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SADRŽAJ ČASOPISA BROJ 02/2024

ANALIZA SAVREMENIH SISTEMA PLAĆANJA U SRBIJI I ZEMLJAMA REGIONA

Marko Savić[1], Nikola Pavlović[2], Miloš Milanović[3]

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Apstrakt

Razvojem Interneta i sve bržim napretkom informacionih tehnologija, elektronsko bankarstvo postaje dostupno svim klijentima, bez obzira na geografsku dislociranost. Ukoliko analiziramo tržište Republike Srbije možemo uvideti da su plaćanja eloktronskim putem manje razvijena u Srbiji u odnosu na zemlje regiona, a posebno u poređenju sa svetom. Predmet istraživanja biće upotreba elektronskih sistema plaćanja, mobilna plaćanja kao i komparativna analiza upotrebe istih u Republici Srbiji i zemljama regiona sa ciljem da se ukaže koje su to prednosti ovog vida plaćanja. U radu će se razmatrati i uticaj siistema elektronskih plaćanja kao i u kojoj meri su korisnici spremni da prihvate ove sisteme.

Ključne reči: *elektronska plaćanja, elektronski novac, mobilna plaćanja, troškovi*.

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Uvod

Plaćanja se više ne obavljaju samo tradicionalnim metodama, već su u ponudi i elektronski sistemi plaćanja. Sa napretkom računarske tehnologije i Interneta imamo ubrzan proces prenosa i obrade podataka i sve veću upotrebu mobilnih i elektronskih plaćanja.

Elektronsko poslovanje pruža usluge korisnicima koristeći benefite informacionih tehnologija. Razvojem elektronskog poslovanja je stvorena nova kategorija novca – elektronski novac, kao zamena gotovog novca, koji se čuva u elektronskoj ili magnetnoj formi. Elektronski novac je postao predmet brojnih diskusija nakon pojave Bitkoina, Eterijuma, Lajtkoina i drugih kriptovaluta. Pojam digitalnog novčanika je relevantan za većinu novih sistema digitalnog plaćanja. Digitalni novčanik je virtuelni sistem za skladištenje koji može da sadrži novac i digitalni sertifikat identiteta korisnika.

U skladu sa definisanim predmetom i ciljevima istraživanja, kao i postavljenim hipotezama: korisnici brže usvajaju mobilne sisteme plaćanja, nego elektronske sisteme plaćanja zasnovane na računarima, u radu će biti korišćene relevantne naučne metode za prikupljanje, analizu i interpretaciju podataka.

Pojmovne karakteristike elektronskih sistema plaćanja

Generalno, elektronska plaćanja predstavljaju oblik finansijske razmene između kupca i prodavca koja je olakšana sredstvima elektronske komunikacije. Elektronski sistemi plaćanja olakšavaju nam da nakon odluke kupaca da kupe proizvod ili uslugu, realizuju plaćanja kupaca prodavcima na najefikasniji, najbrži i najsigurniji način. Uloga sistema elektronskog plaćanja je ključna za budućnost e-trgovine, čiji dalji rast zavisi od blagovremenog razvoja ESP.

Uloga Interneta u razvoju elektronskog poslovanja

Online poslovanje, poznato i kao e-poslovanje ili elektronska trgovina, odnosi se na obavljanje poslovnih transakcija putem Interneta, što uključuje razmenu informacija o vrednosti u obliku proizvoda i usluga, kao i plaćanja, koristeći Internet tehnologije. Upotreba Interneta uslovila je nastanak digitalne ekonomije, koja predstavlja savremeni oblik privređivanja zasnovan na digitalnim tehnologijama i upotrebi informaciono-komunikacionih tehnologija i Interneta u svim oblastima ekonomije.

Informacije koje se mogu pronaći putem Interneta imaju važnu ulogu u donošenju odluka kako proizvođača, tako i potrošača. Ponašanje potrošača je uvek bio pod uticajem dostignuća u informaciono-komunikacionim tehnologijama. Internet i društvene mreže su značajno promenile način na koji pojedinci planiraju proizvodnju ili kupovinu određenih proizvoda ili usluga. Korišćenje Interneta i društvenih medija fundamentalno menja način sprovođenja poslovanja. Svi učesnici u poslovanju su više informisani, povećava se međusobna saradnja i otvaraju se nove mogućnosti za unapređenje poslovanja. Korisnici Interneta mogu da pretražuju ponudu, da se informišu o kvalitetu proizvoda ili usluge pomoću predstavljenih informacija, mogu da se informišu o načinu kupovine i korišćenja proizvoda, kao i da ugovore i plate kupovinu.

Pružanjem informacija o proizvodu ili usluzi organizacije na Internetu i mogućnosti rezervacije i ugovaranja prodaje, organizacije usklađuju svoj model poslovanja u skladu sa potrebama i očekivanjima nove generacije potrošača. Argumenti zašto organizacije koriste Internet i društvene medije u svom poslovanju su: mogućnost targetiranja, merljivost, pristupačnost i niska cena.

Karakteristike i trendovi razvoja online poslovanja

Online poslovanje ispoljava određene karakteristike kada se poredi sa tradicionalnim poslovanjem. Mogu se navesti sledeće: promene u odnosu prodavac – kupac, povećana brzina, udaljenost više nije bitan parametar, globalno tržište, smanjenje vremenskih disproporcija, veština upravljanja je ključ uspeha, otvorenost, interdisciplinarnost i zaštita intelektualne svojine.

Jedan od segmenata razvoja online poslovanja upravo je razvoj elektronske trgovine. To je revolucionaran i savremen način obavljanja trgovinskih aktivnosti, koji se zasniva na korišćenju informacionih i komunikacionih tehnologija. Shodno tome, najjednostavnije se može objasniti kao kupovina i prodaja robe i usluga koja se odvija uz značajnu primenu savremenih, informaciono-komunikacionih tehnologija. Dinamičan razvoj elektronske trgovine počinje početkom devedesetih godina 20. veka, pod velikim uticajem otvaranja Interneta. Amazon.com je bio jedan od prvih sajtova za e-trgovinu u SAD, koji je započeo prodaju proizvoda na mreži. Nakon toga su kompanije u velikoj meri počele da posluju na ovaj način. Ozbiljniji začeci elektronske trgovine registrovani su nakon 1997. godine, kada mnogeorganizacije u svoj fokus poslovne primene Interneta stavljaju prodaju proizvoda, a ne samo promociju. Od 2000. godine kada je Internet postao dominantan poslovni kanal elektronske trgovine, organizacije akcenat stavljaju na smanjenje troškova poslovanja na Internetu i posmatraju kako Internet utiče na njihovu profitabilnost.

O dinamičnom rastu globalne elektronske trgovine svedoči i podatak da je prosečna godišnja stopa rasta elektronske trgovine u svetu 24,8%. Potencijal elektronske trgovine za dalji dinamičan razvoj nalazi se u koristima koje dolaze od primene ovog poslovnog koncepta, pre svega smanjenje troškova, u raznim segmentima poslovanja od nabavke i skladištenja do troškova poslovne komunikacije. Online kupovina je jedna od najpopularnijih online aktivnosti širom sveta, a sam obim elektronske trgovine razlikuje od zemlje do zemlje. Današnje poslovanje i izvršavanje plaćanja u velikoj meri se oslanja na tehnologiju kako bi olakšalo komunikacioni proces. U stvari, mnoge tehnologije koje se koriste u privatnom životu, takođe se koriste i u poslovanju. Gotovo je izvesno da su neki aspekti današnje globalizacije nezaustavljivi, kao što je to slučaj sa razvojem Interneta i opštom primenom informacionih tehnologija u svim aspektima društvenog i poslovnog života, pa tako i u sferi online poslovanja i elektronske trgovine.

Mobilna plaćanja i elektronski novac

Zahvaljujući sve većoj upotrebi online kupovine, sistemi plaćanja putem interneta postaju dominantan oblik plaćanja. Može se uočiti trend rasta plaćanja putem mobilnih telefona, pri čemu pametni telefoni u potpunosti preuzimaju funkciju tradicionalnog novčanika: u telefonima se mogu čuvati podaci o karticama, lična dokumenta, elektronski novac i sl. Pojedini elektronski sistemi plaćanja su projektovani kao elektronske verzije tradicionalnih platnih sistema, dok su napredniji sistemi zasnovani na razmeni digitalnih informacija i imaju snažan uticaj na dalji razvoj finansijskih i monetarnih sistema.

Elektronski novac

U sistemima elektronskih plaćanja se sve više koristi elektronski novac, koji se u literaturi može naći pod različitim nazivima: digitalni novac, e – novac, sajber novac, i slično. Elektronski novac predstavlja zamenu za gotov novac, s tom razlikom što se čuva u elektronskoj ili magnetnoj formi – na čipu, serveru ili platnoj kartici. Ključni elementi elektronskog novca se odnose na višenamenski karakter upotrebe (elektronski novčanik) i unapred izvršenu uplatu određene kupovne snage (pre – paid kartice).

Francuski autor Robert Guttmann razdvaja kategorije elektronskog i tzv.sajber novca. Pod elektronskim novcem podrazumeva sve kategorije plaćanja u kojima se koriste kanali zasnovani na internet tehnologijama (internet, POS terminali) u kombinaciji sa platnim karticama, dok pod sajber novcem podrazumeva „elektronske novčanike“ (kartice sa pre – paid uplaćenom monetarnom vrednošću) i softverski novac kojim se raspolaže isključivo preko softvera instaliranog na računaru. Određeni autori ističu posebnu kategoriju virtuelnog novca, koji se odnosi na valutu koja je dostupna samo članovima određenog zatvorenog sistema.Virtuelni novac nije namenjen za korišćenje u stvarnom svetu, odnosno ne koristi se za kupovinu realnih dobara ili usluga, već predmet trgovine ima virtuelni karakter kao i sam novac (npr. video igre).Sve virtuelne valute su centralizovane, a kontrola nad novčanim snabdevanjem se nalazi u rukama programera virtuelnog sveta.

Mobilna plaćanja

Mobilni telefoni su u upotrebi širom sveta, pri čemu najveći broj predstavljaju takozvani pametni (eng. smart) telefoni. Oni su usvojili određene funkcije računara, pružaju mogućnost njihovog svakodnevnog korišćenja, uključujući brzi pristup Internetu, upotrebu Wi-Fi i mobilne mreže.

Uprkos mnogobrojnim prednostima, postoje i rizici sa kojima se suočavaju mobilni uređaji. Ovi rizici uključuju ograničenja vezana za probleme opsega, pitanja sigurnosti, ometanja prenosa, pretpostavke moći, kao i niz drugih sličnih stavki. Primarna ograničenja povezana sa opsegom i propusnim opsegom mogu se pripisati činjenici da su mreže dostupne pomoću mobilnih uređaja uglavnom ograničene na niz komercijalnih mreža. Glavna pretnja povezana sa mobilnim uređajima odnosi se na bezbednosna pitanja.

Najznačajnija tehnologija kod mobilnog telefona je tzv. inteligentna kartica (eng. smart card) koja predstavlja osnovu za sve osnovne usluge i protokole koje pruža kako operater mobilne mreže tako i dodatne usluge koje pružaju treći subjekti. Inteligentna kartica omogućava upotrebu više sistema koji se bave organizacijom mobilnih plaćanja, kao i integrisanu upotrebu različitih elektronskih tehnologija.

Istraživanje mobilnih plaćanja privuklo je značajnu pažnju među stručnjacima u njihovom nastojanju da objasne logičnost o tome kako provajderi mobilnih plaćanja inoviraju i konkurišu na tržištu. Mobilni operateri imaju ključnu ulogu u procesu mobilnog plaćanja. Međutim, akcije drugih tržišnih aktera (regulatora, finansijskih institucija, proizvođača uređaja, trgovaca), kao i tržišni faktori (dostupna mreža, bankarstvo, trgovačka i potrošačka tehnologija, zakonodavstvo, navike korišćenja platnih instrumenta) mogu uticati na pružaoce usluga i druge aktere na tržištu. Dakle, ovaj okvir omogućava proučavanje načina na koji različite strateške opcije mogu uticati na konkurentsku poziciju aktera ili performanse čitavog tržišta. Kontingentni faktori utiču na sistematski način na aktere i tržište, ali su van direktnog uticaja i kontrole bilo kojeg tržišnog aktera. Teorija kontingencije je od suštinskog značaja za istraživanje razlika između tržišta mobilnih plaćanja (posebno različitih zemalja). U novijim studijama, ova pitanja su uglavnom ugrađena u strategiju i studije ekosistema, koji se koristi kao sinonim za "tržište m-plaćanja i provajdera".

Operateri mobilnih mreža značajno su uložili u poboljšanje komunikacije i razvoj novih tehnologija i usluga, usled čega je došlo do povećanja korisnika mobilnih telefona i njihove upotrebe za obavljanje platnih transakcija. Pored toga, došlo je do povećanje broja i kvaliteta bankarskih usluga pruženih putem Interneta, što je dodatno uticalo na snažan rast mobilnog bankarstva. Mobilno bankarstvo se posmatra kao model e-poslovanja banaka i operatora koji koriste mobilne telekomunikacione mreže kako bi pružili bankarske usluge klijentima i putem njihovih mobilnih uređaja. Ovaj model omogućava plaćanje putem mobilnog bankarstva, kontrolu bilansa računa, uzimanje kredita i niz drugih finansijskih usluga i transakcija.

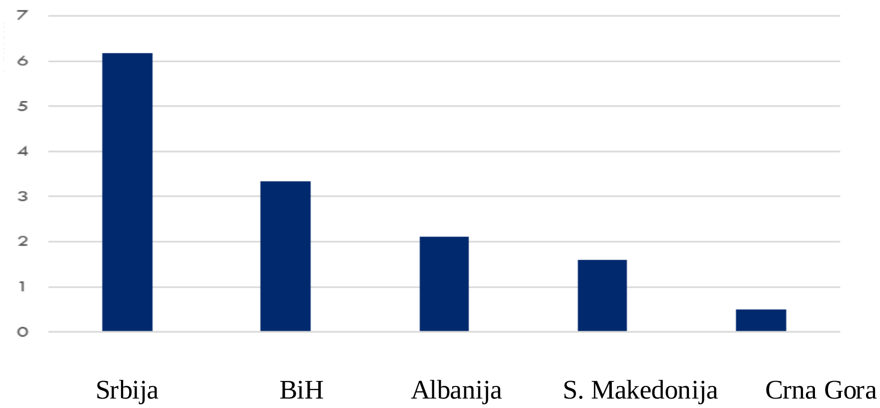
Mobilno bankarstvo ima veliki potencijal primene. Savremeni stil života je nezamisliv bez mobilnog telefona, a promene koje uvodi e-poslovanje bankarskih sistema podstiču razvoj mobilnih aplikacija za korišćenje usluga mobilnog bankarstva. Uzimajući u obzir broj korisnika mobilnih telefona, kao i mogućnosti koje oni pružaju, ne iznenađuje činjenica da se mobilna platforma široko koristi za elektronska plaćanja.

Upotreba i analiza savremenih sistema plaćanja u Srbiji i zemljama regiona

Sa svojom malom populacijom, relativno niskim prihodima i velikom neformalnom ekonomijom, zemlje regiona nisu najbolje okruženje za negovanje e-trgovine. Keš je i dalje kralj na ovom prostoru. Međutim, broj bezgotovinskih transakcija polako raste. Veliki izazov za online plaćanja u zemljama Zapadnog Balkana odnosi se na visoke troškove obrade transakcija — naknade za procenu kartice su do četiri puta veće nego u EU. Centralne banke su najavile planove za usklađivanje domaćih politika sa propisima EU, što bi moglo dovesti do liberalizacije tržišta i nižih transakcionih troškova.

Internet je u širokoj upotrebi u Srbiji, iako zemlja zaostaje za razvijenim zapadnoevropskim nacijama. Kako navodi Statista, očekivani broj korisnika interneta do naredne godine dostići će 86,21%. Kada je reč o apsolutnom broju, Srbija prednjači u regionu. U relativnom smislu, BiH i Crna Gora su ipak lideri. Srbija prednjači u regionu Zapadnog Balkana i po apsolutnom i po relativnom broju ljudi koji kupuju preko interneta.

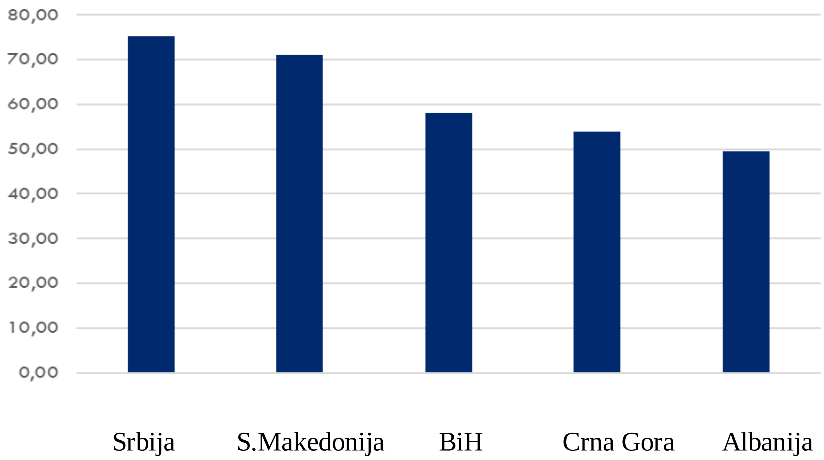
Grafik 1. Broj internet korisnika u zemljama regiona u milionima



Izvor: USAID, MASIT, STIKK, ICT NETWORK, *E-commerce ine Serbia: Increasing your sales through online and e-commerce solutions*, доступно на: https://masit.org.mk/wp-content/uploads/2021/09/digital-trasformation-serbia.pdf (05. 03. 2023.)

Prema UNCTAD B2C E-commerce Index Srbija je 2020. godine na 43. Mestu što je napredak u odnosu na prethodnu godinu kada je Srbija bila za jedno mesto lošije rangirana. Iza Srbije su sve ostale zemlje regiona a najlošije rangirana je Albanija.

Grafik 2. E-commerce Index za zemlje regiona



Izvor: USAID, MASIT, STIKK, ICT NETWORK, *E-commerce ine Serbia: Increasing your sales through online and e-commerce solutions*, доступно на: https://masit.org.mk/wp-content/uploads/2021/09/digital-trasformation-serbia.pdf (05. 03. 20223.)

Pandemija je dala podsticaj razvoju e-trgovine na Zapadnom Balkanu, kao i drugde, pošto su bile zatvorene prodavnice koje nisu neophodne.Ukupan broj online transakcija se udvostručio u jednoj godini zahvaljujući pandemiji, a očekuje se da će nivo ostati visok i u narednim godinama.

Mnoge prepreke utiču na elektronsku trgovinu u regionu. Ključno ograničenje za razvoj elektronskog tržišta je nedovoljno poverenja u online prodavnice, što je navelo tri četvrtine ispitanika na Zapadnom Balkanu. Predstavnici albanskih kompanija za e-trgovinu rekli su istraživačima Svetske banke da velika neformalna ekonomija takođe predstavlja ograničenje za razvoj formalne digitalne ekonomije. Neformalna ekonomija je problem u celom regionu, što pokazuje nedavna studija Centra za politiku i upravljanje iz Sarajeva, koja je procenila veličinu sive ekonomije na oko 30% BDP-a u Bosni, Crnoj Gori i Srbiji. U Severnoj Makedoniji, analiza koju je sprovela asocijacija za e-trgovinu pokazala je da je najveći izazov za sektor nizak nivo digitalnih veština među stanovništvom, ali je još jedan problem pronalaženje odgovarajućeg kadra. E-prodavci smatraju da su barijere za razvoj e-trgovine: nizak nivo svesti potrošača o onlajn kupovini (79%); nepoverenje u onlajn kupovinu (79%); nizak nivo digitalnih veština među kupcima (65%); i nelojalna konkurencija od strane neregistrovanih trgovaca i sive ekonomije (55%). Slede bankarski uslovi i procedure e-trgovine (39%); sistem plaćanja i nedovoljna upotreba platnih kartica (31%); mala ponuda na tržištu domaćih preduzeća (26%); i visoke naknade banaka za onlajn plaćanja (24%); sa bezbednosnim problemima na poslednjem mestu na listi (23%).

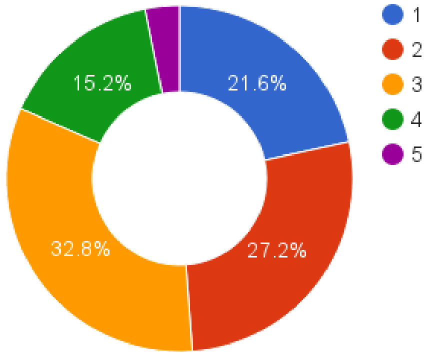
Da bi ukazali u kojoj meri su kupci u Republici Srbiji i zemljama regiona spremni da se preusmere na elektronska plaćanja, obavili smo istraživanje na uzorak od 100 ispitanika, gde smo do podataka došli elektronskim putem, metodom anketiranja. Vodilo se računa o podjednakoj zastupljenosti kupaca iz 5 zemalja, uključujući i Srbiju, različitih starosnih kategorija, nivoa obrazovanja i nivoa mesečnih primanja. U sledećoj tabeli su predstavljena pitanja na koja su pojedinci davali odgovore i prosečna ocena po pitanju.

Tabela 2. Prosečna ocena po pitanju

Pitanje	Prosečna ocena
Lakoća korišćenja	
1. Elektronska plaćanja su složena za upotrebu.	2,51
Sigurnost	
2. Ukoliko bi se povećala bezbednost sistema elektronskih plaćanja, to bi povećalo njihovu upotrebu.	3,82
Poverenje	
3. Smanjenje sigurnosti prenosa velikih količina novca elektronskim putem.	3,4
Primenjivost	
4. Spektar usluga koje nudi jedan sistem placanja utiče na njegovu primenjivost.	3,52
Pouzdanost	
5. Koristila/o bih elektronske sisteme plaćanja ako drugi korisnici pre mene nisu imali problema.	3,53
Privatnost	
6. Brine me što druge kompanije ili institucije mogu doći do podataka o istoriji mojih plaćanja.	3,14
Anonimnost	
7. Elektronski sistemi plaćanja dodatno narušavaju privatnost koja je već narušena upotrebom interneta.	3,29
Konvertibilnost	
8. Ako bi upotreba elektronskih sistema plaćanja omogućila da plaćam u različitim valutama, to bi povećalo moju želju da ih koristim.	3,22
Troškovna efikasnost	
9. Ako je neko plaćanje jeftinije uz upotrebu elektronskih sistema plaćanja, to bi povećalo moju želju da ih koristim.	4,12

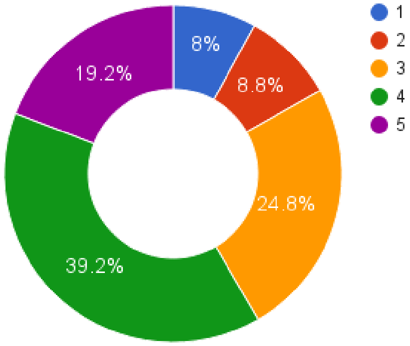
Na sledećih par grafikona su prikazane ocene ispitanika najbitnijih karakteristika elektronskih sistema plaćanja po autorima ovog rada, gde se sagledala složenost korišćenja elektronskih sistema plaćanja, iskustvo drugih prilikom korišćenja elektronskih sistema plaćanja, kao i naknada za korisnike ovih sistema plaćanja.

Grafik 3. Ocena složenosti upotrebe elektronskih sistema plaćanja



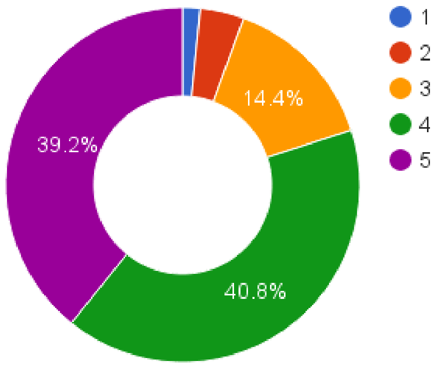
Jedna petina ispitanika smatra da elektronski sistemi plaćanja uopšte nisu komplikovani za korišćenje. Trećina ispitanika je neutralnog mišljenja, što znači da su indiferentni prema tome da li će plaćanja izvršiti nekim instrumentom elektronskog plaćanja ili gotovinom.

Grafik 4. Uticaj iskustva drugih na korišćenje elektronkih sistema plaćanja



Na osnovu prikupljenih podataka se može zaključiti da je većini ispitanika (58.4%) bitno da ljudi koji su pre njih koristili određeni sistem plaćanja imaju pozitivno iskustvo u pogledu funkcionisanja tog sistema. Poseban značaj će za njih imati preporuka koju su dobili od bliskih prijatelja ili od ljudi koje oni smatraju kompetentnim za tu oblast. Za razliku od njih za 8.8% ispitanika uopšte nije bitno mišljenje drugih, već će određeni elektronski sistem plaćanja koristiti ukoliko njima pruža uslove koje traže.

Grafik 5. Porast korišćenja elektronskih sistema plaćanja zbog manjih naknada za korisnika



Veliki broj ispitanika je spreman da koristi elektronske sisteme plaćanja ukoliko je naknada za korišćenje ovakvih sistema niža u odnosu na tradicionalne sisteme plaćanja. Jedan mali deo ispitanika je cenovno indiferentan u odnosu na naknadu za ovaj vid plaćanja i oslanja se isključivo na korišćenje gotovine.

Zaključak

Korišćenjem elektronskih sistema plaćanja ostvaruju se niži operativni troškovi, smanjenje sive ekonomije, razvoj novih platnih sistema. Korisnicima su usluge elektronskog bankarstva dostupne u svako doba i na svakom mestu, što smanjuje vreme i naknade za izvršavanje transakcija, čime se svakako povećava motivisanost za korišćenje elektronskih sistema plaćanja kako u Srbiji tako i u zemljama regiona.

S obzirom da je dan bez mobilnog telefona u modernom vremenu nezamisliv, prirodno je što je mobilni telefon zauzeo posebno mesto u oblasti elektronskih plaćanja. Generacije rođene u informatičko doba postaju platežno sposobni, pa samim tim će se upotreba elektronskih sistema plaćanja, naročito upotrebom mobilnih telefona, kretati uzlaznom putanjom.

Revoluciju u elektronskom bankarstvu predstavlja pojava elektronskog novca. Što se tiče Republike Srbije, donošenjem Zakona o platnim uslugama načinjen je korak napred u usklađivanju zakonodavstva Srbije sa evropskim pravnim odredbama, jer obezbeđuje pravni okvir za osnivanje i poslovanje platnih institucija i institucija elektronskog novca, kao i za zaštitu prava i interesa korisnika platnih usluga i imalaca elektronskog novca.

U radu je potvrđena prva hipoteza istraživanja, a to je da korisnici brže usvajaju mobilne sisteme plaćanja nego elektronske sisteme plaćanja zasnovane na računarima. Sve ovo se zasniva na odgovorima ispitanika u vezi korišćenja sistema elektronskih plaćanja. Više od polovine ispitanika više koristi plaćanja putem mobilnih telefona nego plaćanja zasnovane na računarima. Mobilni sistemi plaćanja su korisnicima postali način na koji redovno izmiruju svoja dugovanja, i koriste ih najčešće nekoliko puta mesečno. Porast informatičke pismenosti srazmerno povlači povećanje broja korisnika mobilnih sistema plaćanja, što u krajnjoj meri doprinosi povećanju upotrebe savremenih elektronskih sistema plaćanja u Srbiji i u zemljama u okruženju.

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ANALYSIS OF MODERN PAYMENT SYSTEMS IN SERBIA AND COUNTRIES IN THE REGION

Marko Savić[4], Nikola Pavlović[5], Miloš Milanović[6]

Abstract

With the development of the Internet and the increasingly rapid progress of information technologies, electronic banking becomes available to all clients, regardless of geographical location. If we analyze the market of the Republic of Serbia, we can see that electronic payments are less developed in Serbia compared to the countries of the region, and especially compared to the world. The subject of the research will be the use of electronic payment systems, mobile payments, as well as a comparative analysis of their use in the Republic of Serbia and the countries of the region with the aim of showing the advantages of this form of payment. The paper will consider the impact of electronic payment systems as well as the extent to which users are ready to accept these systems.

Keywords: *electronic payments, electronic money, mobile payments, expenses.*

Introduction

Payments are no longer made only by traditional methods, but electronic payment systems are also on offer. With the advancement of computer technology and the Internet, we have an accelerated process of data transmission and processing and an increasing use of mobile and electronic payments.

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Electronic business provides services to users using the benefits of information technology. The development of electronic business has created a new category of money - electronic money, as a substitute for cash, which is stored in electronic or magnetic form. Electronic money has become the subject of many discussions after the emergence of Bitcoin, Ethereum, Litecoin and other cryptocurrencies. The term digital wallet is relevant to most of new digital payment systems. A digital wallet is a virtual storage system that can contain money and a user's digital identity certificate.

In accordance with the defined subject and objectives of the research, as well as the set hypotheses: users adopt mobile payment systems faster than electronic payment systems based on computers, relevant scientific methods for data collection, analysis and interpretation will be used in the study.

Conceptual characteristics of electronic payment systems

In general, electronic payments are a form of financial exchange between a buyer and a seller that is facilitated by means of electronic communication. Electronic payment systems make it easier for us, after the customers' decision to buy a product or a service, to realize payments from customers to sellers in the most efficient, fastest and safest way. The role of the electronic payment system is crucial for the future of e-commerce, whose further growth depends on the timely development of EPS.

The role of the Internet in the development of electronic business

Online business, also known as e-business or electronic commerce, refers to conducting business transactions over the Internet, which includes the exchange of information of value in the form of products and services, as well as payments, using Internet technologies. The use of the Internet caused the emergence of the digital economy, which represents a modern form of economy based on digital technologies and the use of information and communication technologies and the Internet in all areas of the economy.

Information that can be found via the Internet plays an important role in decision-making by both producers and consumers. Consumer behavior has always been influenced by advances in information and communication technologies. The Internet and social networks have significantly changed the way individuals plan to produce or purchase certain products or services. The use of the Internet and social media is fundamentally changing the way business is conducted. All participants in business are more informed, mutual cooperation increases and new opportunities for business improvement are opened. Internet users can search the offer, get information about the quality of the product or service using the presented information, they can get information about the way how to buy and use the product, as well as contract and pay for the purchase.

By providing information about the organization's product or service on the Internet and the possibility of booking and contracting sales, organizations adjust their business model in accordance with the needs and expectations of a new generation of consumers. Reasons why organizations use the Internet and social media in their business are: the possibility of targeting, measurability, accessibility and low cost.

Characteristics and trends of online business development

Online business demonstrates certain characteristics when compared to traditional business. The following can be mentioned: changes in the seller-buyer relationship, increased speed, distance is no longer an important parameter, global market, reduction of time disproportions, management skill is the key to success, openness, interdisciplinarity and protection of intellectual property.

One of the segments of the development of online business is the development of electronic commerce. It is a revolutionary and modern way of performing trade activities, which is based on the use of information and communication technologies. Accordingly, it can be simply explained as the purchase and sale of goods and services that takes place with the significant application of modern information and communication technologies. The dynamic development of electronic commerce began in the early nineties of the 20th century, under the great influence of the opening of the Internet. Amazon.com was one of the first e-commerce sites in the US to start selling products online. After that, companies started doing business in this way to a large extent. The more serious beginnings of electronic commerce were registered after 1997, when many organizations put the sale of products, not just promotion, in the focus of their business application of the Internet. Since 2000, when the Internet became the dominant business channel for electronic commerce, organizations have been focusing on reducing the costs of doing business on the Internet and observing how the Internet affects their profitability.

The dynamic growth of global e-commerce is evidenced by the fact that the average annual growth rate of e-commerce in the world is 24.8%. The potential of electronic commerce for further dynamic development is found in the benefits that come from the application of this business concept, primarily cost reduction, in various business segments, from procurement and storage to business communication costs. Online shopping is one of the most popular online activities around the world, and the volume of e-commerce varies from country to country. Today's business and payment processing relies heavily on technology to facilitate the communication process. As the matter of fact, many technologies used in personal life are also used in business. It is almost certain that some aspects of today's globalization are unstoppable, such as the development of the Internet and the general application of information technologies in all aspects of social and business life, including online business and electronic commerce.

Mobile payments and electronic money

Thanks to the increasing use of online shopping, online payment systems are becoming the dominant form of payment. A growing trend of payments via mobile phones can be observed, whereby smartphones completely take over the function of a traditional wallet: card data, personal documents, electronic money, etc. can be stored in the phones. Certain electronic payment systems are designed as electronic versions of traditional payment systems, while more advanced systems are based on the exchange of digital information and have a strong influence on further development of financial and monetary systems.

Electronic money

Electronic money is increasingly used in electronic payment systems, which can be found in the literature under different names: digital money, e-money, cyber money, and etc. Electronic money is a substitute for cash, with the difference that it is stored in electronic or magnetic form - on a chip, server or payment card. The key elements of electronic money are related to the multi-purpose character of use (electronic wallet) and prepayment of a certain purchasing power (pre-paid cards).

French author Robert Guttmann separates the categories of electronic and so-called cyber money. Electronic money means all categories of payments in which channels based on Internet technologies (internet, POS terminals) are used in combination with payment cards, while cyber money means "electronic wallets" (cards with pre-paid monetary value) and software money which is available exclusively through the software installed on the computer. Certain authors highlight a special category of virtual money, which refers to currency that is available only to members of a certain closed system. Virtual money is not intended for use in the real world, i.e. it is not used to buy real goods or services, but the object of trade has a virtual character as money itself (eg. video games). All virtual currencies are centralized, and control over the money supply is in the hands of the developers of the virtual world.

Mobile payments

Mobile phones are in use all over the world, with the largest number being the so-called smart phones. They have adopted certain functions of computers, offer the possibility of their daily use, including fast access to the Internet, use of Wi-Fi and mobile networks.

Despite many advantages, there are also risks that mobile devices face. These risks include limitations related to range issues, security issues, transmission interference, ability assumptions, and a variety of other similar issues. The primary limitations associated with range and bandwidth can be attributed to the fact that the networks accessible by mobile devices are generally limited to a range of commercial networks. The main threat associated with mobile devices is related to security issues.

The most important technology in mobile phones is the so-called intelligent card (eng. smart card) which represents the basis for all basic services and protocols provided by the mobile network operator, as well as additional services provided by the third parties. The intelligent card enables the use of multiple systems dealing with the organization of mobile payments, as well as the integrated use of various electronic technologies.

Mobile payments research has attracted considerable attention among experts in their efforts to explain the rationale behind how mobile payment providers innovate and compete in the marketplace. Mobile operators play a key role in the mobile payment process. However, the actions of other market actors (regulators, financial institutions, device manufacturers, merchants), as well as market factors (available network, banking, merchant and consumer technology, legislation, habits of using payment instruments) can affect service providers and other market actors. Thus, this framework allows for the study of how different strategic options can affect the competitive position of actors or the performance of the entire market. Contingent factors affect actors and the market in a systematic way, but are beyond the direct influence and control of any market actor. Contingency theory is essential to explore the differences between mobile payment markets (especially different countries). In recent studies, these questions have been mainly embedded in ecosystem strategy and studies, which is used as a synonym for "m-payment market and providers".

Mobile network operators have invested significantly in improving communication and developing new technologies and services, as a result of which there has been an increase in the number of mobile phone users and their use for payment transactions. In addition, there was an increase in the number and quality of banking services provided via the Internet, which additionally influenced the strong growth of mobile banking. Mobile banking is seen as an e-business model of banks and operators that use mobile telecommunication networks to provide banking services to clients and through their mobile devices. This model enables payment via mobile banking, checking account balances, taking loans and a number of other financial services and transactions.

