies in the market (De Angelis et al., 2018). With the advent of information technology, numerous concepts were formed within a comprehensive strategic approach, such as activity based costing/management (ABC/ABM), total life cycle costing TLCC) and target cost management (Target cost management - TCM) (Goffnett, 2018).

Conclusion

The basic prerequisite for realizing the competitive advantage of a manufacturing company implies its comprehensive approach to costs. The most important measure of upgrading or preserving the value system of the product is reflected in the fact that production costs are not reduced to a minimum at the expense of impairing the quality of the product that is placed on the market. Accordingly, it can be pointed out that in the modern market, a monopolistic production company is not considered a company that sells the cheapest products by correcting the price based on the destruction of product functionality, but a production company that carefully and intelligently approaches the elimination of costs while preserving the basic value of the product. In addition to a comprehensive approach to costs, a company's competitive advantage also depends on knowing the consciousness of target customers. By analyzing the expectations of customers, it is seen that the intentional customer has a goal that is reflected in the purchase of products of adequate quality with which he will be able to satisfy his needs. On the other hand, this does not mean that the customer will buy an excessively expensive product, because today's customer assumes that the product has passed appropriate quality checks. It is wrong to conclude from this that the cheapest product will have a shorter path to the consumer basket without proper marketing. Bearing in mind the traditional approaches of competing companies, the marketing of a product of appropriate value with minimal production costs and the expectation of customers that the cheaper product has the appropriate quality, modern approaches should strive to unite these two approaches in a cooperative manner. In this way, the appropriate competitive advantage of the company can be ensured in modern conditions of strong competition and high expectations of customers.

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Tabele moraju biti formirane u tekstu rada, a ne preuzete u formi slika iz drugih materijala. Tabele unositi u sam tekst rada i numerisati ih prema redosledu njihovog pojavljivanja. Nazivi tabela moraju biti dati neposredno iznad tabele na koju se odnose. Koristite dole prikazani stil tokom njihovog formatiranja. Naslov tabela pisati sa razmakom 6 pt – iznad/before i 6pt – ispod/after, u fontu TNR, font size 12, ravnanje Justified. Tekst unutar tabela pisati fontom TNR, font size 9. Tekst u zaglavlju tabela boldirati. Izvor i potencijalne napomene pisati sa razmakom 6 pt ispod tabela (before). Izvore i napomene pisati u fontu TNR, font size 10, ravnanje Justified. Naredni pasus početi na razmaku od 6pt od izvora tabele ili napomene (after). Tokom pisanja rada u originalnom tekstu treba markirati poziv na određenu tabelu (*Table* 5.). Trudite se da se sve tabele u radu veličinom uklapaju u zadati format strane (Table properties – preferred width – max 97% - alignment: center). Sav tekst u poljima tabele treba unositi u formi (paragraph – spacing: before/after 0pt, line spacing: single). U slučaju da se tabela lomi na narednu stranicu, molimo Vas da prelomljeni deo tabele na narednoj stranici bude propraćen zaglavljem tabele.

Tabela 5. Troškovi distribucije dobara iz Subotice u maloprodajne objekte

Indikatori	**Period**			**Ukupno**
	Mesec 1	**Mesec 2**	**Mesec 3**	
Pređena razdaljina (km)	12.926	11.295	13.208	37.429
Korišćeno gorivo (litar)	3.231	2.823	3.302	9.356
Vrednost korišćenog goriva (RSD)	242.378	211.790	247.653	701.821
Ukupno provedeno vreme u vožnji (sati)	314	266	417	997
Vrednost ukupno provedenog vremena u vožnji (RSD)	47.048	39.890	62.570	149.508
Broj vožnji	98	77	102	277
Ukupna vrednost (RSD)	0	0	0	0
Broj prevezenih paleti (komad)	1.179	976	1358	3.513
Ukupna prevežena količina (kg)	602.600	429.225	711.116	1.742.941
Suma (RSD)	974.222	870.864	1.100.813	2.945.899

Izvor*:* Nikolić, 2010;

Napomena: Vrednosti u tabeli ne sadrže porez na dodatu vrednost (PDV)

Grafike, dendrograme, dijagrame, šeme i slike treba unositi u sam tekst rada (ne koristiti opciju Float over text) i numerisati ih prema redosledu njihovog pojavljivanja. Njihovi nazivi se moraju pozicionirati neposredno iznad grafika, dendrograma, dijagrama, šeme ili slike na koju se odnose. Kod navođenja naslova, izvora i napomena koristiti isti stil koji je predhodno prikazan za formiranje tabela. Tokom pisanja rada u originalnom tekstu treba markirati pozive na određeni grafik, dendrogram, dijagram, šemu ili sliku (Graph 2.). Svi grafici, dendrogrami, dijagrami, šeme i slike u radu se svojom veličinom moraju uklapati u zadati format strane, te moraju biti centralno postavljeni. Fotografije nisu poželjne u predmetnom radu, a ukoliko se one ne mogu izbeći molimo Vas da koristite optimalnu rezoluciju (preniska rezolucija dovodi do pikselacije i krzavih ivica, dok previsoka samo povećava veličinu fajla bez doprinosa čitljivosti rada).

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Literatura

1. Nikolić N., M. Marković, i P. Petrović. 2016. Poreski bilans. Oditor 2, (1): 13-17.

Prilikom unošenja literaturnih jedinica unosite korišćenjem **Čikaškog šablona za stil,** minimum 10 literaturnih jedinica. Sva korišćena literatura mora biti citirana u radu.

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Nik Holmes[46], John Peters[47]

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Table 5. The distribution cost

Indicators	Period			Total
	2013	2014	2015	
Fixed costs	12.926	11.295	13.208	37.429
Variable costs	3.231	2.823	3.302	9.356

Source: Nikolic, 2016;

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Literature

1. Vall J. 2014. Accounting theory. Valid, New York.
2. Parks D., W. Robberts. 2016. Macroeconomic indicators. Finance 23, (4): 462-476.