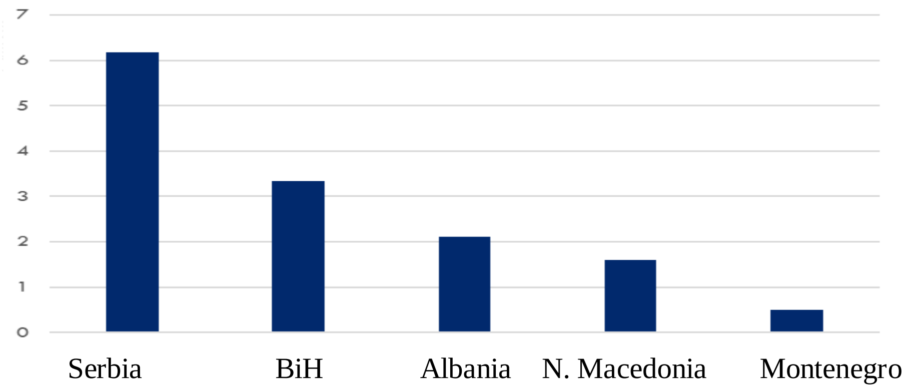
Mobile banking has great application potential. The modern lifestyle is unthinkable without a mobile phone, and the changes introduced by e-business banking systems encourage the development of mobile applications for using mobile banking services. Bearing in mind the number of mobile phone users, as well as the possibilities they provide, it is not surprising that the mobile platform is widely used for electronic payments.

Use and analysis of modern payment systems in Serbia and the countries of the region

With their small populations, relatively low incomes and large informal economies, the countries of the region are not the best environment for nurturing e-commerce. Cash is still king in this space. However, the number of cashless transactions is slowly increasing. A major challenge for online payments in the Western Balkans is the high cost of processing transactions — card evaluation fees are up to four times higher than in the EU. Central banks have announced plans to harmonize domestic policies with EU regulations, which could lead to market liberalization and lower transaction costs.

The Internet is widely used in Serbia, although the country lags behind developed Western European nations. According to Statista, the expected number of Internet users by next year will reach 86.21%. When it comes to the absolute number, Serbia is leading in the region. In a relative sense, Bosnia and Herzegovina and Montenegro are still the leaders. Serbia is leading in the Western Balkans region both in terms of absolute and relative number of people who shop online.

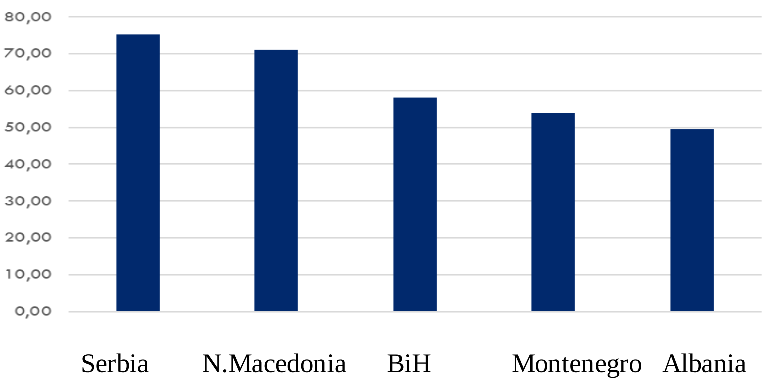
Graph 1. Number of Internet users in the countries of the region in millions



Source: USAID, MASIT, STIKK, ICT NETWORK, *E-commerce in Serbia: Increasing your sales through online and e-commerce solutions*, available on: https://masit.org.mk/wp-content/uploads/2021/09/digital-trasformation-serbia.pdf (05. 03. 2023.)

According to the UNCTAD B2C E-commerce Index, Serbia was in 43rd place in 2020, which is an improvement compared to the previous year, when Serbia was ranked one place lower. All the other countries of the region are behind Serbia, and Albania is ranked the worst.

Graph 2. E-commerce Index for the countries of the region



Source: USAID, MASIT, STIKK, ICT NETWORK, *E-commerce in Serbia: Increasing your sales through online and e-commerce solutions*, available on: https://masit.org.mk/wp-content/uploads/2021/09/digital-trasformation-serbia.pdf (05. 03. 20223.)

The pandemic gave a stimulus to the development of e-commerce in the Western Balkans, as well as elsewhere, as non-essential shops were closed. The total number of online transactions doubled in one year thanks to the pandemic, and the level is expected to remain high in the coming years.

Many obstacles affect e-commerce in the region. A key limitation for the development of the electronic market is insufficient trust in online stores, as stated by three quarters of respondents in the Western Balkans. Representatives of Albanian e-commerce companies told the World Bank researchers that the large informal economy is also a constraint to the development of the formal digital economy. The informal economy is a problem throughout the region, as shown by a recent study by the Center for Policy and Management from Sarajevo, which estimated the size of the grey economy at around 30% of GDP in Bosnia, Montenegro and Serbia. In North Macedonia, an analysis conducted by the e-commerce association showed that the greatest challenge for the sector is the low level of digital skills among the population, but another problem is finding the right staff. E-sellers believe that the barriers to the development of e-commerce are: low level of consumer awareness of online shopping (79%); mistrust in online shopping (79%); low level of digital skills among customers (65%); and unfair competition from unregistered traders and the shadow economy (55%). This is followed by banking conditions and e-commerce procedures (39%); payment system and insufficient use of payment cards (31%); small offer on the market of domestic companies (26%); and high bank fees for online payments (24%); with security issues last on the list (23%).

In order to indicate the extent to which customers in the Republic of Serbia and the countries of the region are ready to switch to electronic payments, we conducted research on a sample of 100 respondents, where we obtained the data electronically, using the survey method. It was taken care to ensure equal representation of customers from 5 countries, including Serbia, of different age categories, education levels and monthly income levels. The following table presents the questions to which individuals gave answers and the average score per question.

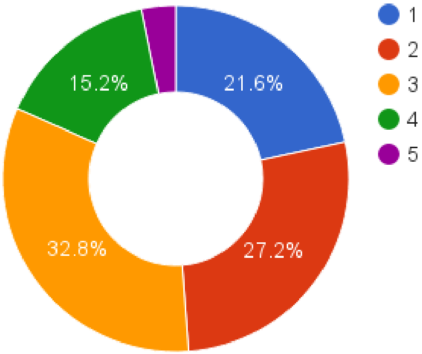
Table 2. Average grade per question

Question	Average grade
Ease of use	
1. Electronic payments are complex to use.	2,51
Security	
2. If the security of electronic payment systems were increased, it would increase their use.	3,82
Confidence	
3. Decreasing the security of transferring large amounts of money electronically.	3,4
Applicability	
4. The spectrum of services offered by a payment system affects its applicability.	3,52
Reliability	
5. I would use electronic payment systems if other users before me had no problems	3,53
Privacy	
6. I am concerned that other companies or institutions may obtain information about my payment history	3,14
Anonymity	
7. Electronic payment systems further violate the privacy that is already violated by the use of the Internet.	3,29
Convertibility	
8. If the use of electronic payment systems allowed me to pay in different currencies, this would increase my desire to use them	3,22
Cost efficiency	

9. If a payment is cheaper using electronic payment systems, this would increase my desire to use them.	4,12

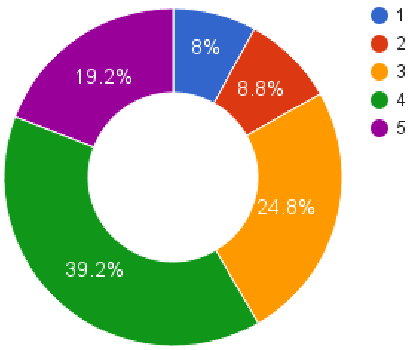
The following graphs show the respondents' evaluations of the most important features of electronic payment systems according to the authors of this study, where the complexity of using electronic payment systems, the experience of others when using electronic payment systems, and the fees for users of these payment systems were reviewed.

Graph 3. Assessment of the complexity of using electronic payment systems



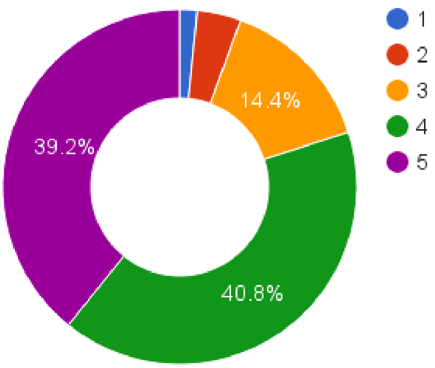
One fifth of the respondents believe that electronic payment systems are not at all complicated to use. A third of respondents have a neutral opinion, which means that they are indifferent to whether they will make payments with an electronic payment instrument or cash.

Graph 4. The influence of the experience of others on the use of electronic payment systems



Based on the collected data, it can be concluded that for the majority of respondents (58.4%) it is important that people who used a certain payment system before them have a positive experience regarding the functioning of that system. Recommendations received from close friends or from people they consider competent in that field will be of particular importance to them. Unlike them, for 8.8% of respondents, the opinion of others is not important at all, but they will use a certain electronic payment system if it provides them with the conditions they are looking for.

Graph 5. Increase in the use of electronic payment systems due to lower fees for the user



A large number of respondents are ready to use electronic payment systems if the fee for using such systems is lower compared to traditional payment systems. A small part of respondents is price indifferent in relation to the fee for this type of payment and relies exclusively on the use of cash.

Conclusion

The use of electronic payment systems results in lower operating costs, reduction of the grey economy, and the development of new payment systems. Electronic banking services are available to users at any time and in any place, which reduces the time and fees of executing transactions, which certainly increases the motivation to use electronic payment systems both in Serbia and in the countries of the region.

Considering that a day without a mobile phone is unthinkable in modern times, it is natural that the mobile phone has taken a special place in the field of electronic payments. Generations born in the information age are becoming able to pay, so the use of electronic payment systems, especially the use of mobile phones, will move upward.

The revolution in electronic banking is represented by the appearance of electronic money. As far as the Republic of Serbia is concerned, the adoption of the Law on Payment Services has taken a step forward in harmonizing the Serbian legislation with the European legal provisions, as it provides a legal framework for the establishment and operation of payment institutions and electronic money institutions, as well as for the protection of the rights and interests of users of payment services and holders of electronic money.

The study confirmed the first hypothesis of the research, namely that users adopt mobile payment systems faster than electronic payment systems based on computers. All this is based on respondents' answers regarding the use of electronic payment systems. More than half of respondents use mobile payments more than computer-based payments. Mobile payment systems have become a way for users to regularly settle their debts, and they use them usually several times a month. The increase in information literacy proportionally leads to an increase in the number of users of mobile payment systems, which ultimately contributes to the increase in the use of modern electronic payment systems in Serbia and in neighboring countries.

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POKAZATELJI ZADOVOLJSTVA KORISNIKA BANJSKIH USLUGA NA PODRUČJU JUŽNE SRBIJE

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Apstrakt

Banje imaju posebno važno mesto u turizmu Republike Srbije, naročito kada je reč o domaćim turistima. U poslednjoj reprezentativnoj godini za turizam pre COVID-19 (2019), učestvovali su sa 18% od ukupnog broja dolazaka turista, odnosno sa 28% od ukupnog broja noćenja. Ključni kriterijum za izbor banja u ovom istraživanju je njihova teritorijalna pripadnost-područje južnog dela Srbije, raspoređenih u dve opštine (Kuršumlija i Medveđa), dva grada (Niš i Vranje), odnosno u četiri okruga (nišavski, toplički, jablanički i pčinjski). Pomenute banje se međusobno značajno razlikuju po ostvarenom turističkom prometu, strukturi i kvalitetu usluga. Sem toga, neke od njih sigurno ne spadaju u najposećenije i najpoznatije domaće banje. Sa druge strane, reč je o veoma perspektivnim destinacijama koje stalno unapređuju svoju ponudu, pogotovo kada je reč o Lukovskoj banji. Jedna od ključnih pretpostavki za unapređenje konkurentske pozicije svake od šest izabranih banja jeste da svoju ponudu usklade sa željama i očekivanjima savremenih turista, odnosno stepen zadovoljstva turista, što je i predmet istraživanja.

Ključne reči: *termomineralni izvori, banjski turizam, zadovoljstvo korisnika, Južna Srbija*

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Uvod

Boravak u banjama, odnosno korišćenje termomineralnih voda, lekovitog blata i lekovitih gasova predstavlja jedan od najstarijih vidova turističkih kretanja. Još su antički narodi prepoznali značaj termomineralnih izvora u lečenju određenih simptoma koje je pacijent imao (Smit, 2017). U cilju oporavka aktivnih i usluženih vojnika u starom Rimu, na izvorima lekovitih i termalnih voda izgrađena su brojna lečilišta i kupališta sa pratećom infrastukturom. Neka od najpoznatijih evropskih banjskih centara imaju korene iz antičkog perioda- Sent Moric u Švajcarskoj, Viši u Francuskoj, Visbaden u Nemačkoj. Isto važi i za mnoge domaće banje (Stojanović, Stankov, 2022). Korišćenje blagodeti lekovitih voda se nastavlja u srednjem veku i traje sve do danas.

Međutim, lekovite vode se nisu koristile samo zbog oporavka i lečenja određenih bolesti i stanja, već i u rekreativne svrhe. Krupne društvene i ekonomske promene u Evropi u drugoj polovini XIX veka, koje je donelo novo predindustrijsko društvo, uslovile su da banjski centri postaju veoma posećena mesta gde korisnici borave radi preventive i rehabilitacije koje je donelo novo predindustrijsko društvo (Stojanović, 2007). Drugim rečima, izdvajaju se *dva glavna motiva za boravak u banjama*. Prvi je tradicionalan i zasniva se na lečenju, rehabilitaciji uz medicinski tretman, uglavnom u stacionarima, rehabilitacionim centrima i specijalizovanim banjskim bolnicama. Drugi motiv se zasniva na rekreaciji, razonodi, sportskim sadržajima, zabavi i aktivnom odmoru. To znači da banje (odavno) ne posećuju samo obolele osobe zbog lečenja već i potpuno zdravi ljudi samo iz drugih razloga. Imajući u vidu izneto, dolazi se do ključnog pitanja: *da li je jedna banja prepoznala promene na turističkom tržištu i da li je svoju ponudu prilagodila savremenim turistima i novim motivima za boravak u banji?* Uvođenje wellness i spa sadržaja, kreiranje specifičnih tretmana za različite segmente turističke tražnje[11], odgovarajuća banjska infrastruktura i

[11] Misli se npr. na antistres programe, kozmetičke tretmane, programe mršavljenja, programe pravilne ishrane, balneoterapije, fizičke vežbe i sl. Često je reč ne o tipskim već personalizovanim programima prilagođenim potrebama i zdravstvenom stanju konkretne osobe. Pre par godina bili su popularni programi tzv. post-kovid rehabilitacije (Stojanović, Stankov, 2022).

suprastruktura, vanpasionska ponuda, ponuda izleta, stručnost medicinskog osoblja predtsavlja ono po čemu se jedna banja izdvaja od brojnih konkurenata. Banjskom turizmu „ide na ruku” jedan od najvažnijih trendova na turističkom tržištu. Naime, savremeni turisti poklanjaju posebnu pažnju očuvanju svog zdravlja (fizičkog i mentalnog), odnosno očuvanju i unapređenju svog zdravstvenog stanja. Briga o svom zdravlju i ličnoj bezbednosti (za vreme putovanja i boravka u destinaciji) postaje važan faktor pri odlučivanju o korišćenju turističkih usluga. Pomenuti trend je posebno dobio na značaju od 2020. godine zbog korona virusa. Tada su wellness i spa sadržaji doživeli svoju ekspanziju, pogotovo što domaći turisti (skoro u svim zemljama sveta) nisu mogli da putuju u inostranstvo zbog restrikcija slobodnog kretanja. Benefiti banjskog (zdravstvenog) turizma u odnosu na mnoge grane turizma su očigledni-manja sezonalnost (veća ujednačenost turističkog prometa tokom cele godine), dnevna potrošnja je veća od potrošnje prosečnog turiste, prosečna dužina boravka je veća nego kod ostalih vidova turizma, najmanje elastičan oblik turizma, zapošljava veći broj ljudi različitih profila (Podovac, Tončev, 2015). Na području Republike Srbije postoji oko 300 mineralnih izvora (Pavlović, Bojičić, 2017) i preko 40 banja. Zakon o banjama[12] definiše najvažnije pojmove (banja, prirodni lekoviti faktor), uslove u pogledu uređenosti i opremeljenosti područja i druga važna pitanja. Da bi jedno područje bilo banja mora da ima organizovanu zdravstvenu službu, objekte i uređaje za korišćenje prirodnog lekovitog faktora, objekte za smeštaj i boravak posetilaca, kao i odgovarajuće komunalne i druge objekte (vodovod, kanalizacija, saobraćajnice, PTT, elektro objekte, javne zelene i rekreacione površine (član 2 pomenutog zakona). Dakle, banje se odlukuju izraženim zdravstveno rekreativnim elementima, uz primenu različitih prirodnih elemenata kao što su: termomineralni izvori, klimatski elementi i faktori, vegetacija i zbog toga ova vrsta mesta kod korisnika izaziva interes za posetu i boravak (Jovičić, 2008). Takođe, ne treba zanemariti činjenicu da banje zapošljavaju veliki broj medicinskih i nemedicinskih radnika. Za nosioce ponude u banjskom turizmu Srbije je najvažnije da prepoznaju trendove na

[12] Službeni glasnik R. Srbije 80/92, 67/93...95/2018)

tržištu i da ih uvaže tako što će svoju ponudu da prilagode potrebama i očekivanjima današnjih turista.

Prirodne i antropogene vrednosti banja Južne Srbije

Teritorijalni raspored domaćih banja ukazuje na njihovu značajnu koncentraciju na jugu Republike Srbije. To je više nego dovoljan razlog da budu predmet istraživanja čiji je fokus utvrđivanje usaglašenosti njihove postojeće ponude sa očekivanjima i trendovima nosilaca savremene turističke tražnje. Sa nepunih 7 000 dolazaka i 39 000 noćenja u 2022. godini, **Niška banja** spada u banje sa skromnijim turističkim prometom (pet puta manje nego najposećenija banja obuhvaćena istraživanjem-Lukovska banja). Administrativno pripada Gradu Nišu, nalazi se blizu autoputa E-80 (Niš-granica sa Bugarskom) na 250 mnv. Njene termalne vode su korišćene još u antičkom periodu. Danas je Niška banja prepoznatljiva po radioaktivnim vodama, lekovitim gasovima i lekovitom blatu namenjenih prvenstveno za lečenje kardiovaskularnih bolesti, posttraumatskih stanja, bolesti respiratornih organa. Atraktivnost ove banje upotpunjuje blizina Niša (10 km), Jelašnička i Sićevačka klisura (3 odnosno 5 km), manastir Sićevo (XIV vek), Cerjanska pećina. **Kuršumlijska banja** je ponovo počela sa radom februara 2023. godine. Pre toga je više od decenije bila zatvorena. Okosnicu ponude čini rekonstruisan i dograđen hotel „Planinka" (nekadašnji hotel „Žubor"), širok spektar lekovitih voda (alkalnih, sumporovitih, gvožđevitih, ugljeno-kiselih) sa rasponom temperature od 14 pa sve do 67°C, kao i lekovito blato. Nalazi se 11 km od gradskog naselja Kuršumlija, blizu puta Niš-Priština, na 442 mnv. Poznata je po lečenju reumatizma (više vrsta), neuroloških oboljenja, bolesti metabolizma, posttraumatskih stanja i ginekoloških problema[13]. U njenoj neposrednoj blizini su brojne srpske srednjevekovne crkve i manastiri, Đavolja varoš, Nacionalni park Kopaonik. Sa 35 000 dolazaka i 205 000 noćenja, **Lukovska banja** je peta banja po ukupnom turističkom prometu u celoj Srbiji u 2022. godini i prva u posmatranoj grupi od šest banja sa juga Srbije. Dominiraju domaći gosti (86% dolazaka i 91% noćenja), dok prosečna dužina

[13] https://banjeusrbiji.com/kursumlijska-banja/

boravka iznosi 5,8 dana[14]. Nalazi se u opštini Kuršumlija, na istočnim obroncima Kopaonika na najvišoj nadmorskoj visini (668 mnv) od svih srpskih banja. Od Niša, Prištine i Kruševca, kao najbližih većih gradova, udaljena je oko 100 km, od Beograda 300 km, a od Novog Sada oko 380 km. Mineralni izvori ove banje izviru u uskoj zoni, na dužini od oko 400 m sa obe strane reke Števe, kao i u koritu reke. Temperatura ovih izvora kreće se od 22 do 65°C. Lukovska banja pomaže kod sledećih bolesti: zapaljenski reumatizam, degenerativni reumatizam, spondiloze vratnog i kičmenog dela kičme, ekstraartikularni reumatizam, osteoporoza i osteopatija, sve vrste sportskih povreda i stanja nakon preloma kostiju i hiruških intervencija (Radnović i saradnici, 2019). U **Sijarinskoj banji** je 2022. godine evidentirano 12 366 dolazaka i 93 568 noćenja što rezultira prosečnom dužinom boravka od sedam i po dana. Broj posetilaca ove banje raste, s tim da 99% turističkog prometa ostvare domaći gosti[15]. Nalazi se u opštini Medveđa u Jablaničkom okrugu. Od tri najbliža veća grada u Srbiji-Prištine, Vranja i Leskovca je skoro podjednako udaljena (svega oko 50 km vazdušnim putem), od Niša 95 km, a od Beograda 320 km. Poseduje 18 izvora lekovite vode različitog fizičko-hemijskog sastava sa temperaturom u rasponu od 32 do 72°C. Prepoznatljiva je po brojnim gejzerima tople vode sa vodenim stubom visine osam metara. Banja pomaže u lečenju sledećih oboljenja: reumatskih, oboljenja lokomotornog i posttraumskih stanja, oboljenja digestivnog traksa, ginekoloških oboljenja, oboljenja krvi, oboljenja organa za disanje, kardiovaskularnih oboljenja i kožnih promena (Marinković i saradnici, 2016). Najjužniju poziciju od posmatarnih banjskih destinacija ima **Vranjska banja**. Prepoznatljiva je po veoma visokim temperaturama lekovitih voda (i do 96°C) pogodnim za lečenje ginekoloških oboljenja, anemije, bolesti disajnih organa, reumatizma, neuralgije. Udaljena je od autoputa E-75 svega nekoliko kilometara, od prvog većeg grada Vranja 10 km, od regionalnih centara Skoplja 105 km, Niša 115 km, a od Beograda 340 km. Međutim, i pored odlične saobraćajne povezanosti, blizine većih emitivnih tržišta, tradicije,

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[14] RZS: Statistički podaci o turističkom prometu u Republici Srbiji za 2022, godinu, strane 3-5.

[15] RZS: Saopštenje UT-10 (ISSN 0353-9555; СРБ5 УТ10 310123), strana 2.

prirodnih predispozicija i antropogenih sadržaja u neposednom okruženju, Vranjska banja ostvaruje skroman turistički promet. Tako je 2022. godine registrovano 2 600 dolazaka (uglavnom domaćih posetilaca) i 22 266 noćenja[16], najmanje od svih šest banja obuhvaćenih istraživanjem. Planirana modernizacija i proširenje postojećih banjskih kapaciteta sigurno će poboljšati tržišnu poziciju ove banje. **Prolom banja** je jedna od najmlađih domaćih banja. Otvorena je 1968. godine, a status banje je dobila 1977. godine. Nalazi se u podnožju Radan planine, na nadmorskoj visini od 550 do 668 m u opštini Kuršumlija, dok je od istoimenog gradskog naselja udaljena 23 km. Termalne vode ove banje imaju temperaturu od 26,4 do 31°C i koriste se u lečenju određenih bolesti bubrega, digestivnog trakta, ekcema, psorijaze, vanzglobnog reumatizma i drugih oboljenja. Od značajnih atrakcija u blizini ove banje se izdvaja Đavolja varoš (11 km), crkva Svete Petke iz doba Nemanjića, crkva brvnara Lazarica iz XIX veka (2,5 km od hotela „Radan”) i neolitsko naselje Pločnik od koga je udaljena 28 km (https://banjeusrbiji.com/prolom-banja/). Zajednička karakteristika pomenutih banja je da raste turistički promet, da značajan deo banjskih gostiju koristi vaučere za odmor u Srbiji, da se njihova ponuda unapređuje u kvantitativnom i kvalitativnom smislu, ali i da je zastupljenost stranih gostiju izuzetno mala, od zanemarljivih 1% u Sijarinskoj banji do ipak skromnih 10-15% u Lukovskoj banji.

Metodologija istraživanja

Predmet istraživanja *je utvrđivanje stepena zadovoljstva postojećim stanjem ugostiteljskih i medicinskih usluga u izabranim banjama Južne Srbije.*

Primarni cilj istraživanja: *jeste identifikacija elemenata turističke ponude banjskog turizma južnog dela Srbije.*

Sekundarni cilj istraživanja: *uspostavljenje predloga radi unapređenja kvaliteta usluga u banjama južnog dela Srbije.*

Cilj rada je: *povezanost svih elemenata banjskog turizma na području Južne Srbije*. U istraživanju se pošlo od **opšte hipoteze** kao odgovora na istraživani problem, **H0:** Korisnici su generalno zadovoljni ponuđenim sadržajima izabranih banja.

[16] RZS: Saopštenje UT-10 (ISSN 0353-9555; СРБ5 УТ10 310123)

Opštu hipotezu upotpunjuju **posebne hipoteze**. Istraživanje polazi od sledeće tri pomoćne hipoteze:

H1: Korisnici su zadovoljni medicinskim uslugama koje si im pružene u izabranim banjama.

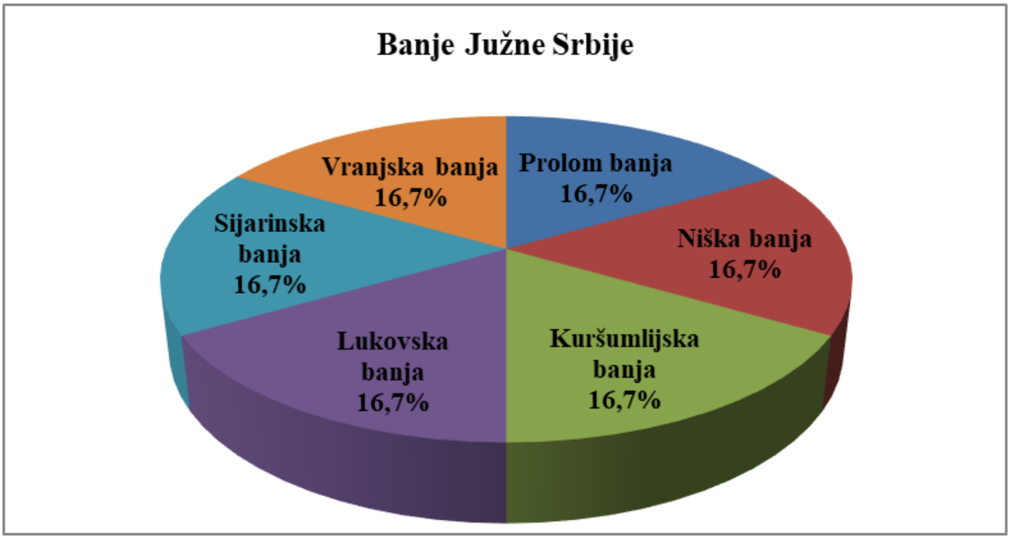
H2: Korisnici su zadovoljni uslugama koje su im pružili smeštajni objekti u kojima su odseli za vreme svog boravka u jednoj od ponuđenih banja.

H3: Korisnici su zadovoljni uslugama ishrane i pića koje su im pružene za vreme svog boravka u jednoj od izabranih banja sa područja Južne Srbije.

Uzorak istraživanja

Ukupan broj anketiranih je 600 ispitanika različitog pola, starosne granice kao i obrazovnog nivoa sa stalnim mestom boravka u Republici Srbiji. Istraživanje je sprovedeno u periodu od polovine juna do početka jula 2023. godine, ličnim intervjuem. Glavni kriterijum za odabir ispitanika je da su oni lično koristili usluge jedne od šest izabranih banja na jugu Srbije: Prolom banje (16,7%), Niške banje (16,7%), Kuršumlijske banje (16,7%), Lukovske banje (16,7%), Sijarinske banje (16,7%) i Vranjske banje (16,7%). Grafikon 1. ukazije na ujednačenu zastupljenost izabranih banja koje su ispitanici koristili (N=100). Takođe, glavni motiv svih ispitanika za boravak u banji je poboljšanje svog zdravstvenog stanja (N=600).

Grafikon 1. Banje Južne Srbije obuhvaćene istraživanjem



Izvor: Autori, 2023.

U odnosu na pol ispitanika, više od polovine celokupnog uzorka čine žene (60,2%) dok su muškarci zastupljeni sa preostalih (39,8%). Što se tiče **starosti ispitanika**, najviše ispitanika su ispitanici osobe preko 65 godina nih (52,2%) tj. ispitanici „trećeg doba“. Zatim sledi grupacija ispitanika koja je u ovom istraživanju zastupljena sa (38,2%) a oni pripadaju starosnoj populaciji od 56 do 65 godina. U ovom uzorku manje od 10% činili su ispitanici koji pripadaju starosnoj grupaciji od 36 do 55 godina svega (9,7%). Takođe, treba napomenuti da u ovom uzorku u datom trenutku istraživanja nije bilo ispitanika mlađih od 35 godina. Što se tiče, **stručne spreme**, najviše ispitanika (nešto manje od trećine celokupnog uzorka) ima srednju stručnu spremu, tačnije (30,2%.) Visoko obrazovanje ima njih (29,8%), a više obrazovanje (28,3%). Najmanji deo uzorka ispitanika se nalazi u kategoriji ostalo (11,7%) i stekao je neki drugi nivo obrazovanja. Kada posmatramo stalni boravak anketiranih, najbrojniji su bili iz regiona Zapadne Srbije i Šumadije njih (29,8%). Na drugom mestu po brojnosti se nalaze ispitanici sa prebivalištem u regionu Južne i Istočne Srbije (26,7%), a na trećem mestu ispitanici iz regiona severne Srbije (Vojvodine) sa (22,5%). U istraživanju je najmanje zastupljen region Beograda (21,0%), dok istraživanjem nisu obuhvaćeni ispitanici sa prebivalištem na Kosovu i Metohiji. Uzorak je približno ujednačen prema mestu prebivališta ispitanika. Kada je u pitanju **bračni status** ispitanika, skoro 2/3 celokupnog uzorka je u braku ili u vanbračnoj zajednici (65,3%). Pored toga, (12,2%), ispitanika je slobodno, odnosno nije u vezi, (16,3%) ispitanika je razvedeno, a (6,2%) je udovac/ica. Uzorak nije ujednačen. Analizirajući visinu **mesečnih Primanja** nešto više od polovine anketiranih ima mesečna primanja u rasponu od 25.001 do 40.000 dinara nijh (50,3%), zatim slede anketirani koji imaju mesečna primanja id 40.001 do 50.000 dinara svega (24,5%), dok (15,5%) anketiranih ima mesečnaprimanja u rasponu od 40.001 do 60.000 dinara, a (9,7%) ispitanika nije želeo da se izjasni po pitanju mesečnih primanja. Kada je u pitanju **radni status** ispitanika, veliku većinu (više od četiri petine celokupnog uzorka), čine penzioneri (86,3%). U znatno manjem obimu su zastupljeni ispitanici u radnom odnosu (9,5%) i poljoprivrednici (4,2%).

Rezultati istraživanja

Pouzdanost instrumenta

U ovom radu korišćena je skala „Zadovoljstvo korisnika banjskim turizmom" (ZKBT) koja je sadržala 30 tvrdnji zatvorenog tipa, a ispitanici su se izjašnjavali sa opsegom ocena od 1 - uopšte nisam zadovoljan/a do 5 - u potpunosti sam zadovoljan/a. Kako bi se utvrdila pouzdanost skale izvršena je provera uz pomoć Kronbahovog alfa koeficijenta (α) na čiju visinu utiče pre svega broj tvrdnji u upitniku. Naknadnom proverom ove skale ZKBT utvrđeno je da je Kronbahov alfa koeficijent α=0,822 (N=30). Tako da ovaj rezultat pouzdanosti (α>0.80) je visok (Tabela 1).

Tabela 1. Pouzdanost instrumenta

Skala	**Kronbahov alfa koeficijent (α)**	**Broj ajtema**
ZKBT	0,822	30

Izvor: Autori, 2023.

Zadovoljstvo uslugama u izabranim banjama Južne Srbije

Skala ZKBT se sastoji od 30 tvrdnji po uzoru na Likertovu skalu. Zadovoljstvo korisnika je prikazano kao prosek zbira svih tvrdnji (od 1 do 5), viši skor se identifikuje kao veće zadovoljstvo. Tvrdnje su grupisane u pet dimenzija koje se odnose na pojedine aspekte usluga koje su ispitanici koristili prilikom baravka u banji: *Usluge ishrane van smeštajnog objekta u kome su odseli, Usluge ishrane i pića u objektu u kome su odseli, Usluge smeštaja (sobe)*[17], *Medicinske usluge i Ostale hotelske usluge*[18]. Istraživanje se odnosi na dve najčešće vrste usluga u banjskom turizmu - ugostiteljske (smeštaj, ishrana i piće) i medicinske (usluge koje pružaju lekari, tehničari, kao i medicinska oprema sa kojom se indukuju terapije). Ostale usluge koje podrazumevaju izlete, animacije, turistički obilazak radi što boljeg upoznavanja mesta ovim istraživanjem nisu obuhvaćeni. Zaključak ovog istaživanja pokazuje da postoji visoko, čak iznad prosečno zadovoljstvo korisnika pruženim uslugama u izabranim banjama u Južnoj Srbiji. Prosek na nivou cele skale je AS=4,44 i SD=0,293. Najmanja ocena je 3 a najviša 5 (Tabela 2).

Tabela 2. Zadovoljstvo korisnika banjskim turizmom

Skala/Subskala	MIN	MAX	AS	SD
Usluge ishrane i pića van smeštajnog objekta u kome su odseli	2	5	4,55	0,518
Usluge ishrane i pića u objektu u kome su odseli	3	5	4,52	0,416
Usluge smeštaja (sobe)	3	5	4,07	0,513
Medicinske usluge	3	5	4,48	0,393
Ostale hotelske usluge	3	5	4,57	0,297

[17] Odnosi se na smeštajne jedinice (najčešće sobe, ređe apartmane) u objektu u kome su ipitanici odseli za vreme svog boravka u određenoj banji.

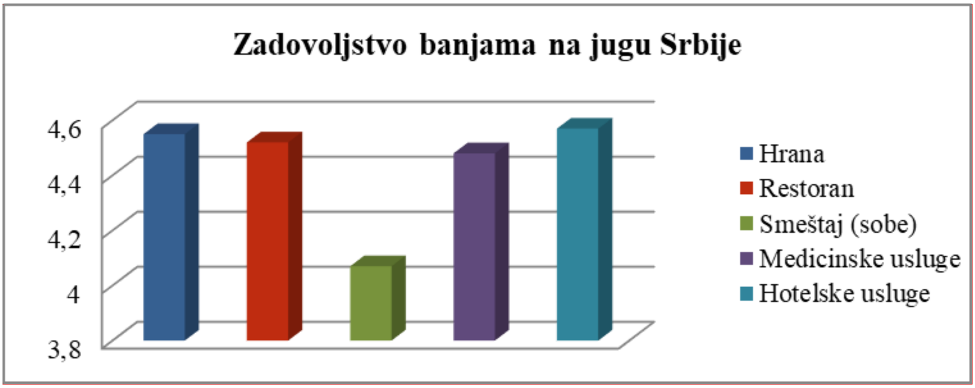
[18] Obuhvata sve usluge u smeštajnom objektu u kome su ispitanici odseli osim usluga smeštaja i usluga ishrane i pića, jer su iste već obuhvaćene sa dve subskale.

ZKBT	3	5	4,44	0,293

Izvor: Autori, 2023.

Visoke ocene dobijene su i ukoliko posmatramo određene attribute banjskog turizma. Na osnovu postavljenih dimenzija uočava se veća izraženost dobijenih rezultata koja iznosi preko 4 (čiji je raspon bio od 1 do 5), a najveće zadovoljstvo ispitanici su pokazali u odnosu na „ostale hotelske usluge” (AS=4,57, SD=0,293) i „usluge ishrane van smeštajnog objekta” (AS=4,55, SD=0,518). Odmah nakon toga, slede „usluge ishrane i pića u smeštajnom objektu” (AS=4,52, SD=0,416) i „medicinskim uslugama” (AS=4,48, SD=0,393). Najniži skor je dobijen u odnosu na zadovoljstvo korisnika „uslugama smeštaja (soba)” u objektu u kom su odseli (AS=4,07, SD=0,513) (Grafikon 2).

Grafikon 2. Zadovoljstvo uslugama u izabranim banjama Južne Srbije



Izvor: Autori, 2023.

Komparativna analiza

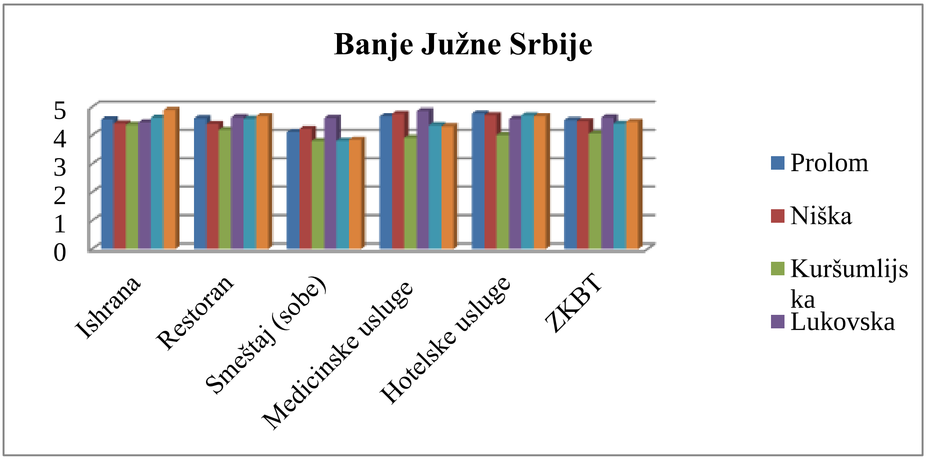
Pored ispitivanja generalnog zadovoljstva korisnika usluga izabranih banja na jugu Srbije, zadatak istraživanja bio je i ispitivanje njihovog zadovoljstva u odnosu na banju u kojoj su boravili i suštinu boravka, ali i u odnosu na sociodemografske karakteristike ispitanika (pol, starost, stručnu spremu, mesto prebivališta, bračni i radni status i visinu mesečnih primanja).

Banja u kojoj su ispitanici boravili

Ako posmatramo banju u kojoj su ispitanici boravili, analizom uočavamo statističke razlike koje su iskazane u odnosu zadovoljstva korisnika sa pruženom uslugom za sve dimenzije ZKBT koje su u ovom istraživanju rađene kao i za prosek cele skale. Dobijene razlike ukazuju na to da su visoke i imaju značaja na nivou značajnosti od $p<0,01$. Na ukupnom nivou, za celu skalu ZKBT ($F=73,495$, $p=0,000$) ispitanici koji su boravili u *Lukovskoj banji* ($AS=4,63$, $SD=0,217$) su pokazali značajno veće zadovoljstvo u odnosu na ispitanike koji su boravili u bilo kojoj drugoj banji, dok su ispitanici koji su boravili u *Kuršumlijskoj banji* ($AS=4,06$, $SD=0,264$) pokazali značajno manje zadovoljstvo u odnosu na korisnike koji su boravili u ostalim banjama obuhvaćenim istraživanjem. U pogledu **Usluga ishrane van smeštajnog objekta** ($F=14,577$, $p=0,000$), ispitanici koji su boravili u Vranjskoj banji su pokazali značajno veće zadovoljstvo ($AS=4,89$, $SD=0,125$) naspram korisnikakoji su koristili usluge drugih banja koja se pokrivene ovim istraživanjem. Anketirani korisnici koji su koristili blagodeti Kuršumlijske banje ($AS=4,37$, $SD=0,583$) su pokazali značajno niž zadovoljstvo ovom vrstom usluge u odnosu na ispitanike koji su boravili u Prolom, Sijarinskoj i Vranjskoj banji. Kada su u pitanju **Usluga ishrane i pića u objektu u kome su odseli** ($F=22,677$, $p=0,000$), ispitanici koji su boravili u Niškoj banji ($AS=4,40$, $SD=0,295$) i Kuršumlijskoj banji ($AS=4,20$, $SD=0,488$) su pokazali značajno niže zadovoljstvo u odnosu na korisnike koji su koristili uluge u drugim navedenim banjama. Naspram **Usluga smeštaja** ($F=56,838$, $p=0,000$)

korisnici koji su koristili usluge u Lukovskoj banji ($AS=4,61$, $SD=0,299$) iskazali su veće zadovoljstvo naspram ispitanika koji su koristili usluge u drugim banjama koje su bile predmet istraživanja, a ispitanici koji su koristili suluge u Kuršumlijskoj banji ($AS=3,80$: $SD=0,405$) bili su manje zadovoljni uslugama smeštaja u poređenju sa onima koji su koristili usluge u Prolom banji, Lukovskoj ili Niškoj banji. U analizi **Medicinskih usluga** ($F=233,258$; $p=0,000$), anketirani korisnici koji suboravili uLukovskoj banji ($AS=4,86$, $SD=0,145$) iskazali su drastično veće zadovoljstvo u poređenju sa drugim korisnicima koji su bili u drugim banjama. Anketirani korisnici koji su se u datom trenutku nalazili u Kuršumlijskoj banju ($AS=3,92$, $SD=0,278$) iskazali su drastično niže zadovoljstvo medicinskim uslugama u poređenju sa drugim ispitanicima.

Grafikon 3. Razlike u izraženosti ZKBT u odnosu na banju



Izvor: Autori, 2023.

Na kraju, u odnosu na **Ostale hotelske usluge** (F=344,647, p=0,000) je potvrđeno da ispitanici koji su boravili u Prolom banji (AS=4,77, SD=0,187) imaju značajno veće zadovoljstvo tim uslugama u odnosu na sve ostale ispitanike. Ispitanici koji su boravili u Niškoj banji (AS=4,71, SD=0,194) pokazali su drastično veće zadovoljstvo u poređenju sa anketiranim korisnicima koji su koristili usluge u Lukovskoj ili Kuršumlijskoj banji. Kada se analizira struktura uzorka u odnosu na pol postoje statističke ključne razlike u izraženosti zadovoljstva korisnika banjskim turizmom dobijene po pitanju ishrane van svog smeštajnog objekta (t=2,778, p=0,006), odnosno u okviru svog smeštajnog objekta (t=2,430, p=0,015). Prva razlika je visoka i važna na nivou p<0,01 dok je druga je ključna na nivou p<0,05. Ostvareni rezultati u ovom istraživanju ukazuju na to da anketirani ispitanici muškog pola znatno su iskazali viši stepen zadovoljstva kada je u pitanju usluga restorana-hrana (AS=4,63, SD=0,464 odnosno AS=4,57, p=0,367) u poređenju sa anketiranim ispitanicima ženskog pola koje su iskazale manje zadovoljstvo ovom uslugom. Kada su u pitanju ostale dimenzije skale ZKBT, kao i na proseku celokupne skale iskazanog zadovoljstva posetilaca koji su anketirani u vezi sa banjskim turizmom nisu ustanovljene statistički značajne razlike u naglašavanju zadovoljstva u odnosu na pol ispitanika. Važno je istaći da je gotovo na svim dimenzijama koje su merene i analizirane u ovom istraživanju utvrđen viši skor dobijen kod muškaraca, izuzev dimenzije „usluge smeštaja (sobe)” na kojoj je nešto veće zadovoljstvo dobijeno kod žena. Analizurajući staraosnu strukturu ispitanika statistički ključne razlike kada je u pitanju zadovoljstvo posetilaca banjskim turizmom uočava se kod dimenzije „Usluge ishrane i pića u svom smeštajnom objektu” (F=3,087, p=0,046). Ustanovljena je razlika na nivou značajnosti koja iznosi od p<0,05 i pokazuje nam da anketirani korisnici koje se nalaze u starnosnom rasponu godina od 36 do 55 godina (AS=4,60, SD=0,335) iskazuju osetno veće zadovoljstvo navedenim uslugama u poređenju sa starosnom grupom od 56 do 65 godina (AS=4,47, SD=0,443). Kada su u pitanju druge dimenzije skale ZKBT i objedinjeni zbirni prosek cele skale nisu utvrđene statistički važne razlike u iskazanih skorova kada je su u pitanju starosne granice ispitanika. Naime, mlađi ispitanici koji pripadaju starosnoj granici od 36 do 55 godina na svim dimenzijama iskazali su izuzetno zadovoljstvo. Kada su u pitanju medicinske usluge uočljiv je kod ispitanika starosti preko 65 godina (AS=4,49, SD=0,407).

Obrazovni nivo ispitanika

Kada je reč o obrazovnim nivou ispitanika, statistički važne razlike utvrđene su na svih pet dimenzija skale ZKBT koje su ispitivane, kao i za objedinjeni prosek skale zadovoljstvo korisnika banjskim turizmom. Utvrđene razlike su visoke i važne na nivou značajnosti od p<0,01. Na dimenziji „Usluge ishrane van svog smeštajnog objekta” (F=20,448, p=0,000) je potvrđeno da ispitanici sa srednjom stručnom spremom (AS=4,74, SD=0,354) iskazali su znatno veći skor u poređenju sadrugim ispitanicima koju su anketirani. Ustanovljeno je da su posetioci kojisu anketirani sa završenim visoko stručnim spremema (AS=4,33, SD=0,574) imaju značajno niže zadovoljstvo posmatranom vrstom usluge u odnosu na ispitnike svih ostalih obrazovnih profila. Uslugama ishrane van svog smeštajnog objekta (F=20,585, p=0,000) ispitanici sa zvanjem visoke stručne spreme (AS=4,33, SD=0,481) imaju značajno niže zadovoljstvo u odnosu na sve ostale ispitanike. Pored toga, ispitanici sa završenim visoko stručnim spremama (AS=4,33, SD=0,387) imaju značano niže zadovoljstvo uslugama ishrane u samom smeštajnom objektu naspram drugih anketiranih iz kategorije ostala obrazovna kategorija (AS=4,69, SD=0,331). Što se tiče usluga koje se odnose na smeštaj (F=34,840, p=0,000), anketirani posetioci iz podgrupe "ostalo obrazovanje" (AS=4,60, SD=0,324) iskazali su znatno veći skor na pomenutoj dimenziji kvaliteta naspram anketiranih ispitanika koji poseduju drugačiji obrazovni profil. Naime, anketirani posetioci sa završenom višom školom (AS=4,06, SD=0,496) iskazali su znatno veće zadovoljstvo kada je u pitanju usluga smeštaja naspram posetioca sa završenom srednjom školom (AS=3,94, SD=0,504). Analizirajući Medicinske usluge (F=32,315, p=0,000) ukazuje se znatno veći skor kod ispitanika iz klasifikacije ostalo (AS=4,87, SD=0,137) naspram posetilaca iz ostalih obrazovnih kategorija. Treba istaći da su ispitanici sa višom školom (AS=4,47, SD=0,350) iskazuju znatno veće zadovoljstvo zdravstvenim tj. medicinskim uslugama u odnosu na ispitanike sa zvanjem visokih strukovnih sprema (AS=4,38, SD=0,482). U odnosu na dimenziju ostale hotelske usluge (F=45,469, p=0,000) kod ispitanika sa završenim visokim strukovnim spremama (AS= 4,38, SD=0,482) potvrđeno je značajno niže zadovoljstvo u odnosu na sve ostale ispitanike. Dakle, anketirani ispitanici sa završenom srednjom školom (AS=4,69, SD=0,138) iskazali su da su zadovoljni navedenim uslugama naspram anketiranih iz kategorije ostalo obrazovanje (AS=4,58, SD=0,376). Ukoliko posmatramo celokupno zadovoljstvo posetilaca na jugu Srbije (F=36,612, p=0,000) možemo reći da je potvrđeno da posetioci iz kategorije ostalo (AS=4,66, SD=0,208) imaju značajno veći skor u odnosu na sve ostale obrazovne kategorije ispitanika, a ispitanici sa zvanjem visokih strukovnih sprema (AS=4,29, SD=0,317) imaju značajno niži skor u odnosu na sve ostale ispitanike.

Mesto prebivališta ispitanika

Što se tiče odnosa prema mestu stanovanja anketiranih dolazimo do saznanja da su statistički ključne razlike u izraženosti zadovoljstva korisnika banjskih usluga dobijene su za dimenzije Usluge ishrane van smeštajnog objekta (F=3,518, p=0,015), Usluge ishrane u objektu u kom su odseli (F=6,818, p=0,000), Medicinske usluge (F=8,816, p=0,000), dok su druge usluge koje pruža hotel dobile vrednost (F=19,213, p=0,000) a Prosek cele skale ZKBT poseduje vrednost od (F=11,426, p=0,000). Važna razlika na nivou značajnosti od p<0,05 dok su druge iskazane razlike značajne na nivou p<0,01. Ukoliko posmatramo dimeziju kvaliteta koje osnose na Uslugu smeštaja (sobe-apartmani) ne uočavaju se iskazane statističke značajne razlike u iskazivanju zadovoljstva posetilaca u korelaciji mesta stalnog boravka posetilaca (F=1,767, p=0,152). Detaljnom analizom utvrđeno je da kada se radi o Uslugama koje se odnose na restoran (hrana) van pansionske posete, posetioci iz regiona Šumadije i Zapadne Srbije (AS=4,46, SD=0,602) iskazuju znatno manje zadovoljstvo naspram posetioca sa severa Srbije (AS=4,60, SD=0,542) ili Beogradskog regiona (AS=4,64, SD=0,441). Kada posmatramo usluge ishrane u samom smeštajnom objektu, posetioci iz Beogradskog regiona (AS=4,59, SD=0,413) kao i ispitanici sa severa Srbije (AS=4,61, SD=0,424) iskazuju znatno više skorove na ovoj dimenziji naspram ispitanika u Šumadiji i Zapadnoj Srbiji ili u odnosu na ispitanike iz Južne i Istočne Srbije. Što se tiče medicinskih usluga posetioci iz Beogradskog regiona I severaSrbije potvrđuju i iskazuju veće zadovoljstvo naspram posetioca čije je stalno mesto boravka potvrđuju u Šumadiji i regionu Zapadne Srbije i ispitanike koji imaju prebivalište u regionu Južne i Istočne Srbije. Kada su u pitanju Ostale hotelske usluge, ispitanici sa prebivalištem u regionu Beograda (AS=4,72, SD=0,231) imaju značajno veće zadovoljstvo ovim uslugama u odnosu na druge posetioce. Dok, ispitanici sa severa Srbije (AS=4,60, SD=0,249) potvrđuju i pokazuju znatno veće zadovoljstvo navedenim uslugama naspram posetilaca iz oblasti Šumadije i Zapadne Srbije kao i regiona Južne i Istočne Srbije. Na celokupnom nivou skale ZKBT, statistički ključne razlike su potvrđene kod posetioca koji žive u Beogradskom region i severa Srbije koji imaju znatno više skorove, odnosno značajno veće zadovoljstvo uslugama banja naspram posetioca iz druga dva regiona.

Bračni status ispitanika

Kada analiziramo bračni status ispitanika, utvrđeno je da su statistički ključne razlike u ovom istraživanju potvrđene za svih pet dimenzija kvaliteta odabrane skale ZKBT, i za proseke celokupne skale. Dobijena razlika je visoka i značajne na nivou značajnosti od p<0,01. U odnosu na dimenziju Usluge ishrane van smeštajnog objekta (F=5,701, p=0,001), staistički značajne razlike su potvrđene kod ispitanika koji su udovci/ice (AS=4,86, SD=0,192) koji imaju značajno veće zadovoljstvo na ovoj dimenziji u odnosu na sve ostale ispitanike. Na dimenziji Usluge ishrane u smeštajnom objektu (F=4,162, p=0,006) statistički značajno viši skorovi su dobijeni kod udovaca (AS=4,72, SD=0,251) u odnosu na ispitanike koji su u braku (AS=4,48, SD=0,451) ili su razvedeni (AS=4,52, SD=0,350). Na dimenziji Usluge smeštaja (F=15,180, p=0,000), značajno viši skorovi su dobijeni kod ispitanika koji su slobodni (AS=4,38, SD=0,452) u odnosu na sve ostale ispitanike iz istraživanja. Pored toga, ispitanici koji su u braku ili vezi (AS=3,98, SD=0,498) pokazali su značajno niže zadovoljstvo uslugama smeštaja u odnosu na razvedene (AS=4,18, SD=0,493). Kada je reč o medicinskim uslugama (F=13,254, p=0,000), posetioci koji su u braku (AS=4,41, SD=0,417) iskazali su znatno niži nivo zadovoljstva naspram drugih posetioca kod kojih je veće zadovoljstvo navedenom uslugom. Kada se posmatraju hotelske usluge (F=19,037, p=0,000) utvrđeno je da posetioci koji su u braku (AS=4,51, SD=0,337) iskazuju znatno niže zadovoljstvo navedenim aspektom usluga na sve druge ispitanike dok je potvrđeno da posetioci koji su slobodni (AS=4,64, SD=0,142) iskazuju znatno niže zadovoljstvo navedenim uslugama naspram udovca/ica (AS=4,77, SD=0,169). Ako posmatramo celokupnu skalu ZKBT (F=17,269, p=0,000) utvrđujemo statistički značajne razlike koje su utvrđene kod posetioca koji su u braku (AS=4,38, SD=0,317) koji su manje zadovoljni banjskim uslugama naspram ispitanika sa drugim bračnim statusom.

Visina mesečnih primanja ispitanika

Ukoliko analiziramo visinu mesečnih primanja kod anketiranih posetioca, utvrđene su statistički ključne razlike kada je u pitanju zadovoljstvo posetioca navedenih banja i iste su potvrđene za svih pet dimenzija kvaliteta čiji je zbirni prosek cele skale ZKBT. Celokupne utvrđene razlike su visoke i predstavljaju značaj na nivou značajnosti od $p<0,01$. Naknadna analiza je pokazala da kada je u pitanju dimenzija Usluge ishrane van smeštajnog objekta (F=5,299, p=0,001), ispitanici iz kategorije „Ne želim reći” (AS=4,32, SD=0,583) pokazju značajno niže skorove na ovoj dimenziji u odnosu na sve ostale ispitanike. Kada se analizira dimenzija kvaliteta Usluga ishrane samom smeštajnom objektu gde je korisnik boravio dobijemo sledeće pokazatelje (F=14,377, p=0,000) ogleda se u manjem zadovoljstvu koje je isto tako zabeleženo i kod anketiranih posetilaca iz grupe „Ne želim reći” (AS=4,21, SD=0,568) naspram drugih pokazatelja koje se odnosi na ispitanika. Pored toga, ispitanici sa primanjama 40.000 - 50.000 dinara (AS=4,49, SD=0,384) pokazali su značajno niže zadovoljstvo uslugama restorana u poređenju sa anketiranim posetiocima sa primanjima u rasponu od 25.000 - 40.000 dinara (AS=4,58, SD=0,332). Što se tiče usluga smeštaja rezultati su sledeći: (F=7,699, p=0,000) predstavljaju statistički značaj koji je niži jer je samo zadovoljstvo zabeleženo i kod ispitanika koji nisu hteli da se izjasne koliki im je mesečni prihod (AS=3,79, SD=0,417) naspram ostalih posetilaca. Kod kvaliteta medicinskih usluga (F=20,590, p=0,000) može se konstatovati da anketirani posetioci iz grupe „Ne želim reći” (AS=4,14, SD=0,415) iskazuju znatno niže skorove u poređenju na ostale anketirane, pa je potvrđeno i da su anketirani koji ostvaruju mesečni prihod u intervalu od 25.000 - 40.000 dinara (AS=4,56, SD=0,309) imaju značajno više skorove na navedenoj dimenziji kvaliteta u poređenju na anketirane sa primanjama od 40.000 do 50.000 dinara (AS=4,45, SD=0,381). Kada su u pitanju ostale hotelske usluge (F=60,188, p=0,000) ispitanici koji ne žele da otkriju visinu svojih mesečnih primanja (AS=4,27, SD=0,346) imali su značajno niže skorove u odnosu na sve druge anketirane. Naime, anketirani koji ostvaruju primanja od 25.000 do 40.000 dinara (AS=4,69, SD=0,164) iskazali su znatno viće skorove u poređenju sa drugim anketiranima. Posmatrajući celokupan uzorak na skali ZKBT (F=26,256, p=0,000) kod anketiranih posetilaca koji nisu želeli da iskažu visinu svojih mesečnih primanja (AS=4,15, SD=0,316) utvrđeno je da je statistički ključno niže zadovoljstvo pruženim uslugama banja u odnosu na druge posetioce a značajne razlike su potvrđene i kod ispitanika sa primanjama od 25.000 do 40.000 dinara koji su značajno zadovoljniji uslugama u odnosu na ispitanike sa primanjama od 50.000 do 60.000 dinara (AS=4,41, SD=0,421).

Radni status ispitanika

U odnosu na radni status ispitanika, statistički ključne iskazane razlike ovim istraživanjem su potvrđene kod dimenzije kvaliteta-Medicinske usluge dobijeni pokazatelji su sledeći: (F=5,816, p=0,003) i Ostale hotelske usluge (F=8,447, p=0,000). Ove razlike predstavljaju ostvarene razlike koje su visoke i važne su na nivou značajnosti od $p<0,01$. Na dimenziji Medicinske usluge je potvrđeno da ispitanici koji se bave poljoprivredom imaju značajno veće zadovoljstvo (AS=4,73, SD=0,237) u poređenju sa anketiranim posetiocima (AS=4,42, SD=0,481) ili koji su u penziji (AS=4,48, SD=0,385). Analizom dimenzije kvaliteta Ostale hotelske usluge ispitanici koji se bave poljoprivredom (AS=4,77, SD=0,161) su pokazali značajno veće zadovoljstvo na zaposlene (AS=4,48, SD=0,320) ili penzionere (AS=4,57, SD=0,295). Pored toga, potvrđeno je da od ovih usluga veći broj skorova imaju posetioci koji sus a statusom “penzioner” u poređenju na zaposlene koji su iskazali manje zadovoljstvo. Posmatajući druge dimenzije kvaliteta na skali ZKBT ne uočavaju se potvrđene statističke važne razlike u izraženosti skorova u poređenju sa radnim statusom posetilaca.

Diskusija rezultata istraživanja

Cilj ovog istraživanja odnosi se na ispitivanje stepena zadovoljstva korisnika uslugama izabranih banja sa juga Srbije. Istraživanje je sprovedeno na uzorku od 600 ispitanika (N=600) koji su boravili u jednoj od šest banja u Južnoj Srbiji: Prolom banja, Niška banja, Kuršumlijska banja, Lukovska banja, Sijarinska banja i Vranjska banja. Zadovoljstvo korisnika je ispitivano kao globalna ocena svih aspekata koji ulaze u ponudu banja, ali i pojedinačno kroz pet dimenzija: Usluge ishrane i pića izvan smeštajnog objekta u kome su odseli, Usluge ishrane i pića u smeštajnom objektu (u kome su odseli), Usluge smeštaja (sobe), Medicinske usluge i Ostale hotelske usluge. Rezultati istraživanja su pokazali da kod ispitanika postoji visoko, iznad prosečno zadovoljstvo korišćenim banjskim uslugama. Najbolje ocenjeni aspekti su Ostale hotelske usluge i Ishrana van smeštajnog objekta, a najslabije Usluge smeštaja (sobe). Na nivou pojedinih banja, najbolju ocenu generalno je dobila Lukovska banja, a najslabiju Kuršumlijska banja. Pored toga, analizirajući kvalitet usluge ishrane najveću ocenu je ostvarila je Vranjska banja a kada je usluga smeštaja najveću ocenu kvaliteta dobila je Lukovska banja koja pored ove usluge, prednjači i u medicinskim uslugama. Posmatrajući zadovoljstvo posetilaca za druge hotelske usluge najveću ocenu kvaliteta dobila je Prolom banja. Dok najnižu ocenu u svih pet dimenzija aspekata kvaliteta usluga banjskog turizma dobila je Kuršumlijska banja. Važno je napomenuti, da iako postoje statistički značajne razlike u izraženosti zadovoljstva uslugama u odnosu na banju u kojoj su ispitanici boravili, da su sve banje dobile vrlo visoke ocene i da razlike proističu iz nijansi kvaliteta usluga. Pored ispitivanja globalnog zadovoljstva korisnika pomenutih banja i ispitivanjem razlika u izraženosti zadovoljstva u odnosu na banju u kojoj su ispitanici boravili, istraživanje se bavilo i ispitivanjem razlika u izraženosti zadovoljstva banjskim uslugama u odnosu na sociodemografske karakteristike ispitanika. Analizirajući strukturu uzorka u odnosu na pol anketiranih statistički značajne razlike u izraženosti zadovoljstva korisnika ostvarene su za obe dimenzije ishrane (izvan „svog" smeštajnog objekta i u okviru njega). Istraživanje na ukazuje da posetioci muškog pola imaju znatno veći stepen zadovoljstva uslugama ishrane naspram posetilaca ženskog pola. U odnosu na starost ispitanika statistički značajna razlike u izraženosti zadovoljstva ostvarena je na dimenziji kvaliteta Usluge ishrane u smeštajnom objektu. Dobijena razlika ukazuje da ispitanici od 36 do 55 godina pokazuju značajno veće zadovoljstvo tim uslugama u odnosu na starosnu grupu od 56 do 65 godina. Kada govorimo o stručnoj spremi ispitanika, statistički značajne razlike potvrđene su za svih pet dimenzija skale ZKBT, kao i za zbirni prosek skale. Po pitanju ishrane izvan smeštajnog objekta, potvrđeno je da anketirani posetioci sa srednjom školskom spremom iskazuju značajno više skorove u poređenju na druge anketirane. Dakle, potvrđeno je da anketirani sa završenim visokim školskom spremom imaju značajno niže zadovoljstvo tom vrstom usluge naspram anketiranih sa drugih obrazovnih kategorija. Po pitanju usluga ishrane u smeštajnom objektu, potvrđeno je da ispitanici sa visokim stručnim spremama imaju značajno niže zadovoljstvo u odnosu na sve ostale ispitanike. Po pitanju smeštaja, ispitanici iz kategorije ostalo obrazovanje imaju značajno više skorove u odnosu na ispitanike svih ostalih obrazovnih profila. Pored toga je potvrđeno i da ispitanici sa višom spremom imaju značajno veće zadovoljstvo smeštajem u odnosu na ipitanike sa završenom srednjom školom. Na dimenziji Medicinske usluge značajno viši skor je dobijen kod ispitanika iz kategorije ostalo obrazovanje u odnosu na ostale obrazovne kategorije. Posetioci koji su učestvovali u ovom istraživanju sa završenom višom školskom spremom poseduju značajno veće zadovoljstvo koje se odnosi na medicinske usluge naspram ispitanika sa zvanjem visokih strukovnih sprema (Bolonja).

Poređenjem ostalih hotelskih usluga kod anketiranih sa završenim visokim strukovnom spremom potvrđeno je značajno niže zadovoljstvo naspram drugij anketiranih, dok su anketirani sa srednjom stručnom spremom iskazali veće zadovoljstvo tim uslugama u poređenju sa anketiranim iz kategorije ostalo obrazovanje. Analizirajući celokupno zadovoljstvo anketiranih posetilaca u banjskim lečilištima koji se nalaze na jugu Srbije naspram školske spreme anketiranih posetilaca potvrđeno je da posetioci iz kategorije ostalo obrazovanje imaju značajno viši skor naspram drugih obrazovnih kategorija, dok su anketirani sa završenim visokim strukovnim školama, iskazali značajno niži skor u odnosu na sve ostale ispitanike. Kada je reč o mestu stalnog boravka anketiranih posetilaca utvrđena je statistički značajna razlika u izraženosti zadovoljstva anketiranih posetilaca koji su u datom trenutku boravili u banjama koje su predmet ovog istraživanja i dobijene su za sve dimenzije kvaliteta usluga i prosek cele skale ZKBT. Detaljnom analizom koja se odnosila na ishranu ishranu van smeštajnog objekta, anketirani posetioci iz regiona Šumadije i Zapadne Srbije iskazali su značajno niže zadovoljstvo naspram posetioca iz Beogradskog regiona i severa Srbije. Takođe, pružene usluge ishrane u smeštajnom objektu (u kome su boravili), potvrđeno je da posetioci iz dva regiona (Beograd i sever Srbije) iskazuju značajno više skorove u opoređenju sa ostalim posetiocima iz drugih regiona. Takođe, ovo se odnosi i na Medicinske usluge. Kada su u pitanju ostale hotelske usluge, anketirani statistički posetioci iz Beogradskog regiona poseduju značajno veće zadovoljstvo naspram drugih posetilaca. Daljom analizom utvrđeno je da ispitanici sa severa Srbije iskazuju značajno veće zadovoljstvo tim uslugama u poređenju sa anketiranim posetiocima iz regiona Šumadije i Zapadne Srbije, odnosno Južne i Istočne Srbije. Generalno na nivou cele skale ZKBT, statistički značajne razlike su potvrđene kod ispitanika iz regiona Beograda i ispitanika sa severa Srbije koji imaju značajno veće zadovoljstvo uslugama banja u odnosu na preostala dva posmatrana regiona. Kada govorimo o bračnom statusu ispitanika statistički značajne razlike u izraženosti zadovoljstva korisnika uslugama banjskog turizma su potvrđene za svih pet dimenzija skale ZKBT, kao i za proseke cele skale. U odnosu na usluge ishrane van smeštajnog objekta, statistički značajne razlike su potvrđene kod udovaca ili udovica koji imaju značajno veće zadovoljstvo na ovoj dimenziji u odnosu na sve ostale ispitanike. Dimenzija kvaliteta Usluge ishrane u samom smeštajnom objektu statistički značajno viši skorovi su postignuti kod udovaca naspram ispitanika koji su u braku ili su razvedeni. Kod dimenzije Usluge smeštaja značajno viši skorovi subraku ostvareni kod posetilaca koji su slobodni naspram drugih posetilaca iz ovog istraživanja. Naime, posetioci koji su u braku ili vanbračnoj zajednici iskazali su značajno niže zadovoljstvo uslugama smeštaja naspram razvedenih posetilaca. Posmatrajući Medicinske usluge, posetioci koji su u braku su iskazali značajno niže zadovoljstvo uslugama naspram drugih. U odnosu na Ostale hotelske usluge potvrđeno je da ispitanici koji su u braku istakli su opaženo niže zadovoljstvo naspram ostalih posetilaca. Utvrđeno je da posetioci koji su slobodni iskazuju značajno niže zadovoljstvo hotelskim uslugama nasprram udovaca ili udovica. Posmatrajući celokupan uzorak na nivou cele skale ZKBT statistički značajne razlike su opažene kod posetilaca koji su u braku i koji su manje zadovoljni uslugama koje im banja pruža naspram posetilaca sa ostalim bračnim statusima. Što se tiče visine mesečnih primanja posetilaca, statistički značajna razlika u zadovoljstvu potvrđene su kod svih pet dimenzija i zbirni prosek cele skale ZKBT. Naknadna analiza je pokazala da kada je u pitanju usluge ishrane (obe dimenzije) ispitanici iz kategorije „Ne želim reći” pokazuju značajno niže skorove na ovoj dimenziji u odnosu na sve ostale. Pored toga, ispitanici sa primanjama 40.000 - 50.000 dinara pokazali su značajno niže zadovoljstvo uslugama ishrane u smeštajnom objektu u odnosu na ispitanike sa primanjama od 25.000 do 40.000 dinara. Kada je u pitanju usluga smeštaja statistički značajno niže zadovoljstvo ovim atributom usluga opaža se kod posetilaca koji ne žele da se izjasne o visini mesečnih primanja naspram drugih posetilaca. Kod atributa usluga koje se odnose na Medicinske usluge potvrđeno je da posetioci iz kategorije „Ne želim reći” imaju značajno niže skorove naspram drugih, ali je potvrđeno i da posetioci sa primanjima od 25.000 do 40.000 dinara poseduju značajno veće skorove na ovoj dimenziji naspram posetilaca sa primanjima od 40.000 do 50.000 dinara. Kod Ostale atributa hotelskih usluga posetioci koji ne žele da otkriju visinu svojih mesečnih primanja imali su znatno niže skorove naspram drugih. Dakle, posetioci sa primanjima od 25.000 do 40.000 dinara iskazali su značajno više skorove u odnosu na sve ostale posetioce kada je u pitanju zadovoljstvo navedenim uslugama.

Celokupan uzorak skale ZKBT koji se odnosi na visinu mesečnih primanja ispitanika, potvrđeno je da razlike postoje kod ispitanika koji ne žele da otkriju visinu svojih mesečnih primanja i zastupljeno je niže zadovoljstvo banjskim uslugama u odnosu na sve ostale ispitanike. Značajne razlike su potvrđene i kod ispitanika sa primanjama od 25.000 do 40.000 dinara koji su značajno zadovoljniji uslugama u odnosu na ispitanike sa primanjama od 50.000 do 60.000 dinara. Na kraju, kada je u pitanju radni status ispitanika, statistički značajne razlike su potvrđene na dimenzijama Medicinske usluge i Ostale hotelske usluge. Na dve dimenzije-Medicinske i Ostale hotelske usluge je potvrđeno da ispitanici koji se bave poljoprivredom imaju značajno veće zadovoljstvo u odnosu na zaposlene i penzionere. Pored toga, penzioneri imaju značano više skorove u odnosu na zaposlene ispitanike.

Zaključak

Savremena destinacija zdravstvenog turizma svoje postojanje bazira na prirodno lekovitim faktorima, neophodnim specijalizovanim objektima, kvalitetnim kadrovima osposobljenim za pružanje specifičnih zdravstvenih tretmana i drugih uslužnih dalatnosti, ali i na postojanju efikasnog sistema koji obuhvata kompletnu ponudu vezanu za gostoprimstvo, smeštaj i animaciju, kako bi na taj način boravak turistički doživljaj u destinaciji bili što prijatniji. Da bi jedna banja mogla da bude konkuretna i da dostigne veću potražnju od one koja je motivisana dosadašnjom potrebom za banjskim lečenjem, ona mora da postane savremena destinacija zdravstvenog turizma (Perić, Sekulić, 2023). Ponuda mora biti obogaćena sadržajima za pružanjem raznovrsnih spa i wellness usluga u cilju promovisanja, stabilizovanja i vraćanja fizičkog, mentalnog i socijalnog dobrostanja uz pomoć prirodno lekovitih i drugih ekoloških faktora, kao i sportsko-rekreativnih i kulturno-zabavnih sadržaja.

Na osnovu svega iznetog, može da se zaključi sledeće: iako se posmatrane banje sa juga Srbije međusobno razlikuju po više značajnih kriterijuma, istraživanje je nedvosmisleno pokazalo da su ispitanici generalno zadovoljni ugostiteljskim i medicinskim uslugama. Ovo nezavisno od starosne dobi ispitanika, obrazovnog nivoa, regiona Srbije odakle dolaze, bračnog statusa, visine mesečnih primanja i radnog statusa. Međutim, nadležni u posmatranim banjskim centrima nikako ne bi smeli da se opuste zbog očiglednog zadovoljstva velikog broja ispitanika. To se odnosi kako na brojne pojedinačne nosioce ponude (hotelijere, restoratere, medicinske ustanove, prateće delatnosti) tako i na opštinske uprave i lokalne turističke organizacije. Istraživanja na osnovu potreba i očekivanja savremenih turista morali bi da budu jedna od polaznih osnova kod unapređenja postojećih i kreiranja potpuno novih turističkih i medicinskih sadržaja u svakoj od šest posmatranih banjskih destinacija. U narednim istraživanjima neophodno je uključiti i zaposlene kao ispitanike, kako bi se sagledale njihove potrebe i problemi u procesu rada. Bez zadovoljstva i motivacije zaposlenih nema ni kvalitetne usluge što turisti vrlo brzo primate. Najvažnije aktivnosti u narednom periodu koje menadžement svih posmatranih banja mora da sprovede su modernizacija medicinske opreme, adaptacija postojećih i izgradnja novih smeštajnih kapaciteta, unapređenje saobraćajne i komunalne infrastrukture, uvođenje novih wellness i spa programa, unapređenje promotivnih aktivnosti prvenstveno kroz aktuelne društvene medije, stalna edukacija zaposlenih (turističkih radnika i medicinskog osoblja). Sa druge strane, i država treba da doprinese jačanju konkurentske pozicije domaćih banja, prvenstveno odgovarajućom kombinacijom instrumenata institucionalne podrške, u skladu sa trendovima i promenama na savremenom turističkom tržištu. Imajući u vidu sprovedeno istraživanje i njegove rezultate, može da se izvrši ocenjivanje sve četiri hipoteze (H0 - H3). Opšta hipoteza da su korisnici generalno zadovoljni ponuđenim sadržajima izabranih banja Juga Srbije, pokazala se kao tačna. Iako se radi o ispitanicima koji su vrlo heterogeni po više kriterijuma, treba istaći njihov jedinstven stav po ovom pitanju. Prva od tri posebne hipoteze (H1) da su korisnici zadovoljni medicinskim uslugama koje im se pružaju u banjama, takođe je potvrđena sprovedenim istraživanjem. Hipoteza H2 da su korisnici zadovoljni hotelskim uslugama navedenih banja, potvrđena je kao ispravna kroz anketno istraživanje. Istraživanje sprovedeno među ispitanicima u celosti potvrđuje i treću posebnu hipotezu (H3) po kojoj su korisnici zadovoljni uslugama ishrane i pića koje su im pružene za vreme svog boravka u jednoj od izabranih banja sa Juga Srbije.

Zahvaljujući brojnim lekovitim izvorima tradicija banjskog turizma u Srbiji je veoma duga, ali se kroz istoriju način i svrha njihovog korišćenja menjala. Banjska mesta su na svojevrstan način bila slika društva i odslikavale su zdravstvenu i medicinsku kulturu jednog vremena. Kao jedan od ključnih faktora privrednog aktiviranja i razvoja Srbije i poboljšanja standarda stanovništva, nameće se zdravstveno-rekreativni turizam. On nije u dovoljnoj meri iskorišćen, iako postoje izuzetni prirodni uslovi, bogato kulturno-istorijsko, etnografsko nasleđe i prepoznatljive turističke destinacije (Perić, Sekulić, 2023). Samo detaljno izrađeni planovi urđenja i zaštite već postojećih, i stručno planiranje razvoja novih lokaliteta, mogu od gore pomenutih banja napraviti konkuretnu destinaciju koja će privući pažnju domačih i stranih posetilaca. Da bi se to ostvarilo neophodni su dobro osmišljeni razvojni planovi države, odgovarajuća zakonska regulativa i finansijska sredstva, uz konsultacije sa timovima stučnjaka iz ove oblasti.

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INDICATORS OF USER SATISFACTION OF SPA SERVICES IN SOUTHERN SERBIA

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Abstract

Spas have a particularly important place in the tourism of the Republic of Serbia, especially when it comes to domestic tourists. In the last representative year for tourism before COVID-19 (2019), they participated with 18% of the total number of tourist arrivals, i.e. with 28% of the total number of overnight stays. The key criterion for the selection of spas in this research is their territorial affiliation - the area of the southern part of Serbia, distributed in two municipalities (Kuršumlija and Medveđa), two cities (Niš and Vranje), i.e. in four districts (Nišava, Toplički, Jablanički and Pčinjski). The mentioned spas differ significantly from each other in terms of tourist traffic, structure and quality of services. Apart from that, some of them certainly do not belong to the most visited and famous domestic spas. On the other hand, we are talking about very promising destinations that are constantly improving their offer, especially when it comes to Lukovska Banja. One of the key assumptions for improving the competitive position of each of the six selected spas is to harmonize their offer with the wishes and expectations of modern tourists, that is, the level of tourist satisfaction, which is also the subject of research.

Key words: thermal mineral springs, spa tourism, user satisfaction, South Serbia

Introduction

Staying in spas, i.e. using thermal mineral waters, healing mud and healing gases, is one of the oldest forms of tourism. Even ancient peoples recognized the importance of thermomineral springs in the treatment of certain symptoms

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that the patient had (Smit, 2017). In order to recover active and serving soldiers in ancient Rome, numerous spas and baths with accompanying infrastructure were built at the sources of healing and thermal waters. Some of the most famous European spa centers have roots from the ancient period - St. Moritz in Switzerland, Vichy in France, Wiesbaden in Germany. The same applies to many domestic spas (Stojanović, Stankov, 2022).

The use of the benefits of medicinal waters continued in the Middle Ages and continues to this day. However, medicinal waters were not only used for recovery and treatment of certain diseases and conditions, but also for recreational purposes. Major social and economic changes in Europe in the second half of the 19th century, brought about by the new pre-industrial society, caused spa centers to become very frequented places where users stay for prevention and rehabilitation brought about by the new pre-industrial society (Stojanović, 2007). In other words, there are two main reasons for staying in spas. The first is traditional and is based on treatment, rehabilitation with medical treatment, mainly in inpatients, rehabilitation centers and specialized spa hospitals. The second motive is based on recreation, entertainment, sports facilities, entertainment and active rest. This means that spas (for a long time) are not only visited by sick people for treatment, but also by completely healthy people only for other reasons. Bearing in mind the above, we come to the key question: has a spa recognized the changes in the tourist market and has it adapted its offer to modern tourists and new motives for staying in a spa? The introduction of wellness and spa content, the creation of specific treatments for different segments of tourist demand, appropriate spa infrastructure and superstructure, non-passionate offer, excursion offer, the expertise of the medical staff represent what sets a spa apart from numerous competitors. One of the most important trends in the tourist market is "going to the favor" of spa tourism. Namely, modern tourists pay special attention to preserving their health (physical and mental), that is, preserving and improving their health. Taking care of your health and personal safety (during travel and stay in the destination) becomes an important factor when deciding to use tourist services. The mentioned trend gained particular importance from 2020 due to the corona virus. Then wellness and spa facilities experienced their expansion, especially since domestic tourists (almost in all countries of the world) could not travel abroad due to restrictions on free movement. The benefits of spa (health) tourism in relation to many branches of tourism are obvious - less seasonality (greater uniformity of tourist traffic throughout the year), daily consumption is higher than the consumption of the average tourist, the average length of stay is longer than in other types of tourism, the least elastic form tourism, employs a large number of people of different profiles (Podovac, Tončev, 2015). In the territory of the Republic of Serbia, there are about 300 mineral springs (Pavlović, Bojičić, 2017) and over 40 spas. The law on spas defines the most important terms (spa, natural healing factor), conditions regarding the arrangement and equipment of the area and other important issues. In order for an area to be a spa, it must have an organized health service, facilities and devices for the use of natural healing factors, facilities for the accommodation and stay of visitors, as well as appropriate communal and other facilities (water supply, sewerage, roads, PTT, electrical facilities, public green and recreational areas (Article 2 of the aforementioned law). Therefore, spas are decided with expressed health and recreational elements, with the application of various natural elements such as: thermal mineral springs, climatic elements and vegetation, and because of this, this type of place arouses the interest of users to visit and stay (Jovičić, 2008). Also, the fact that spas employ a large number of medical and non-medical workers is the most important thing for providers of spa tourism to recognize the trends on the market and to adapt their offer to the needs. and the expectations of today's tourists.

Natural and anthropogenic values of spas in southern Serbia

The territorial distribution of domestic spas indicates their significant concentration in the south of the Republic of Serbia. This is more than enough reason for them to be the subject of research, the focus of which is to determine the compliance of their existing offer with the expectations and trends of the bearers of contemporary tourist demand. With less than 7,000 arrivals and 39,000 overnight stays in 2022, the Niška spa belongs to the spas with a more modest tourist traffic (five times less than the most visited spa included in the research - Lukovska banja). Administratively it belongs to the City of Nis, it is located near the E-80 highway (Nis-border with Bulgaria) at

250 m above sea level. Its thermal waters have been used since ancient times. Today, Niška spa is recognizable for its radioactive waters, medicinal gases and medicinal mud intended primarily for the treatment of cardiovascular diseases, post-traumatic conditions, and diseases of the respiratory organs. The attractiveness of this spa is completed by the proximity of Niš (10 km), Jelašnička and Sićevačka Gorges (3 and 5 km respectively), Sićevo Monastery (XIV century), Cerjanska Pećina. The Kuršumli spa started operating again in February 2023. Before that, it was closed for more than a decade. The backbone of the offer is the reconstructed and extended Hotel "Planinka" (former Hotel "Žubor"), a wide range of healing waters (alkaline, sulphurous, ferric, carbonic acid) with a temperature range from 14 to 67°C, as well as healing mud. It is located 11 km from the town of Kuršumlija, near the Niš-Priština road, at 442 m above sea level. It is known for the treatment of rheumatism (several types), neurological diseases, metabolic diseases, post-traumatic conditions and gynecological problems. In its immediate vicinity are numerous Serbian medieval churches and monasteries, Đavolja varoš, Kopaonik National Park. With 35,000 arrivals and 205,000 overnight stays, Lukovska banja is the fifth spa in terms of total tourist traffic in the whole of Serbia in 2022 and the first in the observed group of six spas from the south of Serbia. Domestic guests dominate (86% of arrivals and 91% of overnight stays), while the average length of stay is 5.8 days. It is located in the municipality of Kuršumlija, on the eastern slopes of Kopaonik at the highest altitude (668 masl) of all Serbian spas. It is about 100 km from Niš, Priština and Kruševac, as the nearest larger cities, 300 km from Belgrade, and about 380 km from Novi Sad. The mineral springs of this spa spring in a narrow zone, about 400 m long, on both sides of the river Števa, as well as in the river bed. The temperature of these springs ranges from 22 to 65°C. The onion spa helps with the following diseases: inflammatory rheumatism, degenerative rheumatism, cervical and spinal spondylosis, extra-articular rheumatism, osteoporosis and osteopathy, all kinds of sports injuries and conditions after bone fractures and surgical interventions (Radnović et al., 2019). In 2022, 12,366 arrivals and 93,568 overnight stays were recorded in Sijarinska Banja, resulting in an average length of stay of seven and a half days. The number of visitors to this spa is growing, with 99% of tourist traffic coming from

domestic guests. It is located in the municipality of Medveđa in the Jablanički district. It is almost equally distant from the three nearest larger cities in Serbia - Priština, Vranje and Leskovac (only about 50 km by air), 95 km from Niš, and 320 km from Belgrade. It has 18 sources of healing water of different physical and chemical composition with a temperature ranging from 32 to 72°C.

It is recognizable by numerous hot water geysers with a water column eight meters high. The spa helps in the treatment of the following diseases: rheumatic diseases, locomotor diseases and post-traumatic conditions, diseases of the digestive tract, gynecological diseases, blood diseases, diseases of the respiratory organs, cardiovascular diseases and skin changes (Marinković et al., 2016). Vranjska banja has the southernmost position among the spa destinations. It is recognizable by the very high temperatures of the healing waters (up to 96°C), suitable for the treatment of gynecological diseases, anemia, diseases of the respiratory organs, rheumatism, neuralgia. It is only a few kilometers away from the E-75 highway, 10 km from the first major city of Vranje, 105 km from the regional centers of Skopje, 115 km from Niš, and 340 km from Belgrade. However, in spite of excellent traffic connections, proximity to major emission markets, tradition, natural predispositions and anthropogenic contents in a non-possessed environment, Vranjska banja achieves modest tourist traffic. Thus, in 2022, 2,600 arrivals (mainly domestic visitors) and 22,266 overnight stays were registered, the least of all six spas included in the research. The planned modernization and expansion of the existing spa facilities will certainly improve the market position of this spa. Prolom spa is one of the youngest domestic spas. It was opened in 1968, and received the status of spa in 1977. It is located at the foot of the Radan mountain, at an altitude of 550 to 668 m above sea level in the municipality of Kuršumlija, while it is 23 km from the town of the same name. The thermal waters of this spa have a temperature of 26.4 to 31°C and are used in the treatment of certain diseases of the kidneys, digestive tract, eczema, psoriasis, extra-articular rheumatism and other diseases. Among the significant attractions near this spa are Đavolja varoš (11 km), the church of Sveta Petka from the Nemanjić era, the Lazarica log cabin church from the 19th century (2.5 km from the hotel "Radan") and the Neolithic settlement of Pločnik, which is 28 km (https://banjeusrbiji.com/prolom-banja/). The common characteristic of the mentioned spas is that tourist traffic is growing, that a significant part of spa guests use vouchers for vacations in Serbia, that their offer is being improved in a quantitative and qualitative sense, but also that the representation of foreign guests is extremely small, from a negligible 1% in Sijarinska banja up to a modest 10-15% in Lukovska banja.

Research methodology

The subject of the research *is determining the degree of satisfaction with the current state of catering and medical services in selected spas in Southern Serbia.* ***The primary goal*** *of the research is to identify the elements of the tourist offer of spa tourism in the southern part of Serbia.*

Secondary goal of the research*: establishment of a proposal to improve the quality of services in spas in the southern part of Serbia.*

The goal of the work *is: the connection of all elements of spa tourism in the area of Southern Serbia.*

The research started from a general hypothesis as an answer to the investigated problem, H_0*: Users are generally satisfied with the offered contents of the selected spas.*

The general hypothesis is complemented by special hypotheses. The research starts from the following three auxiliary hypotheses:

H1: Users are satisfied with the medical services provided to them in the selected spas.

H2: Users are satisfied with the services provided by the accommodation facilities where they stayed during their stay in one of the offered spas.

H3: Users are satisfied with the food and beverage services provided to them during their stay in one of the selected spas from South Serbia.

Statistical methods and techniques applied in the work:

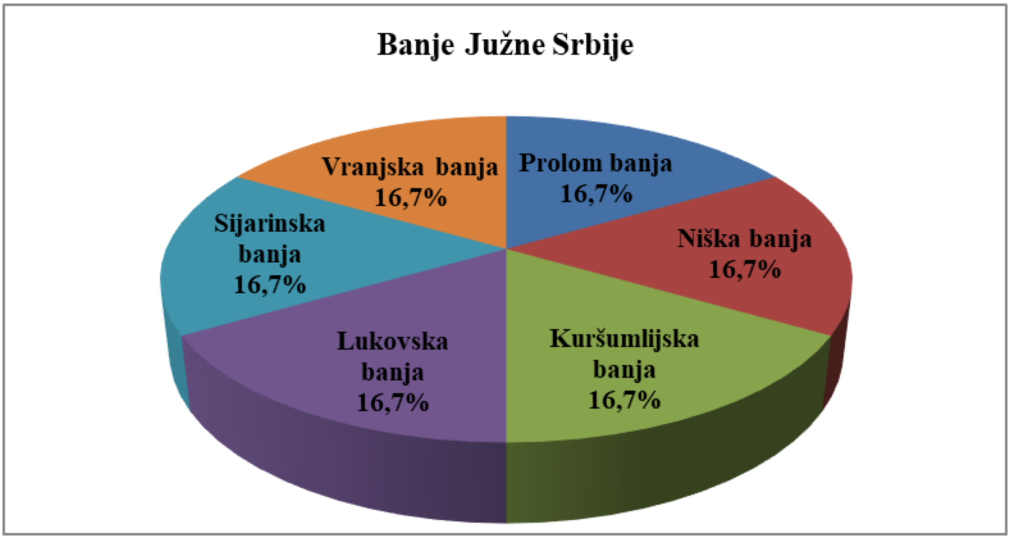
- To display the sample - frequencies (f) and percentages (%);
- To check the reliability of the instrument - Cronbach's alpha coefficient (α);

- To check the normality of distribution e- Kolomogorov-Smirnov test (K-S) and significance (p), skewness and kurtosis;
- To display the expressiveness of measured dimensions - Arithmetic mean (AS) and Standard deviation (SD);
- To show the significance of differences in expression - Wilcoxon rank test (Z) and significance (p);
- To show the significance of differences in the expression of scores in relation to gender (two categories) – Mann - Whitney's U test (Z) and significance (p);
- To show the significance of differences in relation to other independent variables (more than two categories) - Kruskal-Wallis test (χ^2) and significance (p).

Sample research

The total research sample consists of 600 respondents of both sexes residing in the Republic of Serbia. The research was conducted in the period from mid-June to the beginning of July 2023, through a personal interview. The main criterion for selecting the respondents is that they personally used the services of one of the six selected spas in the south of Serbia: Prolom spa (16.7%), Niške spa (16.7%), Kuršumljski spa (16.7%), Lukov spa (16.7%), Sijarinska spa (16.7%) and Vranjska spa (16.7%). The indicators shown in Chart 1 indicate a uniform representation of the selected spas used by the respondents (N=100). Also, the main motive of all respondents for staying in the spa is to improve their health condition (N=600).

Chart 1. Spas of South Serbia included in the research



Izvor: Autori, 2023.

In relation to the gender of the respondents, more than half of the entire sample is made up of women (60.2%), while men represent the rest (39.8%). When it comes to the age of the respondents, the most numerous participants in the research with participation of (52.2%) are people over the age of 65, i.e. "seniors", or as they are informally called, representatives of the baby boom generation. In second place are respondents aged 56 to 65 (38.2%), while the age group 36 to 55 is the least represented (9.7%). Younger respondents, under the age of 35, did not participate in the research. In relation to vocational education, the majority of respondents (slightly less than a third of the entire sample) have a secondary vocational education, more precisely (30.2%). They have higher education (29.8%), and higher education (28.3%). The smallest part of the sample of respondents is in the other category (11.7%) and has obtained some other level of education. When we talk about the respondents' place of residence (Table 4), most of them are from the region of Šumadija and Western Serbia (29.8%). Respondents residing in the region of Southern and Eastern Serbia (26.7%) are in second place in terms of number, and respondents from the region of Northern Serbia (Vojvodina) are in third place with (22.5%). The region of Belgrade is the least represented in the survey

(21.0%), while the survey did not include respondents residing in Kosovo and Metohija. The sample is approximately uniform according to the respondent's place of residence. When it comes to the marital status of the respondents, almost 2/3 of the entire sample is married or in a cohabitation (65.3%). In addition, (12.2%) respondents are single, i.e. not in a relationship, (16.3%) respondents are divorced, and (6.2%) are widowed. The sample is not uniform according to the marital status of the respondents. In relation to the level of monthly income, half of the respondents (50.3%) have monthly incomes from 25,001 to 40,000 rsd, one quarter from 40,001 to 50,000 rsd, and (15.5%) of respondents have incomes from 50,001 to 60,000 rsd. The smallest part of the research sample consists of respondents who did not want to disclose their monthly income (9.7%). When it comes to the work status of the respondents, the vast majority (more than four fifths of the entire sample) are pensioners (86.3%). Respondents in employment (9.5%) and farmers (4.2%) are represented to a much smaller extent.Rezultati istraživanja

Reliability of the instrument

In this paper, the scale "Satisfaction of users of spa tourism" (ZKBT) was used, which contained 30 closed-ended statements, and the respondents declared themselves with a range of grades from 1 - I am not at all satisfied to 5 - I am completely satisfied. In order to determine the reliability of the scale, a check was made with the help of Cronbach's alpha coefficient (α), the height of which is primarily influenced by the number of statements in the questionnaire. Subsequent checking of this ZKBT scale revealed that the Cronbach's alpha coefficient was $\alpha=0.822$ ($N=30$). So this reliability score ($\alpha>0.80$) is high (Table 1).

Table 1. Reliability of the instrument

Scale	Cronbach's alpha coefficient (α)	Item number
ZKBT	0,822	30

Izvor: Autori, 2023.

Satisfaction with services in selected spas in Southern Serbia

The ZKBT scale consists of 30 statements modeled on a Likert scale. User satisfaction is shown as the average of the sum of all statements (from 1 to 5), a higher score is identified as greater satisfaction. The claims are grouped into five dimensions that refer to certain aspects of the services that the respondents used when staying in the spa: Food services outside the accommodation facility where they stayed, Food and beverage services in the facility where they stayed, Accommodation services (rooms), Medical services and other hotel services. The research refers to the two most common types of services in spa tourism - catering (accommodation, food and drinks) and medical (services provided by doctors, technicians, as well as medical equipment with which therapies are induced). Other services that include excursions, animations, tourist tours to get to know the place as well as possible are not included in this research. The conclusion of this survey shows that there is high, even above average user satisfaction with the services provided in the selected spas in Southern Serbia. The average at the level of the whole scale is AS=4.44 and SD=0.293. The lowest score is 3 and the highest is 5 (Table 2).

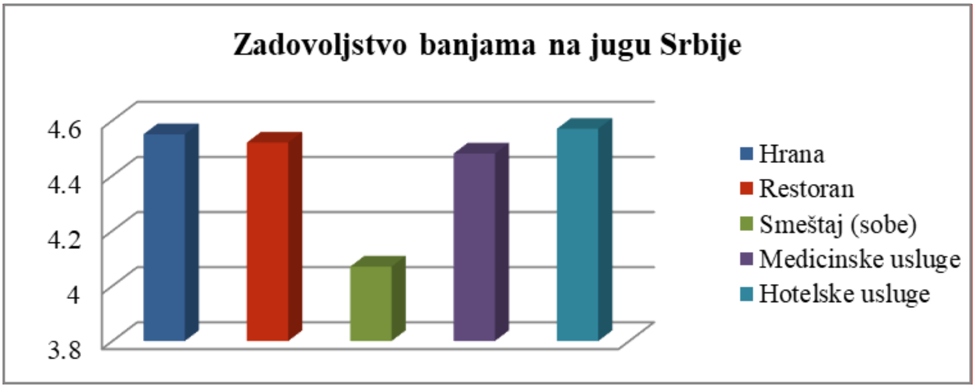
Table 2. User satisfaction with spa tourism

Scale/Subskala	MIN	MAX	AS	SD
Food and beverage services outside the accommodation facility in which they stayed away	2	5	4,55	0,518
Food and beverage services in the facility where they stayed	3	5	4,52	0,416
Accommodation services (rooms)	3	5	4,07	0,513
Medical services	3	5	4,48	0,393
Other hotel services	3	5	4,57	0,297
ZKBT	3	5	4,44	0,293

Source: Autori, 2023.

High marks were also received when it comes to certain aspects of spa tourism services. For all five dimensions, expression above 4.00 (range from 1 to 5) was obtained, and respondents showed the greatest satisfaction in relation to "other hotel services" (AS=4.57, SD=0.293) and "food services outside the accommodation object" (AS=4.55, SD=0.518). Immediately after, "food and beverage services in the accommodation facility" (AS=4.52, SD=0.416) and "medical services" (AS=4.48, SD=0.393) follow. The lowest score was obtained in relation to user satisfaction with "accommodation services (rooms)" in the facility where they stayed (AS=4.07, SD=0.513) (Chart 2).

Graph 2. Satisfaction with services in selected spas in Southern Serbia



Source: Authors, 2023.

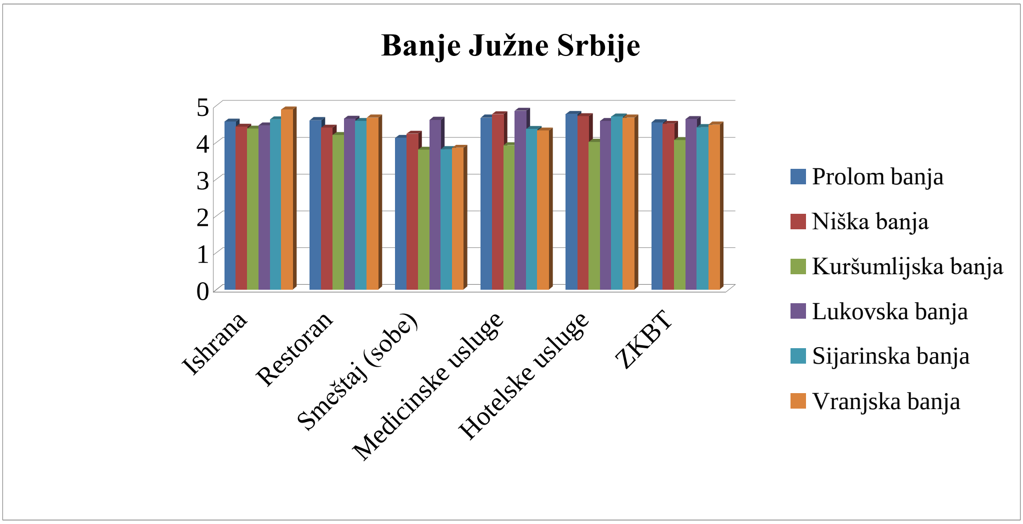
Comparative analysis

In addition to the examination of the general satisfaction of the users of the services of the selected spas in the south of Serbia, the task of the research was to examine their satisfaction in relation to the spa in which they stayed and the essence of their stay, but also in relation to the socio-demographic characteristics of the respondents (gender, age, professional qualification, place of residence, marital and employment status and amount of monthly income).

The spa where the respondents stayed

If we look at the spa where the respondents stayed, the analysis reveals statistically significant differences in the expression of user satisfaction with the services provided for all five dimensions of the ZKBT scale that were used in this research, as well as for the average of the entire scale. All obtained differences show that they are high and significant at the significance level of $p<0.01$. At the overall level, for the entire ZKBT scale ($F=73.495$, $p=0.000$), respondents who stayed in Lukovska banja (AS=4.63, SD=0.217) showed significantly higher satisfaction compared to respondents who stayed in any spa another spa, while respondents who stayed in Kuršumlijska banja (AS=4.06, SD=0.264) showed significantly less satisfaction compared to users who stayed in other spas included in the research. Regarding food services outside the accommodation facility ($F=14.577$, $p=0.000$), respondents who stayed in Vranjska spa showed significantly higher satisfaction (AS=4.89, SD=0.125) compared to respondents who stayed in other spas . Respondents who stayed in the Kuršumli spa (AS=4.37, SD=0.583) showed significantly lower satisfaction with this type of service compared to respondents who stayed in the Prolo, Sijarinska and Vranjska spas. When it comes to food and beverage service in the facility where they stayed ($F=22.677$, $p=0.000$), respondents who stayed in Niška spa (AS=4.40, SD=0.295) and Kuršumlijska spa (AS=4, 20, SD=0.488) showed significantly lower satisfaction compared to respondents who stayed in other spas. In relation to accommodation services ($F=56.838$, $p=0.000$), respondents who stayed in Lukovska banja (AS=4.61, SD=0.299) showed significantly higher satisfaction compared to respondents who stayed in other spas, while respondents who stayed in Kuršumlijska banja (AS= 3.80, SD=0.405) showed significantly less satisfaction with accommodation compared to respondents who stayed in Prolom banja, Niška banja or Lukovska banja. When it comes to medical services ($F=233.258$, $p=0.000$), respondents from Lukovska spa (AS=4.86, SD=0.145) showed significantly higher satisfaction compared to respondents who stayed in other spas. Respondents who stayed in the Kuršumli spa (AS=3.92, SD=0.278) showed significantly lower satisfaction with medical services compared to other respondents.

Graph 3. Differences in the expression of ZKBT in relation to the spa



Source: Authors, 2023.

In the end, in relation to other hotel services (F=344.647, p=0.000), it was confirmed that respondents who stayed in Prolom spa (AS=4.77, SD=0.187) were significantly more satisfied with those services compared to all other respondents. Respondents who stayed in Niška spa (AS=4.71, SD=0.194) showed significantly higher satisfaction compared to respondents who stayed in Kuršumlijska or Lukovska banja. In relation to the gender of the respondents, statistically significant differences in the expression of satisfaction of users with spa tourism obtained in terms of nutrition outside their accommodation facility (t=2.778, p=0.006) and within their accommodation facility (t=2.430, p=0.015). The first difference is high and significant at the $p<0.01$ level, and the second is significant at the $p<0.05$ level. The obtained findings show that male respondents have a significantly higher degree of satisfaction with food services (AS=4.63, SD=0.464, respectively AS=4.57, p=0.367) compared to female respondents, who had lower satisfaction with these services.

On the other dimensions of the ZKBT scale, as well as on the average of the entire scale of users' satisfaction with spa tourism, no statistically significant differences were confirmed in the expression of satisfaction in relation to the gender of the respondents. It is interesting that, in general, men scored higher on all dimensions, with the exception of the "accommodation service (room)" dimension, on which slightly higher satisfaction was obtained among women. When it comes to the age of the respondents, statistically significant differences in the expression of user satisfaction with spa tourism were obtained in relation to the dimension "Food and beverage services in their accommodation facility" ($F=3.087$, $p=0.046$). The obtained difference is significant at the significance level of $p<0.05$ and indicates that respondents aged 36 to 55 years (AS=4.60, SD=0.335) show significantly higher satisfaction with those services compared to respondents aged 56 to 65 years. (AS=4.47, SD=0.443). On the other dimensions of the ZKBT scale, as well as on the overall average of the entire scale, no statistically significant differences in the expressiveness of the scores in relation to the age of the respondents were confirmed. What is noticeable is that "younger" respondents aged 36 to 55 showed the greatest satisfaction on all dimensions. The exception is the dimension of medical services, where the highest expression was obtained in respondents over 65 years old (AS=4.49, SD=0.407).

Educational level of the respondents

In relation to the professional qualification of the respondents, statistically significant differences were confirmed for all five dimensions of the ZKBT scale, as well as for the overall average of the scale of user satisfaction with spa tourism. All obtained differences are high and significant at the significance level of $p<0.01$. On the dimension "Food services outside their accommodation facility" ($F=20.448$, $p=0.000$) it was confirmed that respondents with secondary education (AS=4.74, SD=0.354) have significantly higher scores compared to all other respondents. Also, it was confirmed that respondents with completed higher vocational education (AS=4.33, SD=0.574) have significantly lower satisfaction with the observed type of service compared to respondents of all other educational profiles. Respondents with a higher education degree (AS=4.33, SD=0.481) have significantly lower satisfaction with food services outside their accommodation facility ($F=20.585$, $p=0.000$) than all other respondents. In addition, respondents with completed higher vocational training (AS=4.33, SD=0.387) have significantly lower satisfaction with food services in the accommodation facility itself compared to respondents from the category of other education (AS=4.69, SD=0.331). When it comes to accommodation services (F=34.840, p=0.000), respondents from the "other education" category (AS=4.60, SD=0.324) have significantly higher scores on this dimension compared to respondents from all other educational profiles. In addition, it was confirmed that respondents with a higher education (AS=4.06, SD=0.496) have significantly higher satisfaction with accommodation compared to respondents with a completed secondary education (AS=3.94, SD=0.504). On the dimension of Medical Services (F=32.315, p=0.000) a significantly higher score was obtained for respondents from the other category (AS=4.87, SD=0.137) compared to respondents from other educational categories. Also, respondents with a higher education (AS=4.47, SD=0.350) have significantly higher satisfaction with medical services compared to respondents with a higher professional education (AS=4.38, SD=0.482). In relation to the dimension of other hotel services (F=45.469, p=0.000), significantly lower satisfaction was confirmed in respondents with completed higher vocational education (AS= 4.38, SD=0.482) compared to all other respondents. Also, it was confirmed that respondents with secondary education (AS=4.69, SD=0.138) show greater satisfaction with those services compared to respondents from the other education category (AS=4.58, SD=0.376). Finally, when it comes to the general satisfaction of users with spa tourism in the south of Serbia (F=36.612, p=0.000), it was confirmed that respondents from the category other (AS=4.66, SD=0.208) have a significantly higher score compared to all other educational categories of respondents, and respondents with a higher vocational education degree (AS=4.29, SD=0.317) have a significantly lower score compared to all other respondents.

The respondent's place of residence

In relation to the respondent's place of residence, statistically significant differences in the expression of satisfaction of users of spa services were obtained for the dimensions Food services outside the accommodation facility (F=3.518, p=0.015), Food services in the facility where they stayed (F=6.818, p= 0.000), Medical services (F=8.816, p=0.000), Other hotel services (F=19.213, p=0.000) and Average of the entire scale of ZKBT (F=11.426, p=0.000). The first difference is significant at the $p<0.05$ significance level, and all other differences are significant at the $p<0.01$ level. On the dimension of accommodation services (rooms), no statistically significant differences were confirmed in the expression of user satisfaction in relation to the respondent's place of residence (F=1.767, p=0.152). Subsequent analysis showed that when it comes to food service outside the accommodation facility, respondents from the region of Šumadija and Western Serbia (AS=4.46, SD=0.602) show significantly lower satisfaction compared to respondents from northern Serbia (AS=4.60 , SD=0.542) or the Belgrade region (AS=4.64, SD=0.441). In relation to food services in the accommodation facility, it was confirmed that respondents from the Belgrade region (AS=4.59, SD=0.413) and respondents from the north of Serbia (AS=4.61, SD=0.424) have significantly higher scores on this dimension. in relation to respondents in Šumadija and Western Serbia or in relation to respondents from Southern and Eastern Serbia. When it comes to medical services, it was also confirmed that respondents from Belgrade and northern Serbia show significantly higher satisfaction compared to respondents who reside in Šumadija and the region of Western Serbia and respondents who reside in the region of Southern and Eastern Serbia. When it comes to Other hotel services, respondents residing in the Belgrade region (AS=4.72, SD=0.231) have significantly higher satisfaction with these services compared to other respondents. Also, it was confirmed that respondents from the north of Serbia (AS=4.60, SD=0.249) show significantly higher satisfaction with those services compared to respondents from Šumadija and Western Serbia and the regions of Southern and Eastern Serbia. In general, at the level of the entire ZKBT scale, statistically significant differences were confirmed in respondents from the region of Belgrade and northern Serbia, who have significantly higher scores, i.e. significantly higher satisfaction with spa services compared to respondents from the other two regions.

Marital status of the respondent

When it comes to the marital status of the respondents, statistically significant differences were confirmed for all five dimensions of the ZKBT scale, as well as for the averages of the entire scale. All obtained differences are high and significant at the significance level of $p<0.01$. In relation to the dimension Food services outside the accommodation facility ($F=5.701$, $p=0.001$), statistically significant differences were confirmed in respondents who are widows (AS=4.86, SD=0.192) who have significantly higher satisfaction on this dimension compared to all other respondents. On the dimension Food service in the accommodation facility ($F=4.162$, $p=0.006$), statistically significantly higher scores were obtained among widowers (AS=4.72, SD=0.251) compared to respondents who are married (AS=4.48, SD=0.451) or are divorced (AS=4.52, SD=0.350). On the Accommodation Service dimension ($F=15.180$, $p=0.000$), significantly higher scores were obtained for respondents who are single (AS=4.38, SD=0.452) compared to all other respondents from the research. In addition, respondents who are married or in a relationship (AS=3.98, SD=0.498) showed significantly lower satisfaction with accommodation services compared to divorced (AS=4.18, SD=0.493). When it comes to medical services ($F=13.254$, $p=0.000$), respondents who are married (AS=4.41, SD=0.417) showed significantly lower satisfaction compared to all other respondents, who showed higher satisfaction with that type of services. In relation to other hotel services ($F=19.037$, $p=0.000$), it was also confirmed that respondents who are married (AS=4.51, SD=0.337) have significantly lower satisfaction with this aspect of services compared to all other respondents, and it was also confirmed that respondents who are single (AS=4.64, SD=0.142) show significantly lower satisfaction with those services compared to widows (AS=4.77, SD=0.169). In general, at the level of the entire ZKBT scale ($F=17.269$, $p=0.000$), statistically significant differences were obtained in respondents who are married (AS=4.38, SD=0.317) who are less satisfied with spa services compared to respondents with all other marital statuses.

Amount of the respondent's monthly income

When we talk about the monthly income of the respondents, statistically significant differences in user satisfaction with spa services were confirmed for all five dimensions and the overall average of the entire ZKBT scale. All obtained differences are high and significant at the significance level of $p<0.01$. Subsequent analysis showed that when it comes to the dimension of Food service outside the accommodation facility ($F=5.299$, $p=0.001$), respondents from the category "I don't want to say" (AS=4.32, SD=0.583) show significantly lower scores on this dimension compared to all other respondents. In relation to the dimension of food service in the accommodation facility ($F=14.377$, $p=0.000$), significantly lower satisfaction was also recorded among respondents from the category "I don't want to say" (AS=4.21, SD=0.568) and that in relation to all others categories of respondents. In addition, respondents with incomes of 40,000 - 50,000 rsd (AS=4.49, SD=0.384) showed significantly lower satisfaction with restaurant services compared to respondents with incomes of 25,000 - 40,000 rsd (AS=4.58, SD=0.332). When it comes to accommodation services ($F=7.699$, $p=0.000$), statistically significantly lower satisfaction was recorded among respondents who do not want to disclose their monthly income (AS=3.79, SD=0.417) compared to all other respondents. On the medical service dimension ($F=20.590$, $p=0.000$) it was also confirmed that respondents from the category "I don't want to say" (AS=4.14, SD=0.415) have significantly lower scores compared to all other respondents, but it was also confirmed that respondents with incomes of 25,000 - 40,000 rsd (AS=4.56, SD=0.309) have significantly higher scores on this dimension compared to respondents with incomes from 40,000 to 50,000 rsd (AS=4.45, SD=0.381). When it comes to other hotel services ($F=60.188$, $p=0.000$), respondents who do not want to disclose their monthly income (AS=4.27, SD=0.346) had significantly lower scores compared to all other respondents. In addition, respondents with incomes from 25,000 to 40,000 rsd (AS=4.69, SD=0.164) had significantly higher scores compared to all others. At the level of the entire ZKBT scale ($F=26.256$, $p=0.000$) among respondents who do not want to disclose their monthly income (AS=4.15, SD=0.316), statistically significantly lower satisfaction with spa services was confirmed compared to all other respondents and significant differences were also confirmed among respondents with incomes from 25,000 to 40,000 rsd, who are significantly more satisfied with services compared to respondents with incomes from 50,000 to 60,000 rsd (AS=4.41, SD=0.421).

Work status of the respondent

In relation to the work status of the respondents, statistically significant differences were confirmed on the dimensions of Medical Services ($F=5.816$, $p=0.003$) and Other Hotel Services ($F=8.447$, $p=0.000$). Both obtained differences are high and significant at the significance level of $p<0.01$. On the dimension of Medical services, it was confirmed that respondents engaged in agriculture have significantly higher satisfaction (AS=4.73, SD=0.237) compared to respondents who are employed (AS=4.42, SD=0.481) or are retired (AS=4.48, SD=0.385). When it comes to the dimension of Other hotel services, respondents engaged in agriculture (AS=4.77, SD=0.161) showed significantly higher satisfaction with employees (AS=4.48, SD=0.320) or pensioners (AS=4.57 , SD=0.295). In addition, it was confirmed that respondents who are retired have significantly higher scores for these services compared to employees who are less satisfied on average. On the other dimensions of the ZKBT scale, statistically significant differences in the expressiveness of the scores in relation to the work status of the respondents were not confirmed.

Discussion of research results

The aim of this research was to examine the level of satisfaction of users with the services of selected spas in the south of Serbia. The research was conducted on a sample of 600 respondents (N=600) who stayed in one of six spas in Southern Serbia: Prolom spa, Niška spa, Kuršumlijska spa, Lukovska spa, Sijarinska spa and Vranjska spa. User satisfaction was examined as a global assessment of all aspects included in the offer of spas, but also individually through five dimensions: Food and beverage services outside the accommodation facility where they stayed, Food and beverage services in the accommodation facility (where they stayed), Accommodation services (rooms), Medical services and Other hotel services. The results of the research showed that among the respondents there is a high, above average satisfaction with the spa services used. The best rated aspects are Other hotel services and Food outside the accommodation facility, and the lowest rated are Accommodation services (rooms). At the level of individual spas, Lukovska spa generally received the best rating, and Kuršumlijska spa received the lowest. In addition, when it comes to food services, Vranjska spa got the best rating, and when it comes to accommodation, Lukovska spa, which also leads the way when it comes to medical services, for which it received the best rating. When it comes to satisfaction with other hotel services, Prolom spa is rated the best. Kuršumlijska spa received the lowest marks in all five aspects of spa tourism services. It is important to emphasize again that although there are statistically significant differences in the expression of satisfaction with services in relation to the spa where the respondents stayed, that all spas received very high marks and that the differences stem from nuances in the quality of services. In addition to examining the global satisfaction of users of the mentioned spas and examining the differences in the expression of satisfaction in relation to the spa where the respondents stayed, the research also dealt with the examination of differences in the expression of satisfaction with spa services in relation to the sociodemographic characteristics of the respondents. When it comes to the gender of the respondents, statistically significant differences in the expression of user satisfaction were obtained for both dimensions of nutrition (outside "their" accommodation facility and within it). The obtained findings show that male respondents have a significantly higher level of satisfaction with food services compared to female respondents. In relation to the age of the respondents, a statistically significant difference in the expression of satisfaction was obtained in relation to the dimension of food service in the accommodation facility. The obtained difference indicates that respondents aged 36 to 55 show significantly higher satisfaction with those services compared to the age group of 56 to 65. When we talk about the professional training of the respondents, statistically significant differences were confirmed for all five dimensions of the ZKBT scale, as well as for the aggregate average of the scale. Regarding nutrition outside the accommodation facility, it was confirmed that respondents with secondary education have significantly higher scores compared to all other respondents. Also, it was confirmed that respondents with completed higher professional education have significantly lower satisfaction with that type of service compared to respondents of all other educational profiles. Regarding food services in the accommodation facility, it was confirmed that respondents with higher professional qualifications have significantly lower satisfaction compared to all other respondents. Regarding accommodation, respondents from the other education category have significantly higher scores compared to respondents from all other educational profiles. In addition, it was confirmed that respondents with a higher education have significantly higher satisfaction with accommodation compared to respondents with a high school diploma.

On the dimension of Medical services, a significantly higher score was obtained by respondents from the other education category compared to other educational categories. Respondents with completed higher education have significantly higher satisfaction with medical services compared to respondents with a higher vocational education title. In relation to other hotel services, among respondents with completed higher vocational education, significantly lower satisfaction was confirmed compared to all other respondents, while respondents with secondary vocational education showed greater satisfaction with those services compared to respondents from the category of other education. When it comes to the general satisfaction of users with spa tourism in the south of Serbia in relation to the level of professional education of the respondents, it was confirmed that the respondents from the other education category have a significantly higher score compared to all other educational categories, and the respondents with higher vocational qualifications have a significantly lower score compared to all other respondents. In relation to the respondent's place of residence, statistically significant differences in the expression of satisfaction of spa tourism users were obtained for all dimensions and the average of the entire ZKBT scale. Subsequent analysis showed that when it comes to eating outside the accommodation facility, respondents from the region of Šumadija and Western Serbia show significantly lower satisfaction compared to respondents from Belgrade and northern Serbia. When it comes to food services in the accommodation facility (where they stayed), it was confirmed that respondents from two regions (Belgrade and northern Serbia) have significantly higher scores compared to respondents from all other regions. The same applies to Medical Services. In relation to other hotel services, respondents from the Belgrade region have significantly higher satisfaction than all other respondents. Also, it was confirmed that the respondents from the north of Serbia show significantly higher satisfaction with those services compared to the respondents from the region of Šumadija and Western Serbia, that is, Southern and Eastern Serbia. In general, at the level of the whole scale of ZKBT, statistically significant differences were confirmed among respondents from the Belgrade region and respondents from the north of Serbia, who have a significantly higher satisfaction with spa services compared to the other two observed regions. When we talk about the marital status of the respondents, statistically significant differences in the expression of user satisfaction with spa tourism services were confirmed for all five dimensions of the ZKBT scale, as well as for the averages of the entire scale. In relation to food services outside the accommodation facility, statistically significant differences were confirmed in widows and widowers who have significantly higher satisfaction on this dimension compared to all other respondents. On the dimension of food service in the accommodation facility, statistically significantly higher scores were obtained for widowers compared to respondents who are married or divorced. On the Accommodation Service dimension, significantly higher scores were obtained for respondents who are single compared to all other respondents from the research. In addition, respondents who are married or in a relationship showed significantly lower satisfaction with accommodation services compared to divorced respondents. When it comes to Medical Services, respondents who are married showed significantly lower satisfaction with services compared to all other respondents. In relation to Other hotel services, it was confirmed that respondents who are married have significantly lower satisfaction compared to all other respondents. It was also confirmed that respondents who are single show significantly lower satisfaction with hotel services compared to respondents who are widowed or widowed.

In general, at the level of the entire ZKBT scale, statistically significant differences were obtained in respondents who are married and who are less satisfied with spa services compared to respondents with all other marital statuses. In relation to the monthly income of the respondents, statistically significant differences in satisfaction were confirmed for all five dimensions and the overall average of the entire ZKBT scale. Subsequent analysis showed that when it comes to food services (both dimensions), respondents from the "I don't want to say" category show significantly lower scores on this dimension compared to all others. In addition, respondents with incomes of 40,000 - 50,000 rsd showed significantly lower satisfaction with food services in the accommodation facility compared to respondents with incomes of 25,000 to 40,000 rsd. In the case of accommodation services, statistically significantly lower satisfaction with this aspect of services was recorded among respondents who do not want to reveal the amount of their monthly income compared to all other respondents. On the Medical Services dimension, it was also confirmed that respondents from the "I don't want to say" category have significantly lower scores compared to all other respondents, but it was also confirmed that respondents with incomes from 25,000 to 40,000 rsd have significantly higher scores on this dimension compared to respondents with incomes from 40,000 to 50,000 rsd. When it comes to Other hotel services, respondents who do not want to disclose their monthly income had significantly lower scores compared to all other respondents. In addition, respondents with incomes from 25,000 to 40,000 rsd had significantly higher scores compared to all other respondents when it comes to satisfaction with those services. At the level of the entire ZKBT scale when it comes to the level of monthly income of respondents, it was confirmed that there are differences among respondents who do not want to reveal the amount of their monthly income and there is lower satisfaction with spa services compared to all other respondents. Significant differences were also confirmed among respondents with incomes from 25,000 to 40,000 rsd, who are significantly more satisfied with services compared to respondents with incomes from 50,000 to 60,000 rsd. Finally, when it comes to the work status of the respondents, statistically significant differences were confirmed on the dimensions of Medical Services and Other Hotel Services. On two dimensions - Medical and Other hotel services, it was confirmed that the respondents engaged in agriculture have significantly higher satisfaction compared to employees and pensioners. In addition, pensioners have significantly higher scores compared to employed respondents.

Conclusion

A modern destination of health tourism bases its existence on natural healing factors, necessary specialized facilities, quality staff trained to provide specific health treatments and other service activities, but also on the existence of an efficient system that includes a complete offer related to hospitality, accommodation and entertainment, in order to that way, the stay/tourist experience in the destination was as pleasant as possible. In order for a spa to be competitive and to reach a higher demand than that motivated by the current need for spa treatment, it must become a modern health tourism destination (Perić, Sekulić, 2023). The offer must be enriched with content for the provision of various spa and wellness services in order to promote, stabilize and restore physical, mental and social well-being with the help of natural healing and other ecological factors, as well as sports-recreational and cultural-entertainment content. Based on everything presented, the following can be concluded: although the observed spas from the south of Serbia differ from each other in several important criteria, the research has unequivocally shown that the respondents are generally satisfied with catering and medical services. This is independent of the respondent's age, educational level, region of Serbia where they come from, marital status, amount of monthly income and work status. However, the authorities in the observed spa centers should by no means relax due to the obvious satisfaction of a large number of respondents. This applies both to numerous individual offer holders (hoteliers, restaurateurs, medical institutions, supporting activities) as well as to municipal administrations and local tourist organizations. Research based on the needs and expectations of modern tourists should be one of the starting points for the improvement of existing and the creation of completely new tourist and medical facilities in each of the six observed spa destinations. In subsequent research, it is necessary to include employees as respondents, in order to see their needs and problems in the work process. Without the satisfaction and motivation of the employees, there is no quality service that tourists receive very quickly. The most important activities in the coming period that the management of all observed spas must carry out are the modernization of medical equipment, adaptation of existing and construction of new accommodation facilities, improvement of traffic and utility infrastructure, introduction of new wellness and spa programs, improvement of promotional activities primarily through current social media, constant education employees (tourist workers and medical staff). On the other hand, the state should also contribute to strengthening the competitive position of domestic spas, primarily through an appropriate combination of institutional support instruments, in accordance with trends and changes in the modern tourist market. Bearing in mind the conducted research and its results, it is possible to evaluate all four hypotheses (H0 - H3). The general hypothesis that the users are generally satisfied with the offered contents of the selected spas in the south of Serbia, proved to be correct. Although these are respondents who are very heterogeneous according to several criteria, it is necessary to emphasize their unique position on this issue. The first of the three special hypotheses (H1) that users are satisfied with the medical services provided to them in spas, was also confirmed by the conducted research. The hypothesis (H2) that users are satisfied with the hotel services of the mentioned spas, was confirmed as correct through survey research. The research conducted among the respondents fully confirms the third special hypothesis (H3) according to which users are satisfied with the food and beverage services provided to them during their stay in one of the selected spas from the south of Serbia. Thanks to numerous healing springs, the tradition of spa tourism in Serbia is very long, but throughout history the way and purpose of their use has changed. In a unique way, spa places were an image of society and reflected the health and medical culture of a time. As one of the key factors in the economic activation and development of Serbia and the improvement of population standards, health-recreational tourism is emerging. It has not been used to a sufficient extent, although there are exceptional natural conditions, a rich cultural-historical, ethnographic heritage and recognizable tourist destinations (Perić, Sekulić, 2023). Only detailed development and protection plans for existing ones, and expert planning for the development of new locations, can make the above-mentioned spas a competitive destination that will attract the attention of domestic and foreign visitors. In order to achieve this, well-designed development plans of the state, appropriate legislation and financial resources are necessary, along with consultations with teams of experts in this field.

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PLACE REBRANDING: THE FUTURE PERSPECTIVES OF THE MUNICIPALITY

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Abstract

Today, places are competing among themselves in the market to attract tourists, students, people, investors. Thus, just like commercial brands, place brands need to distinguish themselves in the market in order to be appealing to the target audience, and in accordance with the future, long-term vision of place development. Still, many places lack the systematic place brand management as a tool to support the future vision and development of the place. The paper contributes to the scholarship of place branding, more specifically the aspect of rebranding. The paper explores the holistic approach to place rebranding of Valjevo. The originality of the paper is seen in presenting for the first time and codification of the term holistic place rebranding approach (Acronym: HPRA).

Keywords: *branding, place rebranding, holistic rebranding, HPRA, Valjevo*

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Introduction

Today, places are competing among themselves in the market to attract tourists, students, people, investors. Thus, just like commercial brands, place brands need to distinguish themselves in the market in order to be appealing to the target audience, and in accordance with the future, long-term vision of place development. Still, many places lack the systematic place brand management as a tool to support the future vision and development of the place. The paper explores the holistic approach to place rebranding of Valjevo, additionally contributing to the codification of the term *holistic place rebranding approach* (Acronym: HPRA).

The vast majority of the literature focuses on the capital cities (e.g., Cvitković & Kline, 2017 on the capitals of Ljubljana, Zagreb, and Skopje, further, the role of capital cities in shaping national identity (e.g., Taylor, 1995; van der Wusten, 2000; Wagenaar, 2000; de Frantz, 2011; Cochrane, 2006; Diener & Hagen, 2013), the complex relationship between capital cities and nations, (e.g.,Taylor, 1995; Campbell, 2000; Wolman, Chadwick, Karruz, Friedman & Young, 2007), cities as visible representations of the ruling elite and prevailing ideology, (e.g., Blockmans, 2003; Light & Young, 2013; Langhorst, 2015). However, its smaller counterparts are neglected and rarely explored (e.g., Hassen & Giovanardi, 2021). The capital city, due to its position as a center of economic and cultural activity, is often exceptional and unrepresentative of the nation's cities (e.g., Campbell, 2000; Cvitković, 2023; Wolman et al., 2007).

The perception that a capital city is often seen as unrepresentative of the nation can be attributed to several factors, including (1) *Concentration of Power and Wealth* can create disparities between the capital and other regions, leading to a perception that the capital city is privileged comparing to other parts of the country face; (2) *Urban-Rural Divide* as the capital cities are typically urban centers, while most of a nation's population resides in rural areas, typically leading to differences in lifestyle, values, and priorities, contributing to the perception that the capital city is disconnected from the rural heartland; (3) *Cultural and Ethnic Diversity* as many countries are characterized by cultural and ethnic diversity, and the capital city may not fully represent this diversity. Ethnic and cultural minority groups might experience a sense of marginalization or inadequate representation in the capital, further reinforcing the perception that the capital does not accurately represent their diversity; (4) *Economic Inequalities* between the capital and other regions can be stark. High-paying jobs, business opportunities, and resource access are often concentrated in the capital, while other regions may struggle with unemployment and economic underdevelopment; (5) *Political Decision-Making* made in the capital can sometimes prioritize the interests of urban elites over the broader population's needs which can lead to policies and legislation that are perceived as disconnected from the concerns of everyday citizens; (6) *Infrastructure and Development Projects in the Capital Cities* can create disparities in living conditions and access to public services compared to other regions;

(7) *Media and Information Bias* as media and major news organizations are often headquartered in the capital, leading to a bias in news coverage that may not adequately reflect the experiences and concerns of people in other parts of the country; (8) *Perception of Exclusivity and Elitism* due to the concentration of political institutions, government agencies, and diplomatic missions in the capital can create a perception of elitism and exclusivity, further alienating the capital from the rest of the nation. Furthermore, historical factors can contribute to the perception that the capital city serves the interests of a ruling elite rather than representing the nation's diverse population; (9) *Regional vs. National Identity Conflict* as people in different regions of a country may have strong regional identities and loyalties that compete with their national identity which can lead to a sense that the capital must adequately represent or understand these regional identities. However, it is important to note that the perception of the capital city as unrepresentative is not universal and may vary from country to country. Additionally, governments often try to address these perceptions by decentralizing political power, investing in regional development, and promoting inclusivity and representation of diverse voices in the capital's decision-making processes.

Smaller towns play a crucial role in the economic development of a country for several reasons, namely (1) Decentralization or *Distributed Economic Activity and Power* as smaller towns serve as economic hubs in their regions, distributing economic activity beyond major metropolitan areas. This decentralization helps reduce the strain on large cities and supports a more balanced national economy; (2) *Contribution to the Job Creation* as small towns are offering employment opportunities in various sectors, including agriculture, manufacturing, services, and local businesses reducing urban unemployment rates and easing migration to overcrowded cities; (3) *Rural and Agricultural Economy:* Many small towns are located in rural or agricultural regions and play a pivotal role in producing and distributing agricultural products, which are essential for food security and export earnings; (4) *Entrepreneurship and Local Businesses Boost* due to the a strong entrepreneurial spirit fostering the growth of local businesses, including family-owned enterprises, which contribute to economic diversity and innovation; (5) *Area-Specific Clusters or Niches* such as technology hubs, tourism destinations,or manufacturing centers which can become drivers of economic growth and innovation in their regions; (6) *Raw Materials, Food, and Labor* in small towns act as suppliers, service providers, and labor pools for larger cities, facilitating their functioning; (7) *Infrastructure Development* such as roads, transportation networks, and utilities improve connectivity and market access, making the regions more attractive for businesses and investors; (8) *Unique Cultural and Heritage Tourism* draw tourists, and tourism can boost local economies, generate revenue, and create jobs in sectors like hospitality and entertainment; (9) *Quality of Life and Work-Life Balance* as smaller towns offer many residents a better quality of life due to the lower living costs, reduced congestion, and access to natural surroundings which can, subsequently, attract people looking for a more balanced lifestyle; (10) *Reduction of Regional Disparities* by promoting inclusive growth, and preventing overconcentration of population and economic activity in large cities; (11) *Innovation and Human Capital Talent Development* as smaller towns often have educational institutions and research centers contributing to human capital development and innovation, and can be significant sources of talent for regional and national economies; (12) *Diversification of Economic Activity or Economic Resilience and Stability)* across small towns and regions can make a country's economy more resilient to economic shocks and crises as overreliance on a single economic center can lead to vulnerability.

The history of Valjevo

Valjevo is a historic town in western Serbia, nestled in the picturesque valley of the Kolubara River. Its history dates back centuries, and it has undergone significant changes in traffic connectivity, population structure, and socio-political developments in the post-World War II period.

Pre-World War II History: Valjevo has a rich history that can be traced back to ancient times. Illyrians inhabited the region and later by Romans, who left traces of their presence behind. During the Middle Ages, Valjevo was part of various Serbian medieval states, and it played a role in the cultural and economic life of the region.

World War II and Socialist Period (1945-1990): Following World War II, Serbia became part of the Socialist Federal Republic of Yugoslavia, and Valjevo, like many other towns in the country, experienced significant changes during this period.

Traffic Connectivity: In the socialist era, there was a focus on developing transportation infrastructure. The construction of roads and railways improved Valjevo's connectivity with other parts of the state. The construction of the Belgrade-Bar railway line passing through Valjevo in the late 1950s was a significant milestone. This railway line connected Valjevo to the capital, Belgrade, and the Adriatic coast.

Population: Valjevo's population grew steadily during this period due to increased industrialization and urbanization. The town became a center for various industries, including metalworking, machinery, and textiles. This industrial development attracted people from rural areas seeking employment opportunities. The population was largely homogeneous, primarily consisting of Serbs. Valjevo's population increased significantly from more than 20,000 in 1948 to over 60,000 in 1991, reflecting urbanization and economic development during the socialist period.

Post-Socialist Period (After 1991): The dissolution of Yugoslavia in the early 1990s profoundly impacted Valjevo, as it did on the entire region.

Traffic Connectivity: The breakup of Yugoslavia disrupted the once well-connected transportation network. The Belgrade-Bar railway line, for instance, faced challenges due to the newly established borders and conflicts in the region. While road connections remained vital, the region's transportation links were affected by the instability of the 1990s.

Population: The post-socialist period saw significant changes in the population structure. Economic hardships, political instability, and the disintegration of industries led to emigration from Valjevo to other parts of Serbia and abroad. Valjevo's population started to decline after 1991 due to economic difficulties and the emigration of residents.

Present (2023): Valjevo has been working to rebuild its economy and infrastructure in the post-socialist period. Efforts have been made to improve transportation connectivity, including restoring the Belgrade-Bar railway line. The population has stabilized, and the town is a regional center for culture, education, and commerce.

In summary, Valjevo's history has evolved from a historical and industrial town with a largely homogenous population in the socialist period to a more diverse and interconnected town in the post-socialist era. It has faced challenges and changes in its population and infrastructure, but it remains an important cultural and economic hub in western Serbia.

The concept of rebranding

The concept of rebranding originates within the realm of corporate branding strategies, where brands are regarded as the central assets of a company, encompassing both tangible and intangible elements. While there is a substantial body of literature on rebranding, most of it takes on a journalistic character. Scholarly explorations and formal definitions of this concept are relatively scarce, as seen in the works of Muzellec, Doogan & Lambkin (2003), Muzellec & Lambkin (2006), Merrilees & Miller (2008), Juntunen, Saraniemi & Jussila (2009), Miller, Merrilees & Yakimova (2014), Cvitkovic & Kline (2017), Cvitkovic (2023). Rebranding constitutes a pivotal facet of marketing and holds significant importance in nurturing a brand's growth (Merrilees, 2005). The term "rebranding" itself is a neologism, comprising two distinct components: 're' and 'brand' or 'branding,' suggesting an intent either to revert to a previous state (e.g., in restoring a prior image or reputation) or, more commonly, to signify the repetition of an action (Muzellec et al., 2003; Muzellec & Lambkin, 2006). Muzellec and Lambkin (2006) define rebranding as "the creation of a new name, term, symbol, design, or a combination thereof for an established brand with the aim of establishing a distinctive, new position in the minds of stakeholders and competitors" (p. 805). In contrast, Juntunen et al. (2009) argue that it represents "a systematically planned and executed process involving the development, creation, and upkeep of a fresh, favorable image, and subsequently, a positive reputation for the entire company. This is achieved by sending signals to all stakeholders and managing behavior, communication, and symbolism in order to proactively or reactively respond to change" (p. 3). Rebranding involves deliberate planning, creating, and maintaining a fresh and positive brand image. This transformation arises in response to significant external changes, which must be of considerable magnitude to serve as a basis for a fundamental redefinition of the brand's identity (Cvitkovic, 2023). Consequently, such rebranding represents a significant brand positioning shift, reshaping its core identity (Cvitkovic, 2023). According to the perspective put forth by Cvitkovic & Kline (2017), rebranding is characterized by assigning new meanings to various market categories, achieved through the three essential prerequisites of renaming, restructuring, and repositioning which culminate in the creation of a fresh and distinctive image in the minds of consumers.

Repositioning

Repositioning in marketing refers to altering the perceptions, image, or positioning of a product, brand, or organization in the minds of consumers. It involves changing how a brand is perceived to make it more appealing, relevant, or competitive. Repositioning is often undertaken when a brand faces challenges, such as declining sales, changing consumer preferences, increased competition, or evolving market conditions. The primary objective of positioning is to establish the brand's distinctiveness in comparison to others and to forge a completely new and unique position for the company in the perceptions of its stakeholders (Ries & Trout, 2001; Muzellec et al., 2003; Papp-Váry, 2018). Repositioning, on the other hand, entails the alteration of a brand's psychological attributes and the strategic development and placement of the desired brand image in the minds of the target customers (Czinkota, Ronkainen, Moffett & Moynithan, 2001; Wong & Merrilees, 2006). Nevertheless, Papp-Váry (2018) emphasizes that positioning is not merely about defining qualities that set the brand apart from its competitors; instead, it aims to create a scenario in which the brand stands alone without any direct rivals.

Here, we list the summary of the key aspects of repositioning. Namely, it should include (1) New Target Market Identification as repositioning may involve shifting the focus to a different target audience or segment of the market to reach a more profitable or underserved demographic; (2) Altering Brand Communication Strategies to emphasize different features, benefits, or values helps create a new perception in the minds of consumers; (3) Modification of a Product Features or Attributes Necessity to better align with the desired positioning which may involve improving brand quality, adding new features, or changing packaging; (4) Brand Image Update like a brand's visual identity, including its logo, color, and design elements, may be updated to reflect the new positioning and appeal to the target market; (5) Revising Pricing Policy Strategies to better match the product's perceived value in the eyes of consumers which can be achieved my more effectively communicating the value that a consumer gets for purchasing or consuming a brand; (6) Market Research and Consumer Insights in terms of perception of a brand and preferences are essential in repositioning; (7) Landscape Competitive Analysis and Understanding how competitors are positioned can help identify opportunities for differentiation and repositioning; (8) Effective Campaign Implementation, Monitoring and Consistency across all channels and consumer touchpoints.to assess the effectiveness of the repositioning efforts, and avoid consumer confusion.

Restructuring

Restructuring in marketing refers to reorganizing and making significant changes to an organization's marketing strategies, tactics, operations, or resources. The primary goal of marketing restructuring is to adapt to changing market conditions, improve efficiency, enhance competitiveness, and better align marketing efforts with the organization's overall goals and objectives.

Restructuring represents a governance model aimed at bolstering competitiveness. As highlighted by Thomas, Mokale & Selvaraj (2021), within today's globalized business landscape, the practice of reorganizing organizations as a turnaround strategy enables them to cultivate the flexibility needed to survive and thrive in a competitive environment. Drawing upon insights from the management literature, companies frequently undertake restructuring initiatives in response to both periods of growth and economic downturns, all to enhance their performance, often driven by a desire to rectify past managerial missteps, such as excessive diversification, suboptimal investments in research and development, unprofitable capital expenditures, over-leveraging, and other related factors (Markides & Singh, 1997; Brauer & Wiersema, 2012; Borisova, John, & Salotti, 2013; Zakaria & Arnold, 2016; Mardini & Lahyani, 2020).

Here, we list the summary of the key aspects of restructuring. Namely, it should include (1) Adjustment or Transformation of an Organization's Strategic Approach to better align with its goals, objectives, or changing circumstances, i.e., to evaluate and revise the organization's marketing objectives, goals, and overall strategy to better cope with the market's and its customers' ever-evolving needs; (2) The Process of Assigning and Apportioning Resources, including budgets, personnel, and technology, to optimize marketing activities and initiatives. This may involve reallocating investments from less effective marketing channels to more promising ones; (3) Structural Adjustments (or Structural Transformations) convey the idea of modifying or altering an organization's structure, processes, or functioning to achieve specific goals or adapt to changing circumstances. Restructuring may involve changes in the marketing department's organizational structure, roles, and responsibilities to enhance collaboration, streamline processes, and improve decision-making; (4) Assessing Portfolio of products and/or services to better address market demand and customer preferences which may involve introducing new offerings, discontinuing underperforming products, or enhancing existing ones; (5) Customer (or Market) Segmentation to identify and target specific customer segments more effectively which can result in tailored marketing campaigns and messaging; (6) Marketing Mix Modifications or Changes, which includes product, price, promotion, and place (distribution), to adapt to market conditions may involve altering pricing strategies, adjusting product features, or revamping promotional activities. In addition, it may involve identifying areas where cost reduction and increased efficiency can be achieved without compromising the quality of marketing activities; (7) Revision of a Brand Positioning and Communication to resonate with target audiences and align with market trends and consumer preferences; (8) Conducting In-depth Market Research, Data Analysis and Levering Technology to gain insights into customer behavior, market trends, and competitive dynamics and to enhance marketing efforts, such as implementing customer relationship management (CRM) systems, marketing automation tools, or data-driven marketing strategies; (9) Employment of an Effective and Open Communication Management with internal and external stakeholders; (10) Establishing Key Performance Indicators (KPIs) to track the success and impact of marketing restructuring efforts.

Holistic Place Rebranding Approach

Cvitkovic & Kline (2017) define place/city rebranding as ”as a politically instigated visionary project that is aimed at attributing new meanings to a city and wiping out the old and often undesired images so that the renewed brand can deliver economic prosperity, greater tourist demand, cultural attention within domestic and international customers and can serve as a vehicle to remake the nation brand” (p. 37). Whilst may place brands focus on one or two aspects of rebranding, just a mere application of there is not sufficient for the ‘deeper’ and long-term rebranding. Thus, the paper suggests that places should apply holistic place rebranding (Acronym: HPRA) where several tools are used simultaneously to distinguish the brand in the minds of its prospects. The result of the holistic place rebranding is not a short- terms result; it is a visionary strategy of the local (and/or national) government efforts to ensure future generations to thrive on the place brand equity implemented in present. Holistic place rebranding approach involves deliberately transforming a particular location's image, identity, and public perception, whether it is a city, region, or country with a goal to boost its appeal, competitiveness, and overall standing. Place rebranding seeks to establish a favorable position for the area in the minds of specific target groups, including residents, tourists, investors, and businesses. This, in turn, is aimed at encouraging their participation, visits, investments, or support. Key tools of the approach include (1) Initial Market Research to understand the current perceptions of the place, the target audience's preferences, to gain a competitive advancement of the place; (2) Reputation Redefinition, i.e., developing a clear and compelling identity and different images for the place; (3) Stakeholder Engagement, i.e., involving various stakeholders, including government authorities, local businesses, community members, and experts in the rebranding process to ensure broad buy-in and commitment; (4) Strategic Marketing Communication Approach which develops a comprehensive and coherent communication strategy that, among other, includes branding, public relations, and storytelling to convey the new image and messaging effectively; (5) Rebranding Efforts Alignment with investments in infrastructure, tourism facilities, cultural attractions, and economic development initiatives to support the desired image and experiences; (6) Application and Emphasizing Sustainable Practices and Authenticity, and a genuine commitment to the place's identity to build trust and credibility; (7) Local Community Involvement in rebranding efforts and ensuring that the rebrand aligns with their values and aspirations, building the new place brand from bottom up as well; (8) Continuous monitoring and evaluation of the effectiveness of the rebranding efforts through feedback, data analysis, and performance metrics.

Place branding and cultural heritage

Architecture is a multifaceted cultural phenomenon encompassing the design, construction, and spatial organization of physical structures that reflect and shape the cultural, social, and historical contexts in which they exist. It represents a tangible expression of human creativity, ingenuity, and values, serving as a visual narrative of societies and their evolving identities, aspirations, and values. The architecture as the cultural manifestation of the place (and nation brands) is a sphere where identities can be created, enhanced, and socially accepted (Cvitkovic, 2023). The influence of architecture on the economic development of towns, such as Bilbao in Spain, is profound and multifaceted.

Architecture can serve as a catalyst for economic growth and transformation in several ways:

1. **Tourism and Cultural Attraction**: Distinctive architectural landmarks, such as the Guggenheim Museum Bilbao designed by Frank Gehry, can become iconic symbols of a city. These attractions draw tourists, art enthusiasts, and cultural tourists from around the world. Increased tourism leads to greater economic activity, including spending on accommodations, dining, shopping, and local services. In the case of Bilbao, the Guggenheim Museum has been credited with significantly boosting tourism and fostering economic growth in the region.
2. **Urban Revitalization**: Thoughtful architectural projects can rejuvenate neglected or industrial areas, transforming them into vibrant urban centers. Bilbao's industrial decline in the late 20th century was reversed through a series of urban renewal projects, including the Guggenheim Museum. These projects not only improved the city's aesthetics but alsocreated new opportunities for businesses, restaurants, and housing, stimulating economic activity.
3. **Real Estate Development**: Architectural innovation and design can drive real estate development. The construction of modern, aesthetically appealing buildings can increase property values and attract investors. In Bilbao, the success of the Guggenheim Museum spurred further real estate development, including residential and commercial properties, contributing to the city's economic expansion.
4. **Infrastructure and Connectivity**: Architectural planning plays a role in the development of essential infrastructure, such as transportation hubs and bridges. Improved infrastructure enhances connectivity within and around a city, facilitating the movement of goods and people. Bilbao's architecture includes striking bridges like the Zubizuri Footbridge, which not only serve functional purposes but also enhance the city's visual appeal and connectivity, supporting economic development.
5. **Innovation and Knowledge Economy**: Architectural innovation can be a symbol of a town's commitment to innovation and the knowledge economy. High-tech architecture and sustainable design practices can attract technology companies and research institutions, fostering an environment for innovation and knowledge exchange. This, in turn, can

lead to job creation and economic diversification. Bilbao's commitment to contemporary architecture aligns with its aspiration to be a hub for knowledge-based industries.

6. **Cultural and Creative Industries**: Architectural spaces, such as theaters, galleries, and cultural centers, support the growth of cultural and creative industries. These sectors contribute significantly to a town's economy, generating income through events, exhibitions, performances, and the sale of art and cultural products. In Bilbao, modern architectural spaces like the Euskalduna Conference Centre and Concert Hall have facilitated the growth of cultural events and conferences, attracting visitors and boosting the economy.

In summary, architecture can be a powerful driver of economic development in towns like Bilbao. It not only enhances a town's aesthetics but also attracts tourism, stimulates real estate development, improves infrastructure, fosters innovation, and supports cultural and creative industries. The integration of architecture and urban planning can play a pivotal role in transforming a town's economic landscape and identity.

Cultural heritage is ”a powerful instrument employed to construct and strengthen a nation’s common (hi)story, identity and continuity” (Carla & Mitterhofer, 2017, p. 15). Monuments and their representations of the past affect our understanding of the present, while, at the same time, the forms in which monuments crystallize the past are not immutable as their meaning is interpreted in the present, influenced by ever-changing conditions (Carla & Mitterhofer, 2017). The erection of monuments to historical figures has always been used to represent the current period's dominant ideology, ideas, and values (Cvitković, 2023).

Open-air museums are not a novelty. Modern open-air museums, also known as outdoor or living museums, have become significant cultural and economic assets for many towns and regions. These museums typically showcase historical, cultural, or natural heritage in an outdoor setting, often featuring reconstructed or preserved buildings, artifacts, and landscapes from the past. They play a vital role in attracting visitors, promoting tourism, and contributing to the economic development of the towns in which they are located. Here are a few examples:

1. **Skansen - Stockholm, Sweden**: Skansen is one of the world's oldest open-air museums. It features dozens of historical buildings from various regions of Sweden, as well as a wide range of traditional crafts, animals, and gardens. Skansen attracts millions of visitors annually and contributes significantly to Stockholm's tourism industry. It generates revenue through entrance fees, events, and cultural activities, making it a vital economic asset for the city.
2. **Williamsburg - Virginia, USA**: Colonial Williamsburg is a museum that recreates life in 18th-century Virginia. Visitors can explore restored and reconstructed buildings, interact with historical interpreters in period costume, and learn about American colonial history. This open-air museum has been instrumental in revitalizing the town of Williamsburg, attracting tourists, and generating revenue for local businesses, hotels, restaurants, and shops.
3. **Gyeongju Historic Areas - Gyeongju, South Korea**: Gyeongju is often referred to as an open-air museum itself due to its abundance of well-preserved historical sites and artifacts, including temples, burial mounds, and ancient architecture. The town's rich cultural heritage has made it a popular tourist destination, driving economic growth through tourism-related activities, accommodations, and cultural events.
4. **Museum Island - Berlin, Germany**: Although not a traditional open-air museum, Museum Island is a UNESCO World Heritage site consisting of five world-class museums situated on an island in the Spree River. These museums house an extensive collection of art and artifacts from different periods and cultures. Museum Island significantlycontributes to Berlin's cultural tourism, attracting visitors from around the world, which, in turn, bolsters the local economy.
5. **Jerusalem Biblical Zoo - Jerusalem, Israel**: While not a traditional open-air museum, the Jerusalem Biblical Zoo combines a zoological park with educational and historical elements. It showcases animals mentioned in the Bible and has historical and archaeological exhibits. This unique blend of natural and cultural heritage has made the zoo a prominent attraction, promoting tourism in Jerusalem and benefiting the

local economy.

However, *BZ ‘18–’45: One Monument, One City, Two Dictatorships* is worth exploring in more depth. Namely, this open-air museum located in Italy’s town of Bolzano, provides a perspective on how to treat monuments erected during the ‘undesirable past’. The *Monument to Victory* had been commissioned by Benito Mussolini to celebrate Italy’s victory over Austria-Hungary in World War I (Carla & Mitterhofer, 2017). However, since 2014, a permanent exhibition inside the monument challenges its negative symbolic power by historicizing and (re)contextualizing its symbolic power (Carla & Mitterhofer, 2017). As accentuated by Di Michele, Obermair, Roilo, Soragni & Spada (2014). "BZ '18–'45: one monument, one city, two dictatorships", is an exhibition opened to the public in July 2014 which illustrates the history of the *Monument to Victory*, erected by the Fascist regime between 1926 and 1928. More specifically, it is a permanent exhibition within the Monument to Victory. The exhibition reflects and provides a link to local historical events during the twenty years of Fascism and the Nazi occupation, within the context of national and international events in the years between the two World Wars (1918–1945), covers the radical urban transformations for the construction of a new *Italian* city of Bolzano from the end of the 1920s whilst confronting the difficult relationship between the different language groups, caused by the overbearing legacy of Fascism, within the evolving social and political framework of the second half of the twentieth century to the present day (Di Michele et al., 2014). The exhibition places the monument in a completely different context. Namely, as a result of a joint decision by the Italian Ministry for Cultural Affairs and Tourism, the Autonomous Province of Bolzano, and Bolzano City Council, to use the crypt and adjacent rooms to an exhibition is dedicated to understanding recent history (Di Michele et al., 2014).

The role of modern open-air museums in the economic development of towns is multifaceted. They attract tourists, create jobs, stimulate local businesses, and generate revenue through admission fees and merchandise sales. Additionally, they often contribute to the preservation and promotion of a town's cultural heritage, which can enhance its overall appeal and identity as a tourist destination. As such, these museums play a vital role in the sustainable economic development of the towns and regions where they are located.

The raised fists of Stjepan Filipović located in Valjevo became a symbol of the anti-fascist struggle of the people of the former Yugoslavia and the world, as the photo is part of the permanent exhibition of the Holocaust Memorial Museum in Washington, and at one point, it was exhibited in the headquarters of the United Nations, together with all other artifacts showcasing key moments in the history of mankind (Obrenović, 2017). As accentuated by the Museum, “standing beneath the gallows where he will be hanged momentarily, Stjepan Filipović, commander of the Tomnasko-Kolubarski partisan detachment, calls upon the people of Serbia to fight the "traitors of the Serbian people" (United States Holocaust Memorial Museum, 2022). Today, the monument is in a bad shape and neglected. However, unlike many other monuments, the monument to Filipović and the anti-fascists near Valjevo survived (Obrenović, 2017). Following the success of the "BZ '18–'45: one monument, one city, two dictatorships", the article suggest the reactivation of place brand equity of Valjevo building on the familiarity and importance of the Stjepan Filipović monument worldwide, seeing it more than just a landmark for the domestic, but rather for the foreign tourism flow increase as well.

Moreover, gastronomic culture is an inseparable part of the intangible cultural heritage of a country, and the preservation of gastronomic heritage is an important task of any government (”Hrana Valjevskog kraja”, 2015). The most famous gastronomic product of Valjevo is tobacco-cracker or tobacco-cvark (Serbian: **Duvan-čvarak**), and in their honor, the ”Days of Valjevo tobacco-cvaraks” (Serbian: ”Dani valjevskih duvan-čvaraka”) are organized (”Hrana Valjevskog kraja”, 2015). The inhabitants of the town have a developed awareness of the need to preserve the environment, traditions, the traditional way of preparing food and drinks, and the preservation of old types of fruits and vegetables (”Hrana Valjevskog kraja”, 2015). Furthermore, Valjevo boasts a rich and diverse gastronomic cultural heritage that reflects its history, traditions, and the agricultural bounty of the region. Some key elements of Valjevo's gastronomic heritage are:

1. **Pršut (Cured Ham)**: Valjevo is renowned for its pršut, a type of dry-

cured ham made from high-quality pork and seasoned with local herbs and spices. It is a beloved delicacy and often served as an appetizer or in sandwiches.

2. **Kajmak** is a traditional dairy product made from the cream that forms on the surface of boiled milk. Valjevski kajmak is particularly famous for its creamy texture and distinct flavor. It is a staple in Serbian cuisine and is used as a spread, dip, or condiment for various dishes.
3. **Ajvar** is a popular condiment in Serbia, and Valjevo is known for producing some of the best ajvar in the country. It is made from roasted red peppers, garlic, and eggplant, seasoned with local herbs and spices. Valjevo's ajvar is typically homemade and celebrated for its authentic taste.
4. **Cheeses**: The region around Valjevo is known for its cheese production. Various types of cheese, including fresh white cheese (beli sir), semi-hard cheeses, and aged varieties, are made in Valjevo. These cheeses are enjoyed on their own, in salads, or as accompaniments to other dishes.
5. **Baklava**: Baklava, a sweet pastry made of layers of filo dough, nuts, and honey or syrup, is a popular dessert in Valjevo. It reflects the influence of Ottoman cuisine on the region and is often served on special occasions and during holidays.
6. **Domestic Fruit Brandies (Rakija)**: Valjevo is known for its production of rakija, a strong fruit brandy. Local fruits, such as plums, apricots, and quince, are used to make a variety of rakija types. It's not only a popular drink but also an integral part of cultural celebrations and rituals.
7. **Traditional Bread**: The local bread in Valjevo is often made using traditional methods and recipes, resulting in a unique flavor and texture. Bread is a staple of every meal, and artisanal bakeries continue to preserve the tradition of baking fresh, crusty loaves.
8. **Seasonal Delicacies**: Valjevo's gastronomy also reflects the seasons. In the summer, you'll find dishes prepared with fresh, locally grown vegetables and fruits, while the winter months bring hearty stews and preserved foods.
9. **Local Markets**: Valjevo's open-air markets are vibrant hubs where you can find a wide array of locally grown produce, meats, dairy products,

and homemade specialties. These markets are essential in preserving and promoting traditional foods and culinary culture.

The gastronomic cultural heritage of Valjevo is deeply intertwined with the town's history, agriculture, and traditions. Visitors to Valjevo have the opportunity to savor a wide range of delicious and authentic dishes that showcase the flavors and culinary heritage of this charming Serbian town. These contribute to the idea of developing of small-size touristic ethno villages (Serbian: Etno selo) where the local food is served. Only the holistic approach to place rebranding can contribute to the positioning Valjevo as a desirable, nature-oriented destination with a rich, authentic cultural background and its innovative approach to serve the needs of the modern consumers, setting itself apart from its counterparts, namely mass-tourism destinations. The town of Valjevo already has all the prerequisites for the tourism blossom due to the great connectivity with Belgrade, the capital of Serbia, most importantly, Nikola Tesla international airport.

Foreign direct investments and place branding

In spite of the trend towards economic liberalization, the proposition of employing tools pervasively in the promotion of businesses, products, and services to promote places still puzzles some decision-makers (Gertner, 2007). However, the power of strategic approach to place branding in undeniable, any many scholars have found a direct link between foreign direct investment (FDI) and place branding (e.g., Anholt, 2005; Gertner, 2007; Alansaari, 2023; Schoeneman & Fullerton, 2023). For example, Anholt (2005) accentuates that linked global economic system and a pool of international investors being chased by a growing number of industrial and service locations applies similar pressures to the business of foreign direct investment promotion. Positive brand images have helped many places and countries boost their exports and attract investments, businesses, factories, visitors, residents and talented people, whilst economic development, prosperity and social justice are among most nations’ governing objectives, from the smallest and most destitute to the largest and wealthiest ones (Gertner, 2007). As Alansaari (2023) notes, there are five factors affecting the FDI attraction, namely, cost, market, infrastructure and technology, politics and legal framework, social and cultural factors. Attracting FDI is one of the most lucrative outcomes of a holistic place (re)branding. However, some places are blooming with FDI as a result of their strategic position, rather that systematic approach to place branding.

In recent years, Valjevo is attracting a significant portion of foreign investments and its strategic position, and the workforce price make the place attractive for investments. For example, the Gorenje Valjevo factory, a member of the Gorenje Group, which has been majority-owned by the Chinese company Hisense since 2018, will in the next period become the European center of the Chinese group for refrigeration technology ("Gorenje će proizvodnju svih vrsti hladnjaka preseliti u Valjevo", 2019). *Politika* notes about four million euros were invested in this undertaking ("Gorenje će proizvodnju svih vrsti hladnjaka preseliti u Valjevo", 2019). Joining the Hisense group, which with 75,000 employees is the leader in the production of electronics and household appliances on the Asian market, the foundation for even stronger development is laid ("Gorenje will move the production of all types of coolers to Valjevo", 2019). This partnership will provide access to new markets and encourage the creation of a new product portfolio while preserving and strengthening the presence of the Gorenje Group's strategically essential products and brands in existing and future markets. By getting a new owner, we secured the future of the company in a sustainable way, which means investing in development, in employees, and in all resources that mean a safe and sustainable future, said Mrs. Pejanović, Gorenje board member ("Gorenje će proizvodnju svih vrsti hladnjaka preseliti u Valjevo", 2019). Moreover, in June 2023, the Hansgrohe Group opened its new production site in Valjevo. A factory for producing bathroom and kitchen fittings was built for around 85 million Euros ("New Factory Strengthens European Manufacturing Network", 2023). With this investment, Hansgrohe Gropu is strengthening its manufacturing network in Europe, whilst the factory is part of Hansgrohe's global manufacturing strategy to keep supply chains and transport routes short and safe ("New Factory Strengthens European Manufacturing Network", 2023). The new factory further strengthens the company's valve competency, and with this additional capacity, especially for the European market, the products will be even closer to the customers ("New Factory Strengthens European Manufacturing Network", 2023). Moreover, Valjevo will primarily manufacture hansgrohe branded products (”New Factory Strengthens European Manufacturing Network”, 2023).

Foreign investments can have a significant impact on small towns in Southeastern Europe, bringing economic growth, job opportunities, infrastructure development, and increased international connectivity. Here are a few examples from the region that illustrate the impact of foreign investments:

1. **Kragujevac, Serbia**: Kragujevac, a small town in central Serbia, has attracted foreign investments in the automotive industry. Companies like Fiat (now Stellantis) established production facilities in the region, leading to the creation of thousands of jobs. The automotive cluster in Kragujevac not only revitalized the local economy but also contributed to the improved infrastructure, such as better roads and logistics networks.
2. **Plovdiv, Bulgaria**: Plovdiv, one of Bulgaria's oldest towns, has benefited from foreign investments in various sectors, including manufacturing, technology, and tourism. The city's Free Economic Zone has attracted companies from Europe and beyond, leading to job creation and increased economic activity. Additionally, Plovdiv's status as the European Capital of Culture in 2019 further boosted tourism, which has become a vital source of revenue for the town.
3. **Timisoara, Romania**: Timisoara, located in western Romania, has experienced a surge in foreign investments in recent years, particularly in the IT and technology sectors. Global tech companies have established offices and development centers in the city, creating a thriving tech hub. This influx of foreign capital has not only increased employment opportunities but also transformed Timisoara into a dynamic and cosmopolitan town with a strong focus on innovation.
4. **Ohrid, North Macedonia**: Ohrid, a picturesque town on the shores of Lake Ohrid, has seen increased foreign investments in its tourism sector. The development of hotels, resorts, and infrastructure has boosted the town's appeal as a tourist destination whilst adding up to a job opportunities in the hospitality sector, and increased revenue for local

businesses.

5. **Shkodër, Albania**: Shkodër, a small town in northern Albania, has witnessed foreign investments in the manufacturing sector, particularly in textile and clothing production which has led to the creation of jobs and the growth of export-oriented industries, contributing to the town's economic development.

Foreign investments in small towns in Southeastern Europe can help diversify local economies, reduce unemployment, and improve infrastructure and services. However, it's essential for local governments and communities to carefully manage these investments to ensure they align with the town's long-term development goals and that they benefit the local population in a sustainable manner (Rajnović & Cico, 2023).

Valjevo possesses several attributes that make it attractive to foreign investors. While specific opportunities may evolve, here are some key factors contributing to Valjevo's foreign investment potential:

1. **Strategic Location**: Valjevo's strategic location in western Serbia places it at the crossroads of important transportation routes, including road and rail networks. It is near Belgrade, Serbia's capital city, and connects to other major cities. This location offers logistical advantages for businesses serving domestic and regional markets.
2. **Industrial Heritage**: Valjevo has a history of industrial activity, particularly in machinery, metalworking, and textiles. This heritage provides a foundation for foreign investors interested in these industries. There may be modernization, expansion, and innovation opportunities in existing industrial sectors.
3. **Educational Institutions**: Educational institutions, such as the Valjevo Faculty of Mechanical Engineering, contribute to a skilled workforce and research capabilities. Foreign investors in technology or manufacturing sectors may benefit from collaboration with local educational institutions for talent development and innovation.
4. **Agriculture and Food Processing**: The surrounding region is known for its fertile land and agricultural production. Foreign investment in food processing, agribusiness, or related sectors could leverage the region's

agricultural potential.

5. **Tourism Potential**: Valjevo's natural beauty, with nearby mountains, rivers, and historical sites, offers tourism potential. Foreign investors interested in hospitality, eco-tourism, or cultural tourism may find opportunities to develop accommodations, restaurants, and recreational facilities.
6. **Renewable Energy**: Serbia increasingly focuses on renewable energy sources, including wind and solar power. Valjevo's open landscapes and relatively favorable climate conditions make it a potential site for renewable energy projects. Foreign investors in the energy sector might explore opportunities in renewable energy production and infrastructure development.
7. **Local Government Support**: The local government's willingness to facilitate foreign investment and streamline bureaucratic processes can attract investors significantly. Establishing a business-friendly environment and offering incentives can encourage foreign companies to invest in Valjevo.
8. **Infrastructure Development**: Ongoing infrastructure projects, including road improvements and the restoration of the Belgrade-Bar railway line, can enhance connectivity and accessibility, making Valjevo more appealing to investors.
9. **Cultural and Heritage Preservation**: Valjevo's historical and cultural heritage, including museums, art galleries, and festivals, presents opportunities for investors interested in cultural preservation, tourism, and related activities.
10. **European Integration**: Serbia's aspirations for European Union (EU) membership may increase opportunities for foreign investors, as alignment with EU standards and regulations can attract businesses looking to access the broader European market.

While Valjevo offers potential for foreign investment, investors need to conduct thorough market research, assess local conditions, and engage with local authorities and stakeholders to understand the specific opportunities and challenges in the region. Additionally, Serbia's regulatory framework and investment incentives should be considered when evaluating investment prospects in Valjevo.

Students in foci of the future

One of the great challenges facing many places and countries is population decline. In order to address the question, local and national government need to provide legislative, operational, and functional prerequisites for attracting both domestic and foreign student force which will, after finishing the education cycle, stay in the country and contribute to its economic growth. Against this background, and having in mind that Valjevo is University town, the place already has a good starting point in positioning itself as a place brand that attracts the flow of students, particularly in the area of IT. Combined with the commercial brands operating in Valjevo, the potentials to grow place brand as being appealing to students (and hence, the future work-force), a cooperation between faculties and business should be incorporated in the brand's DNA.

Increasing the flow of students to Valjevo can have several positive effects, including economic growth, cultural enrichment, and the development of a skilled workforce. Here are some strategies that Valjevo can consider attracting more students:

1. **Diversify Educational Offerings**: Valjevo can diversify its educational offerings by collaborating with universities, vocational schools, and technical institutions to establish new programs and courses that cater to a broader range of students. This may include degree programs in emerging fields, vocational training in high-demand sectors, and language courses for international students.
2. **Scholarships and Financial Aid**: Offering scholarships, grants, or financial aid programs can make education in Valjevo more accessible to domestic and international students. These incentives can attract top talent and help students with limited financial means pursue their education in the town.
3. **International Partnerships**: Partnerships with foreign universities and institutions can facilitate student exchange and joint degree programs. Such collaborations can attract international students and enhance the

educational experience by providing exposure to different cultures and teaching methodologies.

4. **Marketing and Promotion**: Valjevo should invest in marketing and promotion efforts to raise awareness about its educational institutions and their unique opportunities. This can be done through online marketing, participation in education fairs, and targeted advertising campaigns.
5. **Improved Infrastructure and Services**: Upgrading and expanding educational infrastructure, including modern classrooms, libraries, and laboratories, can enhance the learning environment and make Valjevo more appealing to students. Additionally, providing essential services such as affordable housing, transportation, and healthcare can improve students' overall quality of life.
6. **Cultural and Recreational Activities**: Valjevo can promote cultural and recreational activities that cater to students' interests. Organizing festivals, art exhibitions, sports events, and music concerts can create a vibrant and engaging student community.
7. **Language Programs**: Offering language courses, especially English and other widely spoken languages, can attract international students who want to improve their language skills while pursuing their studies. Language schools or departments within educational institutions can facilitate this.
8. **Internship and Job Opportunities**: Collaborating with local businesses and industries to provide students with internship and job placement opportunities can make Valjevo a more attractive destination. Students are often drawn to places where they can gain practical experience and establish career connections.
9. **International Student Support Services**: Establishing dedicated support services for international students, such as orientation programs, visa assistance, and accommodation guidance, can ease the transition for those from abroad and make them feel welcome.
10. **Community Engagement**: Encouraging community engagement through student volunteer programs and community service initiatives can foster a sense of belonging and encourage students to stay in

Valjevo after graduation.

11. **Safety and Security**: Ensuring a safe and secure environment is essential to attract students and their families. Implementing measures to improve safety on and off campus can build trust and confidence among students.

Conclusion

Place rebranding can be undertaken for various reasons, including attracting tourists, promoting foreign direct investment, boosting local economies, reversing negative stereotypes, addressing population decline, or recovering from economic downturns or crises. It often involves a multifaceted approach that combines marketing, urban planning, policy changes, and community engagement to reshape the image and perception of the place positively and sustainably. Public administrators and politicians need to understand their redefined roles in the economy and must learn and develop skills to adjust to a market- and customer-oriented approach to social and economic development (Gertner, 2007). In accordance with the basic elements of branding, Valjevo needs to apply a long-term place branding strategy in order to rebrand (or (re)position) itself in the minds of the prospects. Valjevo’s prospects are its citizens, students, investors, and tourists and for each group of prospects, the paper has suggest ways for place rebranding.

Smaller towns are integral to a country's economic development as they contribute to job creation, regional economic diversification, cultural heritage preservation, and overall economic resilience. A balanced approach supporting urban and rural areas is essential for sustained and inclusive national economic growth. Following Cvitkovic (2023) who accentuates the aspects of rebranding, Valjevo should in its strategy employ repositioning and restructuring. Repositioning can be a challenging process, as it involves changing established perceptions and behaviors of consumers. It requires a well-thought-out strategy, effective communication, and often a commitment to making necessary changes to align the product or brand with the new positioning. When done successfully, repositioning can breathe new life into a product or brand, attract new customers, and revitalize its market presence. Shifts in consumer behavior, technological advancements, competitive pressures, or changes in the business environment often drive marketing restructuring. It is a strategic endeavor to enhance an organization's ability to adapt, innovate, and remain competitive in a dynamic marketplace. Successful marketing restructuring requires careful planning, analysis, and execution to achieve the desired outcomes and long-term growth. By applying the holistic place rebranding approach Valjevo can enhance its appeal to relevant stakeholders and contribute to the town's long-term development.

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ORGANIZACIONA KULTURA – PUT KA USPEŠNOJ KORPORACIJI

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Rezime

Srž svake uspešne poslovne organizacije ogleda se u dobroj organizacionoj kulturi, a posebno kod organizacija koje poslovanje obavlja kroz mrežu ispostava i filijala. Savremene poslovno okruženje karakteriše dinamičnost i neizvesnost, pa je organizaciona kultura jedan od načina da se razvije i učvrsti jedinstvenost uspešnog poslovanja. Organizacija kroz norme, običaje i ukorenjeni sistem vrednosti oblikuje razmišljenje i saradnju zaposlenih u organizaciji. Ovaj rad predstavlja analizu organizacione kulture jedne ekspoziture banke i u tu svrhu je korišćen dijagnostički instrument za procenu organizacione kulture - OCAI model. Njegova misija je da pruži sliku o postojećem i preferiranom tipu organizacione kulture. Cilj je da se identifikuju i analiziraju karakteristike organizacione kulture radne jedinice banke uz korišćenje OCAI modela i ukaže na one elemente koji zahtevaju dalje razmatranje ili eventualne korektivne mere.

Ključne reči: *organizaciona kultura, instrument za procenu organizacione kulture (OCAI), banka*

JEL:A13, D53, D70

Uvod

Organizaciona kultura, pojam koji je privukao sve veću pažnju tokom proteklih nekoliko decenija i ima duboko ukorenjen uticaj na svaku sferu organizacije. Dok je ranije smatrana sekundarnim ili marginalnim elementom,

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danas se organizaciona kultura nalazi u samom središtu organizacione strategije i uspešnosti. Predstavlja pokretačku silu koja utiče na različite aspekte, uključujući angažovanost zaposlenih, produktivnost, sposobnost organizacije da se prilagodi promenama i njenu otpornost.

Stvaranje, uspostavljanje i negovanje organizacione kulture je jedinstvena procedura, jer je specifična za svaku organizaciju i od posebnog značaja za svaku od njih. Značaj organizacione kulture se ogleda u njenom uticaju, koji kroz sistem vrednosti, ima uticaj na efikasnost i efektivnost same organizacije. Organizaciona kultura se najčešće opisuje kao sistem pretpostavki, verovanja, vrednosti i normi ponašanja koje su zaposleni razvili unutar organizacije (Stefanović et al, 2000). Definisana na ovaj način, organizaciona kultura se može predstaviti kao specifičan karakter organizacije ili osnovni element socijalizacije svakog novog zaposlenog. Na osnovu vrednosti koje promoviše određena organizaciona kultura, formiraju se pravila ponašanja unutar kolektiva, kao što su prihvatljivi načini donošenja odluka, oblici neprihvatljivog ponašanja, oblačenje, međusobni odnos, itd.

U savremenom poslovnom okruženju, organizacije se suočavaju sa raznolikim izazovima. Ovi izazovi obuhvataju tehnološke promene, dinamiku promenljivog tržišta, evoluciju očekivanja radne snage i društvene zahteve. U ovom kompleksnom kontekstu, organizaciona kultura može predstavljati oslonac organizacije, obezbeđujući stabilnost, smernice i osećaj svrhe. S druge strane, ukoliko nije usaglašena sa potrebama organizacije, može postati prepreka promenama, inovacijama i rastu. Razumevanje i upravljanje organizacionom kulturom postaje sve važnije, jer može značajno uticati na uspeh organizacije, privlačenje i zadržavanje talenata, kao i njen ugled na tržištu. Lideri i menadžeri trebaju biti svesni organizacione kulture i aktivno raditi na njenom oblikovanju kako bi postigli ciljeve organizacije i podržali razvoj zaposlenih.

Organizaciona kultura nije samo reč na papiru, ona je dinamična sila koja se oblikuje kroz svakodnevne poslovne aktivnosti. Kroz organizacionu kulturu, kompanije usvajaju svoj jedinstveni identitet, odražavajući svoje ciljeve, vrednosti i misiju. Često se organizaciona kultura izražava kroz osnovne vrednosti koje organizacija promoviše, kao i njen odnos prema kvalitetu, inovacijama i društvenoj odgovornosti. Kultura organizacije oblikuje sam identititet organizacija, jer pomaže članovima da se identifikuju sa njom i razumeju svoju ulogu u postizanju organizacionih ciljeva. Organizacionom kulturom definišu se prihvatljivi i neprihvatljivi obrasci ponašanja unutar organizacije (komunukacija u organizaciji i rešavanje konflikata sa kolegama i nadređenima).

U fokusu organizacione kulture, važno je prepoznati radnu motivaciju zaposlenih kao "jedan od najvažnijih preduslova za efikasnost rada i postizanje ciljeva, kako pojedinaca tako i cele organizacije" (Boljnović, 2011). Budući da zaposleni predstavljaju najvredniji resurs svake poslovne organizacije, njihova radna motivacija je jedan od najvažnijih aspekata koje organizaciona kultura treba da promoviše i podržava. Imajući u vidu da ljudski resursi nisu samo jednostavna suma broja zaposlenih, već "ukupni ljudski potencijal: dostupno znanje i iskustvo, korisne sposobnosti i veštine, moguće ideje i stvaralaštvo, stepen motivacije i interes za postizanje organizacionih ciljeva" (Kulić, 2005).

Kada je reč o merenju radne kulture, može se doći do utiska da je to neostvarivo i da je nemoguće adekvatno je proceniti. Neki stručnjaci čak tvrde da kulturu nije moguće meriti i stava su da sve što čini organizacionu kulturu (njene vrednosti, verovanja i pretpostavke) se ne može ili ne bi trebale meriti kvantitativno. Takođe, mnogi tretiraju kulturu kao barometar ponašanja.

Kultura kao ideja ne može se lako kvantifikovati, ali dobra organizaciona kultura stvara niz ponašanja koja se mogu pratiti. Rezultati zdravog i produktivnog preduzeća mogu se povezati s kulturom. Brojna istraživanja ukazuju na različite parametre koji se mogu meriti u sveobuhvatnoj analizi organizacione kulture (O'Donnell, Boyle, 2003). Dati parametri mogu se sveobuhvatno meriti, iako sama kultura nije merljiva, i na osnovu ovih zajedničkih atributa može se utvrditi uspešnost ili neuspešnost poslovanja datog preduzeća.

Važno je uspostaviti sistem praćenja percepcije zaposlenih o trenutnoj organizacionoj kulturi u odnosu na željenu kulturu. Imajući to na umu, Robert Quinn i Kim Cameron (2006) sa Univerziteta u Mičigenu razvili su Instrument za procenu organizacione kulture (Organizational Culture Assessment Instrument - OCAI). Ovaj alat omogućava uvid u kulturne snage, prikazujući tip organizacione kulture, tako da menadžment datog preduzeća može preduzeti moguće korektivne mere na osnovu dobijenih informacija. U tom smislu, OCAI se može efikasno koristiti u cilju poboljšanja ili promene organizacionih vrednosti kako bi se uskladile s poslovnom strategijom.

Metodološki okvir istraživanja

Instrument za procenu organizacione kulture (OCAI)

Kako bi identifikovali vrstu organizacione kulture i vrednosti koje dodatno oblikuju stavove, očekivanja i aktivnosti članova organizacije, Cameron i Quinn su kreirali upitnik za procenu organizacione kulture (OCAI - Organizational Culture Assessment Instrument). Razvijen je iz teorijskog okvira poznatog kao Competing Values Framework (CVF). Suštinski, stvorili su alat pomoću kojeg je moguće proceniti dominantnu orijentaciju poslovne organizacije posmatranjem njenih kulturnih snaga i vrste organizacione kulture. Zahvaljujući OCAI testu, moguće je oceniti organizacionu kulturu, ali i klimu na nivou radnih timova, odeljenja ili pojedinačnih sektora organizacije. Na osnovu dobijenih informacija, moguće su dalje korektivne akcije u cilju poboljšanja ili promene organizacionih vrednosti na nivou određene organizacione jedinice, pa čak i celokupne organizacije, u skladu s poslovnom strategijom.

Kako bi se stekao uvid u glavne karakteristike organizacije koje možda moraju da se prilagode novim okolnostima, odnosno kako bi se identifikovao tip organizacione kulture i vrednosti koje oblikuju stavove, očekivanja i aktivnosti članova posmatrane organizacije, Cameron i Quinn su razvili upitnik za procenu organizacione kulture u vezi sa šest dimenzija sadržaja, odnosno aspekata organizacione kulture (Suderman, 2012):

1. dominantne karakteristike;
2. opšti stil vođenja u organizaciji;
3. upravljanje zaposlenima;
4. kompaktnost organizacije;
5. strateški ciljevi;

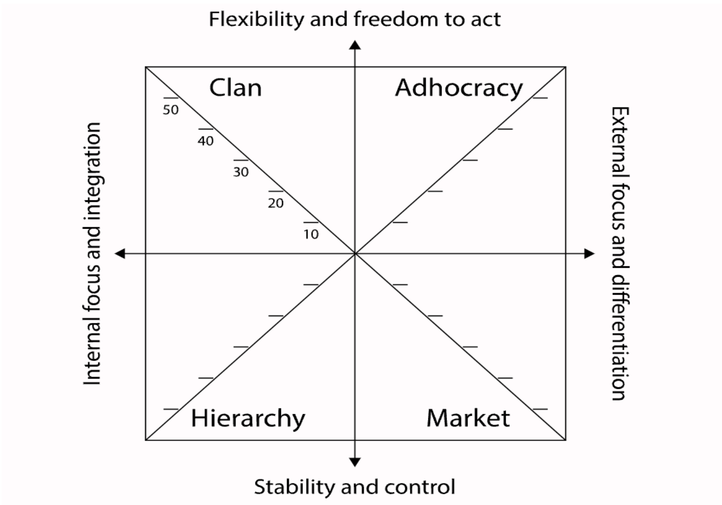
6. kriterijumi uspeha.

Svaki od ovih šest aspekata pruža ispitaniku četiri opcije odgovora (A, B, C, D), unutar kojih ispitanik raspodeljuje ukupno 100 bodova. Važno je napomenuti da nema tačnog ili netačnog odgovora u OCAI testu, jer svaka organizacija opisuje različit, jedinstven sistem odgovora. Kako svako pitanje ima četiri odgovora, unutar kojih treba raspodeliti 100 bodova, ispitanik dodeljuje najveći broj bodova odgovoru koji najtačnije opisuje situaciju u njegovoj organizaciji, a zatim u opadajućem redosledu ostalim odgovorima koji manje odražavaju situaciju u organizaciji.

OCAI test se sastoji od dva upitnika, svaki sa po šest pitanja. Prvi deo je upitnik koji pruža sliku trenutne situacije unutar organizacije, odnosno kulture kakva je danas, i naziva se "Trenutno". Zatim, ispitanik daje odgovore na ista pitanja kao u prethodnom upitniku, ali koji opisuju željenu situaciju, odnosno kako bi ispitanici želeli da organizacija izgleda za pet godina i ovaj upitnik se naziva "Željeno" (Suderman, 2012). Ocena OCAI testa je jednostavna, jer se zasniva na jednostavnim aritmetičkim proračunima. Prvi korak uključuje zbir svih odgovora (bodova) koje nosi ponuđeni odgovor A u upitniku "Trenutno", a zatim se dobijena vrednost deli sa šest kako bi se dobila prosečna vrednost rezultata. Rezultati za odgovore B, C i D se računaju na isti način, a potom se pristupa oceni upitnika "Željeno" na isti način. Upoređivanjem dobijenih rezultata može se jasno utvrditi da li je trenutna situacija u organizaciji bliska željenom stanju ili su dobijeni dva ekstrema kao odgovori, što ukazuje na potrebu uvođenja korektivnih mera.

Dalje operacije s dobijenim odgovorima bazirane su na korišćenju teorijskog modela Competing Values Framework. Ova teorija sugeriše da unutar svake organizacije postoje dve ortogonalne dimenzije koje igraju ključnu ulogu u kreiranju kulture - jedna je fleksibilnost naspram stabilnosti (tj. kontrole), dok je druga unutrašnji fokus organizacije, naspram spoljnog fokusa (Cameron, Quinn, 1999). Ove dimenzije leže u činjenici da organizaciona kultura treba obezbediti istovremeno ostvarivanje ovih suprotstavljenih zahteva: za stabilnošću i promenom, kao i za spoljnim i unutrašnjim fokusom. Na taj način, kulture se razlikuju u pogledu toga gde se ove dve dimenzije nalaze, pri čemu su kulture retko smeštene na njihovim krajnostima. S obzirom da postoje dve dimenzije sa dva ekstrema, moguće je razlikovati 4 tipa kulture koji odgovaraju ponuđenim odgovorima u OCAI upitniku (Janjićijević, 2011).

Slika 1. Okvir konkurentnih vrednosti



Izvor: (Cameron, Quinn, 2006)

Klanska kultura (A): Ova kultura je orijentisana internim pravcem prema održavanju harmoničnih odnosa u timu, podrazumeva fleksibilnost i stavljanje zaposlenih u organizaciji u fokus, jer njihov razvoj i posvećenost dovode do konkurentske prednosti i tržišnog uspeha. Iz tog razloga, ova kultura ističe važnost harmonije i dobrih interpersonalnih odnosa, neguje prijateljsko radno okruženje, promoviše međusobno poštovanje, neguje zdrav unutrašnji ambijent i dobrobit kako na ličnom nivou tako i na kolektivnom nivou.

Kultura adhokratije (B): Kultura adhokratije je usmerena prema spolja, tj. prema tržišnom položaju, ali i prema fleksibilnosti. Ova kultura se zasniva na ideji da ključ uspeha leži u promenama i inovacijama u dinamičnom i kreativnom radnom okruženju. Zaposleni u organizacijama koje neguju ovu kulturu su spremni da preuzmu rizike, dok se od lidera očekuje da budu inovatori, pa se može zaključiti da ovaj tip kulture generalno promoviše individualnu inicijativu i slobodu.

Tržišna kultura (C): Ova kultura takođe je usmerena prema spolja - tj. prema tržišnom pozicioniranju organizacije, ali je fokusiranje na stabilnosti i kontroli.

Kultura tržišta se zasniva na pretpostavci da samo oštra konkurencija sa spoljne strane i orijentacija ka potrošaču iznutra dovode do uspeha. U suštini, ovo je kultura gde su konkurencija i profit visoko vrednovani, pa se bazira na rezultatima koji naglašavaju završavanje posla i dovršavanje stvari, a menadžment je fokusiran na definisane ciljeve. Naglasak je na pobedi i to održava organizaciju na okupu. Reputacija i uspeh su od suštinskog značaja.

Kultura hijerarhije (D): Kultura hijerarhije je orijentisana i ka stabilnosti i unutrašnjosti. Ova kultura se bazira na kontroli, efikasnosti, logičkom vođenju, objektivnosti i racionalnosti. Efikasnost i produktivnost su osnovni elementi ove kulture, a procedure određuju šta ljudi rade. Održavanje glatkog funkcionisanja organizacije je od suštinskog značaja. Formalna pravila i politike održavaju organizaciju na okupu. Dugoročni ciljevi su stabilnost i rezultati, uz efikasno i glatko izvršavanje zadataka.

Putem OCAI testa možemo lako da prikažemo dominantnu trenutnu kulturu u organizaciji, razlike između trenutne i preferirane kulture, snagu trenutne kulture, kao i “bol” sa kojim se radnici trenutno susreću i eventualnu “dobit” koju mogu da postignu ukoliko se izvrše određene promene. Ukoliko bi organizacije bile svesne značaja organizacione kulture i prednosti implementacije OCAI testa lako bi se mogla vršiti dijagnoza i promena organizacione kulture. Osnovne prednosti primene OCAI testa su: meri se šest aspekata koji su izuzetno bitni za organizaciju, vidi se trenutno stanje organizacione kulture i jasno se poredi trenutna i preferirana kultura, mogućnost dodavanja kvalitativnih detalja, kao i mogućnost samostalne primene već definisanih testova.

OCAI istraživanje u filijali banke

Instrument za praćenje organizacione kulture je validno sredstvo za procenu organizacione kulture i jedna od najčešće korišćenih metrika za vrednosvanje i procenu organizacione kulture (model korišćen u preko 10.000 kompanija). Prema ovom modelu nema tačnih i pogrešnih odgovora pa će svaka kompanija ili ekspozitura proizvesti različite skupove odgovora.

Primenom ovog modela od zaposlenih se traži da ocene svoju organizaciju odgovorima na pitanja, gde se indirektno ocenjuje organizaciona kultura i klima na nivou odeljenja ili organizacione jedinice sa definisanim granicama. OCAI test se uglavnom odnosi na ekspozituru ili organizacionu jedinicu, jer najviše pomaže u određivanju načina za promenu kulture. Zaposleni odgovara na šest pitanja, pri čemu svako pitanje ima četiri alternative i cilj je da se podeli 100 bodova između ovih alternative. Prvom grupom pitanja definiše se trenutno stanje, a drugom grupom pitanja željeno stanje. Pod željenim stanjem uglavnom se misli na željeni izgled organizacije za pet godina.

Metodologija aktuelnog istraživanja fokusira se na primenu OCAI testa u proceni organizacione kulture jedne od filijala Banca Intesa. Svesno smo se odlučili da se fokusiramo na jednu specifičnu filijalu kako bismo uhvatili suptilne nijanse kulturnih dinamika na operativnom nivou, s obzirom na mogućnost značajnih razlika u odnosu na širu organizacionu kulturu.

OCAI test sproveden je u jednoj ekspozituri banke, gde je 15 radnika pristalo da odradi test. Zaposleni ove poslovne jedinice su odgovorima prikazali organizacionu klimu unutar svog tima, kao i odnose prema neposrednom lideru i menadžeru ekspoziture. Naša istraživačka metodologija obuhvatila je niz koraka. Prvo smo organizovali sesiju orijentacije za zaposlene filijale, pružajući im uvod u OCAI, njegovu svrhu i značaj u kontekstu organizacione kulture. Nakon toga, učesnicima su dostavljeni OCAI upitnici, obezbeđeni i u štampanom i u digitalnom formatu, kako bismo udovoljili njihovim preferencijama i olakšali učešće. Sakupljanje podataka protezalo se kroz dvonedeljni period, nakon čega su odgovori bili agregirani i analizirani koristeći različite statističke alatke. Cilj analize bio je identifikacija dominantnih kulturnih arhetipova, potencijalnih neslaganja između trenutne i željene kulture, kao i identifikacija oblasti kulturne snage i potencijalnih poboljšanja. Posebna pažnja posvećena je sagledavanju kako zaposleni doživljavaju organizacionu kulturu, kao i uočavanju konkretnih elemenata koji čine tu kulturu jedinstvenom unutar filijale. Ova detaljna analiza trebala je da nam omogući precizan uvid u ključne aspekte koji utiču na radnu atmosferu, međusobne odnose i efikasnost timova u okviru ove banke.

Na osnovu rezultata, imamo nameru da identifikujemo potencijalne oblasti gde postoji sklad između trenutne i željene kulture, ali takođe i oblasti gde su potrebne korektivne mere. Ovaj pristup omogućava nam ne samo da dijagnostikujemo trenutno stanje organizacione kulture, već i da predložimo konkretne korake ka njenom poboljšanju.

Ocenjivanje OCAI upitnika zahteva jednostavne aritmetičke proračune. Prvi korak je da se saberu svi odgovori pod A u koloni "Trenutno", i potom podele sa šest. Odnosno, izračuna se prosečni rezultat za A alternative u koloni "Trenutno". Isto se uradi i za odgovore, B, C i D. Potom se proces ponovi za izračunavanje rezultata željenog stanja (Cameron, Quinn, 2006). Rezultati OCAI testa će se naći u sledećem poglavlju ovog rada, gde su analizirani odgovori zaposlenih u jednoj ekspozituri banke. U skladu sa rezultatom, možemo videti šta zaposleni te poslovne jedinice misle o organizacionoj klimi unutar njihovog tima, kao i o njihovom odnosu sa neposrednim liderom, odnosno menadžerom date ekspoziture.

Tabela 1. OCAI upitnik

1. DOMINANTNE KARAKTERISTIKE		**TRENUTNO/ ŽELJENO**	
A	Organizacija je veoma lično mesto. To je poput šire porodice, Čini se da ljudi dele mnogo sebe.		
B	Organizacija je veoma dinamično preduzetničko mesto. Ljudi su voljni da rizikuju.		
C	Organizacija je orijentisana na rezultate. Glavna briga je da posao bude obavljen. Ljudi vole da se takmiče i orijentisani su na postignuća.		
D	Organizacija je veoma kontrolisano i strukturirano mesto. Formalne procedure generalno upravljaju ljudima.		
	UKUPNO		
2. ORGANIZACIONO LIDERSTVO		**TRENUTNO/ ŽELJENO**	
A	Smatra se da liderstvo u organizaciji podstiče mentorstvo, ili olakšavanje komunikacije i negovanje odnosa.		
B	Smatra se da liderstvo u organizaciji podstiče preduzetništvo, inovativnost ili preuzimanje rizika.		
C	Smatra se da liderstvo u organizaciji podstiče brz tempo, agresivan stil, i orijentisanost na rezultate.		
D	Smatra se da liderstvo u organizaciji podstiče koordinaciju, organizaciju ili efikasnost nesmetanog rada.		
	UKUPNO		
3. MENAĐŽMENT ZAPOSLENIH		**TRENUTNO/ ŽELJENO**	

A	Stil upravljanja u organizaciji karakteriše timski rad, opštu saglasnost i učešće.		
B	Stil upravljanja u organizaciji karakteriše individualno preuzimanje rizika, inovativnost, slobodu i jedinstvenost.		
C	Stil upravljanja u organizaciji karakterišu jaka konkurencija, visoki zahtevi i postignuća.		
D	Stil upravljanja u organizaciji karakterišu sigurnost zaposlenja, saglasnost, predvidivost i stabilnost u odnosima.		
	UKUPNO		
4. KOMPAKNOST ORGANIZACIJE		**TRENUTNO/ ŽELJENO**	
A	Ono što čini organizaciju kompaktnom je lojalnost i uzajamno poverenje. Posećenost ovoj organizaciji je velika.		
B	Ono što čini organizaciju kompaktnom je posvećenost inovaciji i razvoju. Naglasak je na tome da se nalazite na samom vrhu.		
C	Ono što čini organizaciju kompaktnom je naglasak na dostignuća i postizanje ciljeva. Agresivnost i pobeđivanje su česte teme.		
D	Ono što organizaciju čini kompaktnom su formalna pravila i politika.Održavanje organizacije koja neometano fukcioniše je veoma važno.		
	UKUPNO		
5. STRATEŠKA ISTICANJA		**TRENUTNO/ ŽELJENO**	
A	Organizacija ističe ljudski razvoj. Visoko poverenje, otvorenost i upornost, kao i učešće u obukama.		
B	Organizacija ističe sticanje novih resursa i stvarenje novih izazova. Probanje novih stvari i istraživanje novih mogućnosti se ceni.		
C	Organizacija ističe takmičarske akcije i postignuća. Postizanje visokog nivoa i pobeda na tržištu su dominantni.		
D	Organizacija ističe stalnost i stabilnost. Efikasnost, kontrola i glatko poslovanje su važni.		
	UKUPNO		
6. KRITERIJUMI USPEHA		**TRENUTNO/ ŽELJENO**	
A	Organizacija definiše uspeh na osnovu razvoja ljudskih resursa, timskog rada, posvećenosti zaposlenih, kao i brige za ljude i njihove lične i druge potrebe.		
B	Organizacija definiše uspeh na osnovu posedovanja najunikatnijih i najnovijih proizvoda. Ona je proizvodni lider i inovator.		
C	Organizacija definiše uspeh na osnovu pobeda na tržištu i nadmašivanja konkurencije. Konkuretno		

	tržište je ključ liderstva.		
D	Organizacija definiše uspeh na osnovu efikasnosti. Pouzdano poslovanje, glatko funkcionisanje i jeftina prozvodnja su kritični.		
	UKUPNO		

Izvor: (Cameron & Quinn, 2006, preuzeto sa sajta OCAIonline.com)

Rezultati i diskusija

Kako je precizirano u metodologiji, OCAI test je alat koji analizira šest ključnih aspekata organizacione kulture. Pet zaposlenih u jednoj ekspozituri banke pristalo je da učestvuje u istraživanju i pomoglo nam da analiziramo organizacionu kulturu u jednom uređenom bankarskom sistemu. Analizom rezultata OCAI testa dobijamo uvid u njihovo viđenje organizacione klime unutar tima, kao i njihov odnos sa neposrednim liderom i menadžerom odeljenja.

Proces testiranja sprovodio se dva puta, u skladu sa definisanom procedurom. Prvo su učesnici ocenjivali trenutnu situaciju, a potom željeno stanje. Prvi krug evaluacije obuhvatao je ocenu šest aspekata trenutne kulture, dok se u drugom krugu ocenjivalo istih šest faktora kako bi se utvrdila željena kultura.

Svaki aspekt kulture imao je četiri alternative, a učesnici su imali na raspolaganju 100 bodova za raspodelu. Ti bodovi su distribuirani na četiri izjave unutar svakog od šest aspekata. Anketa je obrađena uz pomoć internet stranice OCAI Online, čiji softver pomaže ispitanicima da pravilno raspodele 100 bodova. Ispitanicima je savetovano da slede svoj instikt i da popunjavaju bodove na osnovu prvog impulsa, jer je on obično i tačan.

Odogovori svih ipitanika su obrađeni uz pomoć programa Microsoft Excel, gde su sabrane sve alternative (A, B, C i D). Potom su date vrednosti podeljene sa brojem ispitanika i tako su dobijene prosečne vrednosti za sve ove alternative. Alternativa A, odnosno odgovori pod A teže prijateljskoj, porodičnoj atmosferi, nalik na klan. Odgovori pod B uglavnom predstavljaju neformalnost u komuniciranju i poslovanju, ili tzv. Ad-hoc-kratiji. Odgovori pod C predstavljaju stanje u kome je sve podređeno tržištu i ispunjavanju zacrtanih ciljeva, nema puno fleksibilnosti i neformalnosti (ispunjavanje ciljeva je prioritet). Odgovori pod D uglavnom sugerišu organizovanost i hijerarhiju. Ispod se nalazi tabela sa prosečnim vrednostima dodeljivanja bodova od strane ispitanika.

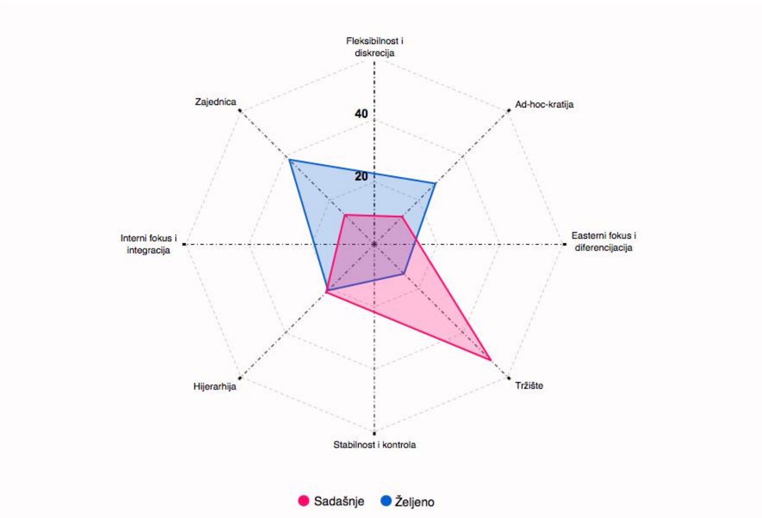
Tabela 2. Rezultat ocenjivanja organizacione kulture (klime) u jednoj ekspozituri banke

	Trenutno	**Željeno**
Zajednica	13,33	38,33
Ad-hoc-kratija	12,50	27,5
Tržište	52,50	13,33
Hijerarhija	21,67	20,83

Izvor: Proračuni autora na osnovu dostavljenih podataka

Kada ove podatke prenesemo na dijagram, možemo uočiti svu snagu OCAI alata. Podaci iz tabele ne prikazuju jasnu sliku kao dijagram da organizaciona klima unutar ove poslovne jedinice je dijametralno suprotna onoj kakvu bi zaposleni u istoj želeli da imaju.

Slika 2. Dijagram ocenjivanja organizacione kulture (klime) u jednoj ekspozituri banke



Izvor: Dijagram generisan unošenjem podataka na sajt OCAIonline.com

Dobijeni rezultati putem OCAI upitnika pružili su duboko i nijansirano razumevanje kulturnog pejzaža filijale, ističući ključne karakteristike koje trenutno oblikuju organizacionu dinamiku. Uočen je značajan uticaj kultura Tržište i Hijerarhija što jasno pokazuje snažan naglasak na strogo strukturirane procese (jasne procedure u poslovanju). OCAI test predstavlja značajan alat za istraživanje organizacione kulture, a analizom dijagrama uočavamo da zaposleni u ekspozituri smatraju da je njihova organizaciona kultura usmerena na poslovne rezultate, gde se poštovanje hijerarhije, stabilnost i kontrola smatraju ključnim elementima.

Međutim, zanimljivo je primetiti razliku između trenutne kulture i željene kulture, kako je reflektovano u rezultatima OCAI testa. Zaposleni izražavaju želju da rade u sredini koja je više nalik "klanu", gde je naglasak na fleksibilnosti, neformalnoj komunikaciji i ad-hoc sistemima poslovanja. Ovaj pomak ukazuje na evoluciju želja zaposlenih ka stvaranju radnog okruženja koje podržava saradnju, fleksibilnost i inovacije. To implicira da postoji izražena težnja ka uspostavljanju atmosfere gde timski duh i kreativnost, zajedništvo, saradnja i otvorenost u organizaciji dobijaju na važnosti u odnosu na čvrstu strukturu i hijerarhijsku kontrolu.

OCAI test bi trebalo sprovesti šire u okviru cele organizacije, obuhvatajući sve zaposlene, kako bi se dobila potpunija slika o različitim kulturama prisutnim u različitim timovima ili odeljenjima. Proučavanje varijacija među timovima i odeljenjima, kao i identifikacija zajedničkih karakteristika, pruža dublje razumevanje organizacione dinamike.

Na osnovu dobijenih rezultata, menadžeri HR i lideri kompanije mogu razviti personalizovane strategije i korektivne mere kako bi unapredili komunikaciju i organizacionu kulturu. Ovo uključuje prilagođavanja u liderstvu, usmeravanje obuka i razvojnih programa, kao i implementaciju praksi koje podržavaju željenu kulturu unutar organizacije. Samo kroz sveobuhvatno sagledavanje rezultata OCAI testa mogu se oblikovati precizne strategije usmerene ka jačanju organizacione kulture u pravcu koji odražava vrednosti i ciljeve zaposlenih.

Zaključak

Merenje organizacione kulture putem alata kao što je OCAI testiranje predstavlja ključni korak ka razumevanju dinamike unutar organizacije i postizanju dugoročnog uspeha. Postoje dva ključna pitanja koja treba uzeti u obzir: Zašto je potrebno meriti organizacionu kulturu i kako OCAI test može pomoći top menadžmentu u internom uređenju kompanije?

Prvo, potreba za merenjem organizacione kulture proizilazi iz činjenice da ona direktno utiče na performanse, zadovoljstvo zaposlenih i ukupnu uspešnost organizacije. Razumevanje trenutne kulture omogućava identifikaciju ključnih vrednosti, normi i obrazaca ponašanja koji formiraju temelj organizacionog identiteta. Ovo znanje omogućava donošenje informisanih odluka, usmeravanje strategija i prilagođavanje pristupa kako bi se ostvarili poslovni ciljevi. Takođe, merenje organizacione kulture postaje ključno u procesima promena, omogućavajući organizacijama da precizno identifikuju oblasti koje zahtevaju intervenciju i strategije koje podržavaju transformaciju ka poželjnom kulturnom okviru.

Drugo, OCAI test predstavlja moćan alat za top menadžment u internom uređenju kompanije. Kroz analizu rezultata ovog testa, menadžeri dobijaju jasnu sliku o dominantnim kulturnim tipovima u organizaciji, čime se otvara prostor za kritičko razmatranje trenutnog stanja. OCAI test omogućava top menadžmentu da prepozna ne samo trenutne kulturne obrasce, već i željene ciljeve koji se usklađuju sa strategijskim planovima. Nudi kvantitativne podatke o percepcijama zaposlenih, olakšavajući identifikaciju oblasti koje zahtevaju fokus i unapređenje.

Istraživanje organizacione kulture kroz prizmu OCAI modela u kontekstu ekspoziture banke pruža dragocene uvide kako za akademsku zajednicu, tako i za praktičare u industriji. Organizaciona kultura, iako nematerijalna, ima dubok uticaj na funkcionisanje, performanse i prilagodljivost organizacije. Rezultati istraživanja naglašavaju važnost redovnog procenjivanja i podešavanja organizacione kulture kako bi se osigurala usklađenost sa strateškim ciljevima i spoljnim izazovima.

Za filijalu banke, kulturni uvidi pružaju kako prilike, tako i izazove. Dok se trenutna kultura dobro uklapa sa operativnim potrebama filijale, postepeni prelaz na drugu organizacionu kulturu može dovesti do kompletnog unapređenja i transformacije organizacije. Prihvatanje kulture koja je više kolaborativna i inovativna može unaprediti ne samo zadovoljstvo zaposlenih, već i pozicionirati filijalu da bolje služi svojim klijentima u neprestano evoluirajućem bankarskom okruženju.

U širem kontekstu, ovo istraživanje ističe značaj prepoznavanja i negovanja organizacione kulture kao strateškog resursa. Dok se kompanije suočavaju sa kompleksnostima 21. veka, dobro usklađena, prilagodljiva i dinamična kultura može biti njihov kompas, vodeći ih ka održivom uspehu.

Redovno sprovođenje OCAI testova pruža kontinuiranu analizu i praćenje kulturnih promena tokom vremena. Menadžeri mogu identifikovati dinamiku evolucije kulture, prepoznati izazove i prilagođavati strategije u skladu s promenama u organizaciji. OCAI test postaje osnov za razvoj inovativnih inicijativa koje podržavaju kulturnu transformaciju, poboljšavaju timsku efikasnost i održavaju zadovoljstvo zaposlenih. U krajnjem zaključku, OCAI test predstavlja dragocen resurs koji omogućava organizacijama da dublje razumeju svoju kulturu, usklađuju je sa poslovnim ciljevima i aktivno oblikuju put ka održivom uspehu.

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ORGANIZATIONAL CULTURE - THE PATH TO A SUCCESSFUL CORPORATION

Strahinja Bogdanović[27]

Abstract

The essence of every successful business organization is reflected in a good organizational culture, particularly for organizations that operate through a network of branches and subsidiaries. The modern business environment is characterized by dynamism and uncertainty, making organizational culture one of the ways to develop and strengthen the uniqueness of successful operations. Through norms, customs, and an ingrained value system, an organization shapes the thinking and collaboration of its employees. This paper presents an analysis of the organizational culture of a bank branch, utilizing the Organizational Culture Assessment Instrument (OCAI) model for this purpose. Its mission is to provide an overview of the existing and preferred type of organizational culture. The goal is to identify and analyze the characteristics of the organizational culture within the bank's branch using the OCAI model and highlight elements that require further consideration or potential corrective measures.

Keywords: *organizational culture, Organizational Culture Assessment Instrument (OCAI), bank*

JEL: *A13, D53, D70*

Introduction

Organizational culture, a concept that has attracted increasing attention over the past few decades and has a deep-rooted influence on every sphere of the organization. While earlier it was considered a secondary or marginal element, today organizational culture is at the very center of organizational strategy and success. It represents a driving force that affects various aspects, including

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employee engagement, productivity, the organization's ability to adapt to change and its resilience.

Creating, establishing and nurturing organizational culture is a unique procedure, because it is specific for each organization and of special importance for each of them. The importance of organizational culture is reflected in its influence, which through the system of values, has an impact on the efficiency and effectiveness of the organization itself. Organizational culture is most often described as a system of assumptions, beliefs, values and norms of behavior developed by employees within the organization (Stefanović et al, 2000). Defined in this way, organizational culture can be presented as a specific character of the organization or a basic element of the socialization of each new employee. Based on the values promoted by a certain organizational culture, rules of behavior within the collective are formed, such as acceptable ways of making decisions, forms of unacceptable behavior, dressing, mutual relationship, etc.

In the modern business environment, organizations face a variety of challenges. These challenges include technological change, changing market dynamics, evolving workforce expectations and societal demands. In this complex context, organizational culture can be the backbone of the organization, providing stability, direction and a sense of purpose. On the other hand, if it is not aligned with the needs of the organization, it can become an obstacle to change, innovation and growth. Understanding and managing organizational culture is becoming increasingly important, as it can significantly affect the success of the organization, attracting and retaining talent, as well as its reputation in the market. Leaders and managers should be aware of organizational culture and actively work on shaping it in order to achieve organizational goals and support employee development.

Organizational culture is not just a word on paper, it is a dynamic force that is shaped through everyday business activities. Through organizational culture, companies adopt their unique identity, reflecting their goals, values and mission. Organizational culture is often expressed through the basic values that the organization promotes, as well as its attitude towards quality, innovation and social responsibility. Organizational culture shapes the very identity of organizations, as it helps members identify with it and understand their role in achieving organizational goals. Organizational culture defines acceptable and unacceptable patterns of behavior within the organization (communication in the organization and resolving conflicts with colleagues and superiors).

In the focus of organizational culture, it is important to recognize the work motivation of employees as "one of the most important prerequisites for work efficiency and achieving goals, both for individuals and for the entire organization" (Boljnović, 2011). Since employees represent the most valuable resource of any business organization, their work motivation is one of the most important aspects that the organizational culture should promote and support. Bearing in mind that human resources are not just a simple sum of the number of employees, but "total human potential: available knowledge and experience, useful abilities and skills, possible ideas and creativity, degree of motivation and interest in achieving organizational goals" (Kulić, 2005).

When it comes to measuring work culture, one may get the impression that it is unattainable and that it is impossible to assess it adequately. Some experts even claim that culture cannot be measured and are of the opinion that everything that makes up organizational culture (its values, beliefs and assumptions) cannot or should not be measured quantitatively. Also, many treat culture as a barometer of behavior. Culture as an idea cannot be easily quantified, but a good organizational culture creates a set of behaviors that can be monitored. The results of a healthy and productive company can be linked to culture. Numerous studies indicate various parameters that can be measured in a comprehensive analysis of organizational culture (O'Donnell, Boyle, 2003). Given parameters can be comprehensively measured, although the culture itself is not measurable, and based on these common attributes, the success or failure of the business of a given company can be determined.

It is important to establish a system of monitoring employees' perception of the current organizational culture in relation to the desired culture. With this in mind, Robert Quinn and Kim Cameron (2006) from the University of Michigan developed the Organizational Culture Assessment Instrument (OCAI). This tool provides insight into cultural strengths, showing the type of organizational culture, so that the management of a given company can take possible corrective measures based on the information obtained. In this sense, OCAI can be effectively used to improve or change organizational values to align with business strategy.

Methodological framework of the research

Organizational Culture Assessment Instrument (OCAI)

In order to identify the type of organizational culture and values that additionally shape the attitudes, expectations and activities of the organization's members, Cameron and Quinn created a questionnaire for the assessment of organizational culture (OCAI - Organizational Culture Assessment Instrument). It was developed from a theoretical framework known as the Competing Values Framework (CVF). Essentially, they created a tool by which it is possible to assess the dominant orientation of a business organization by looking at its cultural strengths and the type of organizational culture. Thanks to the OCAI test, it is possible to evaluate the organizational culture, but also the climate at the level of work teams, departments or individual sectors of the organization. Based on the information obtained, further corrective actions are possible in order to improve or change organizational values at the level of a specific organizational unit, and even the entire organization, in accordance with the business strategy.

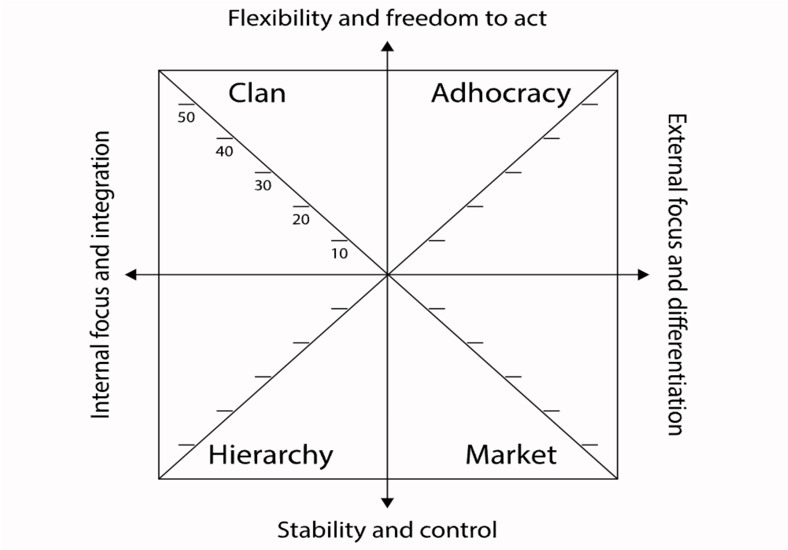
In order to gain insight into the main characteristics of the organization that may have to adapt to new circumstances, that is, to identify the type of organizational culture and values that shape the attitudes, expectations and activities of the members of the observed organization, Cameron and Quinn developed a questionnaire for assessing organizational culture in in connection with six dimensions of content, i.e. aspects of organizational culture (Suderman, 2012): 1. dominant characteristics; 2. general leadership style in the organization; 3. employee management; 4. compactness of the organization; 5. strategic goals; 6. success criteria.

Each of these six aspects provides the respondent with four answer options (A, B, C, D), within which the respondent distributes a total of 100 points. It is important to note that there is no right or wrong answer in the OCAI test, as each organization describes a different, unique response system. As each question has four answers, within which 100 points should be distributed, the respondent assigns the highest number of points to the answer that most accurately describes the situation in his organization, and then in descending order to other answers that less reflect the situation in the organization. The

OCAI test consists of two questionnaires, each with six questions. The first part is a questionnaire that provides a picture of the current situation within the organization, i.e. the culture as it is today, and is called "Current". Then, the respondent gives answers to the same questions as in the previous questionnaire, but which describe the desired situation, that is, how the respondents would like the organization to look like in five years, and this questionnaire is called "Desired" (Suderman, 2012). The OCAI test score is simple, as it is based on simple arithmetic calculations. The first step includes the sum of all answers (points) carried by the offered answer A in the "Current" questionnaire, and then the obtained value is divided by six to obtain the average value of the result. The results for answers B, C and D are calculated in the same way, and then the rating of the questionnaire "Desired" is approached in the same way. By comparing the obtained results, it can be clearly determined whether the current situation in the organization is close to the desired state or whether two extremes were obtained as answers, which indicates the need to introduce corrective measures.

Further operations with the received answers are based on the use of the Competing Values Framework theoretical model. This theory suggests that within every organization there are two orthogonal dimensions that play a key role in creating culture - one is flexibility versus stability (ie control), while the other is the organization's internal focus versus external focus (Cameron, Quinn, 1999). These dimensions lie in the fact that organizational culture should ensure the simultaneous realization of these conflicting demands: for stability and change, as well as for external and internal focus. Thus, cultures differ in terms of where these two dimensions lie, with cultures rarely located at their extremes. Given that there are two dimensions with two extremes, it is possible to distinguish 4 types of culture that correspond to the answers offered in the OCAI questionnaire (Janjićijević, 2011).

Figure 1. Competitive values framework



Izvor: (Cameron, Quinn, 2006)

Clan culture (A): This culture is internally oriented towards maintaining harmonious relationships in the team, it implies flexibility and putting employees in the organization in focus, because their development and commitment lead to competitive advantage and market success. For this reason, this culture emphasizes the importance of harmony and good interpersonal relationships, fosters a friendly working environment, promotes mutual respect, fosters a healthy internal environment and well-being both on a personal and collective level.

Culture of adhocracy (B): Culture of adhocracy is directed outwards, ie. according to market position, but also according to flexibility. This culture is based on the idea that the key to success lies in change and innovation in a dynamic and creative work environment. Employees in organizations that foster this culture are willing to take risks, while leaders are expected to be innovators, so it can be concluded that this type of culture generally promotes individual initiative and freedom.

Market culture (C): This culture is also directed outwards - ie. according to the organization's market positioning, but the focus is on stability and control.

Market culture is based on the assumption that only fierce competition from the outside and orientation towards the consumer from the inside lead to success. In essence, this is a culture where competition and profit are highly valued, so it is based on results that emphasize getting the job done and getting things done, and management is focused on defined goals. The emphasis is on winning and that keeps the organization together. Reputation and success are essential.

Hierarchy culture (D): Hierarchy culture is oriented towards both stability and inwardness. This culture is based on control, efficiency, logical leadership, objectivity and rationality. Efficiency and productivity are fundamental elements of this culture, and procedures determine what people do. Keeping the organization running smoothly is essential. Formal rules and policies hold the organization together. The long-term goals are stability and results, with efficient and smooth execution of tasks.

Through the OCAI test, we can easily show the dominant current culture in the organization, the differences between the current and preferred culture, the strength of the current culture, as well as the "pain" that the workers are currently facing and the possible "gain" that they can achieve if certain changes are made. If organizations were aware of the importance of organizational culture and the benefits of implementing the OCAI test, it would be easy to diagnose and change organizational culture. The main advantages of applying the OCAI test are: six aspects that are extremely important for the organization are measured, the current state of the organizational culture is seen and the current and preferred culture are clearly compared, the possibility of adding qualitative details, as well as the possibility of independent application of already defined tests.

OCAI research in a bank branch

The organizational culture monitoring instrument is a valid tool for evaluating organizational culture and one of the most commonly used metrics for evaluating and evaluating organizational culture (a model used in over 10,000 companies). According to this model, there are no right or wrong answers, so each company or branch will produce different sets of answers.

Applying this model, employees are asked to rate their organization by answering questions, which indirectly assess the organizational culture and climate at the level of a department or organizational unit with defined boundaries. The OCAI test is mostly related to the branch or organizational unit, as it is most helpful in determining how to change the culture. The employee answers six questions, where each question has four alternatives and the goal is to divide 100 points between these alternatives. The first group of questions defines the current state, and the second group of questions defines the desired state. The desired state generally refers to the desired appearance of the organization in five years.

The methodology of the current research focuses on the application of the OCAI test in the assessment of the organizational culture of one of the branches of Banca Intesa. We consciously chose to focus on one specific branch in order to capture the subtle nuances of cultural dynamics at the operational level, given the potential for significant differences to the broader organizational culture.

The OCAI test was conducted in one branch of the bank, where 15 employees agreed to take the test. The employees of this business unit presented their answers to the organizational climate within their team, as well as their relationships with their immediate leader and branch manager. Our research methodology included a number of steps. First, we organized an orientation session for branch employees, providing them with an introduction to OCAI, its purpose and importance in the context of the organizational culture. Afterwards, participants were provided with OCAI questionnaires, provided in both printed and digital formats, to accommodate their preferences and facilitate participation. Data collection spanned a two-week period, after which responses were aggregated and analyzed using various statistical tools. The goal of the analysis was to identify dominant cultural archetypes, potential discrepancies between current and desired culture, as well as to identify areas of cultural strength and potential improvements. Special attention is paid to looking at how employees perceive the organizational culture, as well as noticing the specific elements that make that culture unique within the branch. This detailed analysis was supposed to give us a precise insight into the key aspects that affect the working atmosphere, mutual relations and efficiency of the teams within this bank.

Based on the results, we intend to identify potential areas where there is harmony between the current and desired culture, but also areas where corrective measures are needed. This approach allows us not only to diagnose the current state of organizational culture, but also to propose concrete steps towards its improvement. Scoring the OCAI questionnaire requires simple arithmetic calculations. The first step is to add up all the answers under A in the "Current" column, and then divide by six. That is, the average score for A alternatives in the "Current" column is calculated. The same is done for the answers, B, C and D.

The process is then repeated to calculate the result of the desired state (Cameron, Quinn, 2006). The results of the OCAI test will be found in the next chapter of this paper, where the answers of employees in one branch of the bank are analyzed. In accordance with the result, we can see what the employees of that business unit think about the organizational climate within their team, as well as about their relationship with the immediate leader, that is, the manager of the given branch.

Tabela 1. OCAI upitnik

1. DOMINANT CHARACTERISTICS		**CURRENTLY/ DESIRED**	
A	Organization is a very personal place. It's like an extended family. People seem to share a lot of themselves.		
B	The organization is a very dynamic entrepreneurial place. People are willing to take risks.		
C	The organization is results-oriented. The main concern is getting the job done. People like to compete and are achievement oriented.		
D	The organization is a very controlled and structured place. Formal procedures generally manage people.		
	IN TOTAL		
2. ORGANIZATIONAL LEADERSHIP		**CURRENTLY/ DESIRED**	
A	Leadership in an organization is thought to encourage mentoring, or facilitating communication and nurturing relationships.		
B	It is believed that leadership in the organization encourages entrepreneurship, innovation or risk taking.		

C	Organizational leadership is thought to encourage fast-paced, aggressive style, and orientation to results.		
D	It is believed that leadership in an organization encourages coordination, organization or efficiency of smooth operation.		
	IN TOTAL		
3. EMPLOYEE MANAGEMENT		**CURRENTLY/ DESIRED**	
A	The management style in the organization is characterized by teamwork, general agreement and participation.		
B	The management style in the organization is characterized by individual risk-taking, innovation, freedom and uniqueness.		
C	The management style in the organization is characterized by strong competition, high demands and achievements.		
D	The management style in the organization is characterized by job security, agreement, predictability and stability in relationships.		
	IN TOTAL		
4. KOMPAKNOST ORGANIZACIJE		**CURRENTLY/ DESIRED**	
A	What makes an organization compact is loyalty and mutual trust. Attendance at this organization is high.		
B	What makes the organization compact is the commitment to innovation and development. The emphasis is on being at the very top.		
C	What makes an organization compact is the emphasis on achievement and goal achievement. Aggressiveness and winning are frequent themes.		
D	What makes an organization compact are formal rules and politics. Maintaining an organization that functions smoothly is very important.		
	IN TOTAL		
5. STRATEGIC HIGHLIGHTS		**CURRENTLY/ DESIRED**	
A	The organization emphasizes human development. High trust, openness and persistence, as well as participation in trainings.		
B	The organization emphasizes the acquisition of new resources and the creation of new challenges. Trying new things and exploring new possibilities is appreciated.		
C	The organization highlights competitive actions and achievements. Achieving a high level and winning the market are dominant.		
D	The organization emphasizes constancy and stability. Efficiency, control and smooth operations are important.		
	IN TOTAL		

6. SUCCESS CRITERIA		CURRENTLY/ DESIRED	
A	The organization defines success based on the development of human resources, teamwork, commitment of employees, as well as care for people and their personal and other needs..		
B	The organization defines success based on having the most unique and newest products. She is a product leader and innovator.		
wqC	The organization defines success based on winning the market and surpassing the competition. A competitive market is the key to leadership.		
D	The organization defines success based on efficiency. Reliable operations, smooth operation and low-cost production are critical.		
	IN TOTAL		

Izvor: (Cameron & Quinn, 2006, preuzeto sa sajta OCAIonline.com)

Results and discussion

As specified in the methodology, the OCAI test is a tool that analyzes six key aspects of organizational culture. Five employees in one branch of the bank agreed to participate in the research and helped us to analyze the organizational culture in an organized banking system. By analyzing the results of the OCAI test, we gain insight into their perception of the organizational climate within the team, as well as their relationship with the immediate leader and department manager.

The testing process was carried out twice, in accordance with the defined procedure. First, the participants evaluated the current situation, and then the desired state. The first round of evaluation included the evaluation of six aspects of the current culture, while the second round evaluated the same six factors in order to determine the desired culture.

Each aspect of culture had four alternatives, and the participants had 100 points available to distribute. Those points are distributed across four statements within each of the six aspects. The survey was processed with the help of the OCAI Online website, whose software helps respondents to correctly distribute 100 points. Respondents were advised to follow their instincts and fill in points based on their first impulse, as it is usually correct.

The responses of all respondents were processed with the help of the Microsoft Excel program, where all alternatives (A, B, C and D) were collected. Then the given values were divided by the number of respondents and thus the average values for all these alternatives were obtained. Alternative A, i.e. the answers under A tend towards a friendly, family atmosphere, similar to a clan. Answers under B mainly represent informality in communication and business, or the so-called. Ad-hoc-cracies. Answers under C represent a state in which everything is subordinated to the market and the fulfillment of set goals, there is not much flexibility and informality (fulfillment of goals is a priority). Answers under D generally suggest organization and hierarchy. Below is a table with the average values of points assigned by the respondents.

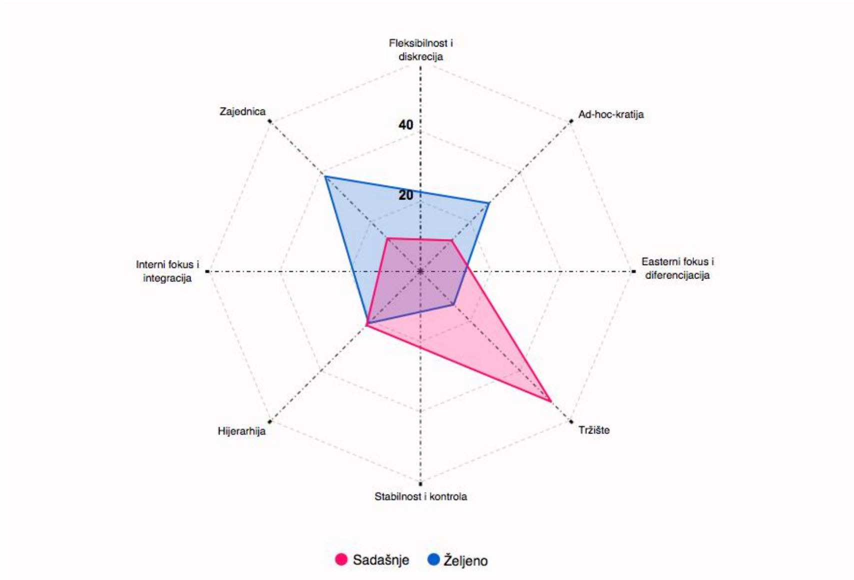
Table 2. The result of evaluating the organizational culture (climate) in one branch of the bank

	Right now	Desired
Community	13,33	38,33
Ad-hoc-kratija	12,50	27,5
Market	52,50	13,33
Hierarchy	21,67	20,83

Source: Author's calculations based on provided data

When we transfer this data to a diagram, we can see all the power of the OCAI tool. The data from the table do not show a clear picture as a diagram that the organizational climate within this business unit is diametrically opposed to what the employees in the same would like to have.

Figure 2. Diagram of evaluation of organizational culture (climate) in one branch of the bank



The results obtained through the OCAI questionnaire provided a deep and nuanced understanding of the branch's cultural landscape, highlighting key characteristics that currently shape organizational dynamics. A significant influence of Market and Hierarchy cultures was observed, which clearly shows a strong emphasis on strictly structured processes (clear procedures in business). The OCAI test is an important tool for researching organizational culture, and by analyzing the diagram, we can see that branch employees believe that their organizational culture is focused on business results, where respect for hierarchy, stability and control are considered key elements.

However, it is interesting to note the difference between the current culture and the desired culture, as reflected in the results of the OCAI test. Employees express a desire to work in an environment that is more like a "clan", where the emphasis is on flexibility, informal communication and ad-hoc business systems. This shift points to the evolution of employee desires towards creating a work environment that supports collaboration, flexibility and innovation. This implies that there is a pronounced desire to establish an atmosphere where team spirit and creativity, togetherness, cooperation and openness in the organization gain importance in relation to a firm structure and hierarchical control.

The OCAI test should be conducted more widely within the entire organization, including all employees, in order to get a more complete picture of the different cultures present in different teams or departments. Studying variation across teams and departments, as well as identifying commonalities, provides a deeper understanding of organizational dynamics.

Based on the results obtained, HR managers and company leaders can develop personalized strategies and corrective measures to improve communication and organizational culture. This includes making adjustments in leadership, directing training and development programs, and implementing practices that support the desired culture within the organization. Only through a comprehensive overview of the results of the OCAI test can precise strategies be formed aimed at strengthening the organizational culture in a direction that reflects the values and goals of employees.

Conclusion

Measuring organizational culture through tools such as OCAI testing is a key step towards understanding the dynamics within an organization and achieving long-term success. There are two key questions to consider: Why is it necessary to measure organizational culture and how can the OCAI test help top management in the internal organization of the company?

First, the need to measure organizational culture stems from the fact that it directly affects performance, employee satisfaction and the overall success of the organization. Understanding the current culture enables the identification of key values, norms and patterns of behavior that form the foundation of organizational identity. This knowledge enables making informed decisions, directing strategies and adjusting approaches to achieve business goals. Also, measuring organizational culture becomes crucial in change processes, enabling organizations to accurately identify areas that require intervention and strategies that support transformation towards a desirable cultural framework.

Second, the OCAI test is a powerful tool for top management in the internal organization of the company. Through the analysis of the results of this test, managers get a clear picture of the dominant cultural types in the organization, which opens up space for a critical consideration of the current situation. The OCAI test allows top management to identify not only current cultural patterns, but also desired goals that align with strategic plans. It offers quantitative data on employee perceptions, making it easier to identify areas that require focus and improvement.

Researching organizational culture through the prism of the OCAI model in the context of a bank branch provides valuable insights for both academia and industry practitioners. Organizational culture, although intangible, has a profound impact on the functioning, performance and adaptability of an organization. The research results emphasize the importance of regularly assessing and adjusting organizational culture to ensure alignment with strategic goals and external challenges.

For the bank branch, cultural insights provide both opportunities and challenges. While the current culture fits well with the operational needs of the branch, a gradual transition to another organizational culture can lead to a complete improvement and transformation of the organization. Embracing a culture that is more collaborative and innovative can improve not only employee satisfaction, but also position the branch to better serve its customers in an ever-evolving banking environment.

In a broader context, this research highlights the importance of recognizing and nurturing organizational culture as a strategic resource. As companies face the complexities of the 21st century, a well-aligned, adaptable and dynamic culture can be their compass, guiding them to sustainable success.

Regularly conducting OCAI tests provides continuous analysis and monitoring of cultural changes over time. Managers can identify the dynamics of culture evolution, recognize challenges and adapt strategies in accordance with changes in the organization. The OCAI test becomes the basis for developing innovative initiatives that support cultural transformation, improve team effectiveness and maintain employee satisfaction. Ultimately, the OCAI test is a valuable resource that enables organizations to gain a deeper understanding of their culture, align it with business goals, and actively shape the path to sustainable success.

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INTERNA KONTROLA KAO PODRŠKA FUNKCIJI MENADZMENTA U SVRHU OTKRIVANJA NEPRAVILNOSTI I UPRAVLJANJA RIZICIMA

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Apstrakt

Upravljanje rizicima predstavlja važnu komponentu konkurentnosti svakog privrednog subjekta i preduslov donošenja pravovremenih i ispravnih odluka. Imajući to u vidu, postavlja se pitanje na koji način je proces upravljanja rizicima uspostavljen u preduzećima, koliko je on razvijen, odnosno kakva je uloga sistema interne kontrole u svrhu otkrivanja nepravilnosti i upravljanju rizicima.To pitanje ujedno predstavlja osnovni istraživački problem ovog rada. Cilj istraživanja je da se teorijski i empirijski obradi veza između interne kontrole i menadzmenta preduzeća i istraži stepen razvijenosti interne kontrole u proizvodnim preduzećima koja posluju na prostoru Nišavskog okruga. Empirijsko istraživanje daje odgovore na ključno pitanje koje je temelj samog istraživanja, a to je: da li je interna kontrola podrška funkciji menadzmenta u svrhu otkrivanja nepravilnosti i upravljanja rizicima?

Ključne reči: *rizici, interna kontrola, menadzment, ciljevi, efikasnost*

Jel klasifikacija : *D, D04, D81*

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Uvod

U savremenom i globalizovanom poslovnom okruženju, poslovanje preduzeća postaje sve kompleksnije i složenije i praćeno je sve intenzivnijim korišćenjem informaciono-komunikacionih tehnologija. Često se u takvim uslovima govori o povećanju rizika poslovanja. Uporedo sa navedenim promenama, svako preduzeće ima svoju fazu rasta i razvoja, što predstavlja dodatni izvor rizika posmatranog preduzeća. Da bi preduzeće minimiziralo nastale rizike, odnosno njima kvalitetno upravljalo, ono koristi različite metode nadzora poslovanja. Kao jedan od oblika nadzora u preduzećima je i interna kontrola, koja postaje neizostavni mehanizam upravljanja rizikom i mehanizam pomoću koga se ceo proces upravljanja može poboljšati. Odgovornost za uspostavljanje i funkcionisanje sistema interne kontrole preuzima menadžment preduzeća, a sistem obuhvata politike i procedure koje su usmerene u pravcu poboljšanja upravljačkih performansi privrednih subjekata. U radu se postavlja pitanje na koji način se uspostavlja process upravljanja rizicima u preduzećima, koliko je on razvijen, odnosno kakva je uloga sistema interne kontrole u svrhu otkrivanja nepravilnosti i upravljanje rizicima.U tom smislu, kao predmet istraživanja uzeta su proizvodna preduzeca u Nišavskom okrugu. Cilj istraživanja je ispitati ulogu interne kontrole u svrhu detektovanja nepravilnosti i upravljanja rizicima unutar proizvodnih preduzeća koja posluju na prostoru Nišavskog okruga. Na osnovu definisanog područja i problema istraživanja, istraživačke hipoteze glase: Prva hipoteza odnosi se na učestalost primene sistema interne kontrole u preduzećima, a glasi: „Interna kontrola bitno doprinosi poslovanju proizvodnih preduzeća Nišavskog okruga”. Druga hipoteza se odnosi na upravljanje rizicima i ulogu interne kontrole i glasi: „Interna kontrola adekvatno potpomaže proces upravljanja rizicima i njihovog minimiziranja.“ Treća hipoteza u radu razmatra proces usklađivanja pojedinih područja poslovanja i glasi: „Sva područja poslovanja, koja podležu internoj kontroli, usklađuju se na mesečnom nivou“.

Pregled literature

Kompleksnost poslovnog okruženja i složenost veza između okruženja i preduzeća utiču na pojavu neizvesnosti i rizika u poslovanju, koji može imati pozitivan ili negativni aspekt, s obzirom na to da se može odnositi na potencijalne prilike za postizanje dodatne vrednosti za preduzeća ili na mogućnost, odnosno pretnju, umanjenja njegove vrednosti. Shodno tome, kako bi zadržala svoje mesto na tržištu i išla korak napred, preduzeća moraju posvetiti posebnu pažnju rizicima poslovanja.

Različiti autori različito definišu pojam rizika. Potoji više različitih definicija rizika u zavisnosti od toga sa kog aspekta se isti posmatraju.

Tradicionalno se definišu na osnovu neizvesnosti i gubitka. Takva jedna definicija od strane Rejde je opisana kao „neizvesnost ostvarivanja gubitka"(Rejda, 2005).

Neki autori izjednačavaju „neizvesnost i rizik" (Ostojic, 2007).

Vaughan T. i E. Vaughan definišu rizik „kao stanje u kojem postoji mogućnost negativnog odstupanja od željenog ishoda koji očekujemo ili kojem se nadamo".(Vaughan, Vaughan, 2003).

Zajednička nit za mnoge definicije rizika je „da rizik predstavlja događaj koji može uticati na postizanje definisanog poslovnog cilja" (srđansimic.com/upravljanje-rizicima-i-kontinuitet- poslovaja/pojam rizika/)

Upravo zbog postojanja rizika, menadžment preduzeća mora voditi stalnu brigu o unutrašnjim i spoljnim faktorima koji mogu uticati na ostvarivanje ciljeva preduzeća, efikasnost, racionalno korišćenje resursa itd. Ove činjenice ističu važnost upravljanja rizikom (risk management) i procene rizika (risk assessment). Upravljanje rizikom se može definisati kao uređen analitički proces kojim preduzeće otkriva, uočava, identifikje, smanjuje i kontroliše moguće rizike i gubitke, kojima je izloženo (Crnković i saradnici, 2010). Cilj procene rizika je da se sazna koji su rizici verovatniji i opasniji, kako će koji rizik uticati na preduzeće, i u krajnjem slučaju, pružanje odgovora na pitanje kako upravljati pojedinim rizikom. Kada se rizici identifikuju, oni postaju katalizator rasta prihoda predzeća i njihovim otkrivanjem svaka neizvesnost nestaje.

Da bi se rizici na vreme utvrdili i preduzele potrebne aktivnosti, nužno je organizovati adekvatan sistem interne kontrole. Krstić i Đorđević (2012) u svom istraživnju složenosti odnosa između preduzeća i okruženja ukazuju na mogućnost nastanka događaja čiji ishod nije moguće proceniti sa odgovarajućom verovatnoćom. Pri tome, zaključuju da je interna kontrola mehanizam koji svojim potencijalima znatno doprinosi povećanju efikasnosti procesa upravljanja rizikom. Istraživanje Tušeka i Žagera, (2008) pokazalo je da, matematički gledajući, što je kvalitet internih kontrola veća, to je konačna vrednost indeksa rizika manja.

Sistem interne kontrole se smatra "produženom rukom menadžmenta", s obzirom na to da se razvija kao funkcija menadžmenta. Proces interne konrole uključuje sve one politike i postupke koje je usvojio menadžment preduzeća, koje mogu pomoći u postizanju cilja vezanog za obezbeđenje: poslovanja, politike, zaštite sredstava, sprečavanje prevare i greške, tačnosti i kompetentnosti računovodstvenih isprava i blagovremenu pripremu pouzdanih finansijskih informacija (Simijonović, 2017). Uz ove osnovne, ciljevi interne kontrole se mogu grupisati na: strategijske, taktičke i operativne i svi se trebaju uključiti u poslovne funkcije jedinica preduzeća kao sistema. Same ciljeve interne kontrole moguće je podeliti i na podgrupe: operativne ciljeve, informacione ciljeve i ciljeve koji se odnose na ujednačenost i podudarnost.

Činjenica je da bez blagovremene i precizne interne kontrole, menadžment neće biti u prilici da pravilno usmeri preduzeće ka zadatim ciljevima koji u osnovi treba da vode ka razvoju poslovanja i sigurnosti samog preduzeća kao celine (Popović i saradnici, 2014). U tom smislu, menadžment je odgovoran za utemeljenje odgovarajuće poslovne kulture kako bi se olakšali efektivni procesi interne kontrole i da bi se stalno nadgledala efektivnost (Stanišić, 2014). Kvalitetno izveštavanje koje menadžment dobija na dnevnom, nedeljnom ili mesečnom nivou doprinosi donošenju kvalitetnijih poslovnih odluka. Ključno je da sistem interne kontrole, kao sredstvo upravljanja rizicima, treba da bude tako koncipiran da pruža razumno uverenje o tome da će specifični ciljevi unutar preduzeća stvarno biti ostvareni, a time i ciljevi preduzeća kao celine. Efektivan sistem interne kontrole treba da nosi obeležja uspostavljanja standarda, treba da analizira i upoređuje ostvarene rezultate u odnosu na standarde, stara se o planu i programu korektivnih aktivnosti i analizira i revidira standarde. Važna karakteristika uspešne interne kontrole je i ekonomičnost vremena i resursa kojima se meri uspešnost u odnosu na planirane rezultate. Blagovremenost i jednostavnost u primeni od strane zaposlenih čini osnovu merenja presudnih tačaka sistema. Pored toga, važan je i odnos neostvarenja ciljeva i troškova uspostavljenih kontrola. U konačnom, treba imati u vidu da je previše kontrola preskupo i kontraproduktivno, a premalo predstavlja nepotreban rizik. (Popović i saradnici, 2014). Sastav internih kontrola se razlikuje od preduzeća do preduzeća, što je odraz različitih karakteristika, kao što su: veličina preduzeća, organizacioni oblik, način na koji se rukovodi, sposobnosti ljudi i sl. Osnovne komponente sistema internih kontrola su: kontrolno okruženje, sistem procene rizika, kontrolne aktivnosti, sistem informacija i komunikacije i sistem nadzora (Trifunac, Stanojević, 2009). Okruženje ili uslovi u kojima se sprovodi interna kontrola se umnogome odražavaju na ponašanje i odluke menadžmenta preduzeća. Procena rizika uključuje funkcije određivanja, analize i upravljanje rizicima koji utiču na pripremu objektivnih finansijskih izveštaja. Kontrolne aktivnosti podržavaju politike i postupke kojima se osigurava da se sve potrebne aktivnosti u vezi sa upravljanjem rizicima preduzete u ostvarivanju ciljeva preduzeća. Informisanje i komunikacija omogućavaju detaljno i pravovremeno izveštavanje o poslovnim transakcijama. Aktivnosti nadzora i konstantnog proveravanja efekata interne kontrole su postupci koji osiguravaju ostvarivanje ciljeva preduzeća.

Interna kontrola se može podeliti na: izvršnu ili administrativnu kontrolu, informaciono-računovodstvenu kontrolu i upravljačku kontrolu (Crnković i saradnici, 2010). Pri tome, izvršna ili administrativna kontrola se uspostavlja u određenim poslovnim jedinicama preduzeća. Informaciono- računovodstvena kontrola odnosi se na skup mera, postupaka i pravila kojima se nastoji osigurati tačnost, valjanost i sveobuhvatnoost računovodstvenih evidencija i izveštaja. Upravljačka kontrola se odnosi na naknadnu proveru funkcionisanja sistema administrativnih i računovodstvenih kontrola i preduzimanje potrebnih mera i akcija za njihovo delovanje. Pojedini autori navode vrste interne kontrole sa stanovišta subjekta i objekta, zatim, prema metodama rada, prema obicima, itd. Kada je reč o tehnikama internih kontrola, one mogu biti: preventivne, detekcione i reaktivne (Dawis et all, 2008). Preventivne kontrole su ugrađene u sistem da spreče da neka greška ili događaj prođu nezapaženi. Elementarna vrsta preventivne kontrole je organizaciona struktura kojom je izvršeno razgraničenje dužnosti kod izvesnih funkcija. Svrha detekcione kontrole je da upozorava menadžment na greške ili probleme kada se jave ili ubrzo iza toga. Primer jedne detekcione kontrole je brojanje gotovine i usaglašavanje blagajne na kraju dana. Uz detektorske kontrole, koriste se i korektivne kontrole za oporavak od posledica neželjenih događaja. Tako, polisa osiguranja kojom se naplaćuje gubitak, predstavlja jedan tip korektivne kontrole. Kao odgovor na procenjeni rizik, kontrolni mehanizmi za njegovo smanjenje moraju da budu usmereni, kvalitetni i da imaju smisla. Fokusirane i kvlitetne kontrole imaju svoju cenu, pa koristi koje se preko njih ostvaruju u smanjenju rizika moraju biti veće nego troškovi tih kontrola. Menadžment ima mogućnost da bira način na koji će da vrši procenu rizika i da uspostavi odgovarajuću vrstu kontrola nad rizicima. Time se sprečava konfuzija prilikom upravljanja preduzećem i postiže veća pouzdanost informacija i obezbeđuje prilagodljivost strategiji preduzeća.

Na kraju prikaza pregleda literature interne kontrole, važno je naglasiti da, iako sistem interne kontrole može pomoći preduzeću da ostvari ciljeve, on ne može biti lek za sve. Bez obzira na to koliko je dobro koncipiran i koliko dobro funkcioniše, sistem interne kontrole ne može pružiti apsolutno uverenje menadžmentu o postizanju ciljeva preduzeća ili njegovom opstanku, a sve iz razloga postojanja različitih faktora rizika koji postoje u okruženju preduzeća. Pored troškovnih ograničenja, efikasnost sistema interne kontrole mogu narušiti: neodgovornost članova uprave, tajni sporazumi, greške zaposlenih i dr. Uz navedeno, postoje i brojni drugi činioci koji mogu narušiti sistem interne kontrole, kao što su: neodgovarajuća organizacija, neprimereni postupci u ispunjavanju procene rizika, neispunjavanje zadataka, manipulacija i zloupotreba dokumentacije, greške u primeni računovodstvenih pravila, itd. Zbog toga, sistem interne kontrole u savremenim uslovima treba da obuhvati široko područje (ne samo računovodstveno-finansijski podsistem), tj. on treba da bude ugrađen u celoviti poslovni proces. Menadžment ima zadatak da ravnomerno raspodeli kontrolne postupke i vrste kontrola unutar preduzeća, kako bi svi poslovni delovi i svi procesi unutar preduzeća bili pokriveni. Samo celoviti system interne kontrole, koji obuhvata preduzeće u celini, može svojom funkcijom ostvariti ciljeve preduzeća i zaštiti njegovu imovinu. Upravo je to razlog zbog kojeg se sve više ističe nužnost saradnje i primena koncepta ERM-a (Enterprise Risk Management) u poslovima interne kontrole.

Interna kontrola i ERM su važni sa aspekta poslovanja, jer pružaju sigurnost od neizvesnosti, smanjuju finansijske rizike i kreiraju pouzdane izveštaje o poslovanju. Svrha im nije eliminisanje rizika, nego adekvatna kontrola i upravljanje rizicima.

Metodologija istrživanja

Korišćena metodologija u radu pojašnjava samu svrhu, strukturu i cilj rada. U prvom delu rada, uvodno se govori o temi rada. Drugi deo obuhvata pregled naučne i stručne literature koja se odnosi na internu kontrolu kao podršku funkciji menadžmenta u svrhu otkrivanja nepravilnosti i upravljanja rizicima. U trećem delu rada opisana je metodologija sprovedenog istraživanja, dok su u četvrtom delu prikazani rezultati sprovedenog istraživanja putem anketnog upitnika. Glavni zaključci rada, dobijeni na temelju sprovedenog istraživanja, izneseni su u zaključnom delu rada.

Prikaz i interpretacija rezultata istraživanja

Uzorak istraživanja

U sprovedenom anketnom istraživanju učestvovalo je 12 proizvodnih preduzeća s područja Nišavskog okruga. U radu nisu dati nazivi proizvodnih preduzeća koja su učestvovala u istraživanju, radi zaštite privatnosti preduzeća i poverljivosti podataka. Anketni upitnik distribuiran je on-line u vremenu od 10.06.2023. do 12.10.2023. godine. Za potrebe ovog rada analizirano je 21 pitanje iz anketnog upitnika. Svi odgovori bili su anonimni. Ispitanici i autori istraživanja nisu mogli uticati međusobno jedni na druge, čime je osigurana nezavisnost opažanja.

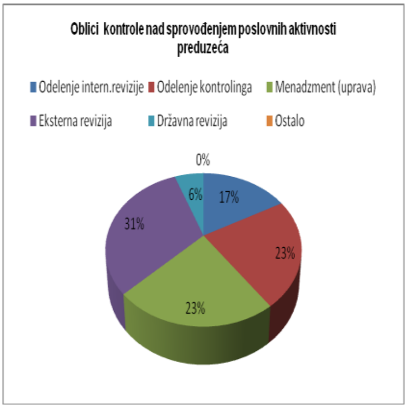
Rezultati istraživanja i diskusija

Da bi se postigao što veći stepen sigurnosti poslovanja, moguće je, a i poželjno je, koristiti više oblika nadzora nad preduzećem. Pri tome, nadzor može biti unutar samog preduzeća i može ga obavljati deo interne revizije, deo kontrolinga ili menadžment, odnosno uprava preduzeća. Izvan preduzeća, nadzor obavljaju eksterna revizorska preduzeća ili državna revizija. U tom smislu, jedna od relevantnih informacija je: koje oblike nadzora koriste anketirana preduzeća?

Tabela 1.Struktura odgovora: oblici kont. nad sprovođ. posl.aktivnosti preduzeća

Obliici kontrol.nad. sprovođ.posl.aktivn-osti preduzeća	**Broj odgovora (moguće je više)**	**Udeo u %**
Odelenje intern.revizije	6	17,14%
Odelenje kontrolinga	8	22,85%
Menadzment (uprava)	8	22,85%
Eksterna revizija	11	31,42%
Državna revizija	2	5,71%
Ostalo	0	0,00%
UKUPNO	35	100,00%

Slika 1. Udeo oblika kontro. nad sprovođenjem posl. aktiv.ped.



Izvor: *Autorsko istrživanje, obrada i prikaz*

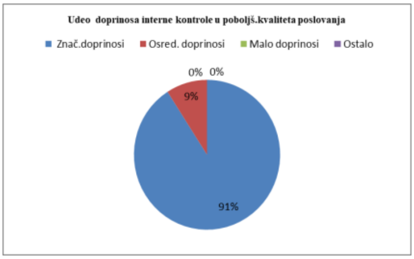
Podaci iz istraživanja pokazuju da se značajan broj anketiranih proizvodnih preduzeća Nišavskog okruga oslanja na eksternu reviziju (31,42% u odnosu na ostale odgovore). Takođe, kada se posmatraju pojedinačni odgovori, vidljivo je kako je od 12 proizvodnih preduzeća koja su učestvovala u anketiranju, njih 11 uvrstilo eksternu reviziju kao jedan od mogućih odgovora, iz čega bi se moglo zaključiti da je uloga eksternih, nezavisnih revizora vrlo važna u poslovanju savremenih preduzeća. Dalje, podaci iz istraživanja pokazuju da kod svih proizvodnih preduzeća postoji neki oblik internog nadzora unutar preduzeća, što navodi na zaključak da se većina anketiranih preduzeća oslanja na rad dela kontrolinga i menadžmenta u sprovođenju nadzornih aktivnosti. Samo su 2 preduzeća navela državnu reviziju kao jedan od oblika nadzora.

Jedan od važnih indikatora je i kakvo shvatanje imaju zaposleni pojedinih proizvodnih preduzeća Nišavskog okruga o tome *kolika i kakva je uloga interne kontrole u samom poslovanju,* jer upravo to shvatanje može biti presudno i za napore koji će biti učinjeni u procesu kontrole i u njenom daljem razvoju. Sledeći podaci ilustruju mišljenja anketiranih preduzeća o tome koliki doprinos interna kontrola ima u povećanju kvaliteta njihovog poslovanja

Tabela 2. Str. odgo: doprinos interne kon-trole u pobolj. kvaliteta poslov. preduzeća

Dopr. inte. kon. u pobolj. kval. poslovanja	**Broj anketiranih**	**Udeo u %**
Znač. doprinosi	11	91,00%%
Osrednje dopri.	1	9,00%
Malo doprinosi	0	0,00%
Ostalo	0	0,00%
Ukupno	12	100,00%

Slika 2. Udeo doprinosa int. kont. u pobolj. kvalitet. poslovanja pre.



Izvor: *Autorsko istražívnje, obrada i prikaz*

Na osnovu datih odgovora primećujemo kako većina anketiranih preduzeća smatra da interna kontrola značajno doprinosi poboljšanju kvaliteta poslovanja. Čak 75% preduzeća, odnosno njih 9, odlučilo se za taj odgovor. Samo 16,66% anketiranih preduzeća smatra kako je taj doprinos osrednji, dok 8% smatra kako je doprinos zanemarljiv. Ovakvi rezultati su ohrabrujući i govore o tome da, iako se sva anketirana preduzeća oslanjaju na eksterne oblike nadzora, značajan broj anketiranih preduzeća internu kontrolu shvata kao važan deo poslovanja koji omogućuje uspešnije rezultate i napredak celokupnog preduzeća.

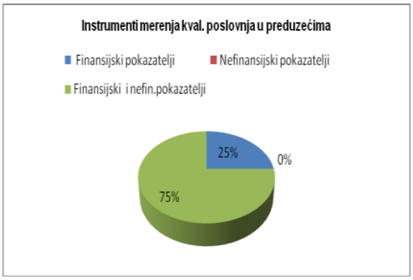
U nastavku anketnog upitnika, ispitanici su se izjasnili o tome *koje instrumente merenja kvaliteta poslovanja koriste pri proceni kvaliteta poslovanja.*

Tabela 3. Struktura odgov. instrumenti za merenje kvalit. poslovanja u preduz.

Instrumenti merenja kval.poslovanja	**Broj anketiranih**	**Udeo u %**
Finansijski pokazatelji	3	25,00%
Nefinansijski pokazatelji	0	0,00%
Finansijski i nefin.pokazatelji	9	75,00%
UKUPNO	12	100,00%

Izvor: *Autorsko istraživanje, obrada i prikaz*

Slika 3. Udeo instrumenata za mere.kvaliteta poslovanja u pred.



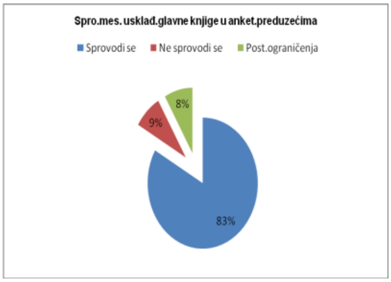
Prema podacima iz tabele 3 vidljivo je kako anketirana preduzeća prate aktuelna kretanja i daju važnost i finansijskoj i nefinansijskoj vrsti pokazatelja (njih 9, od ukupno 12 anketiranih koristi se i jednim i drugim pokazateljima). Međutim, ukoliko se uzme u obzir i činjenica da ni jedno anketirano preduzeće nije navelo kao odgovor samo nefinansijske pokazatelje, a 3 anketirana preduzeća su navela samo finansijske pokazatelje, može se doći do zaključka da u pojedinim anketiranim preduzećima još ne postoji dovoljan nivo svesti o važnosti i nefinasijskih pokazatelja u ocenjivanju kvaliteta poslovanja.

Imajući u vidu činjenicu da je glavna knjiga bazična poslovna knjiga u koju se hronološki unose svi poslovni događaji, relevantan je i podatak *da li se u anketiranim preduzećima sprovode mesečna usklađivanja računa glavne knjige kako bi se izbegle nepravilnosti i moguće greške.*

Tabela 4. Str. odgovora : sprovođe. mesečn. usklađ. glavne knjige u anket. preduzećima

Sprovođenje **Meseč. usklađivanja glavne knjige u anket. preduzeća**	**Broj anketiranih**	**Udeo u %**
Sprovodi se	10	83,33%
Ne sprovodi se	1	8,33%
Postoje ogranič.	1	8,33%
UKUPNO	12	100,00%

Slika 4. Udeo mesečnih usklađ. glavne knjige u anketir. predu.



Izvor: *Autorsko istraživanje, obrada i prikaz*

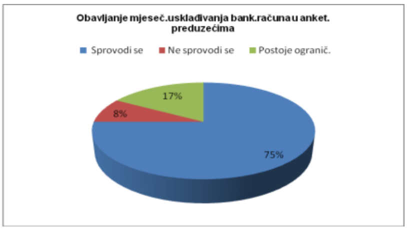
Na slici 4 primećujemo kako 83,33% anketiranih preduzeća sprovodi usklađivanje glavne knjige na mesečnom mivou, što znači da su mogućnosti neotkrivanja mogućih grešaka značajno smanjene. Samo jedno anketirano preduzeće dalo je negativan odgovor na navedeno pitanje.

Za poslovanje bilo kojeg preduzeća bitno je posedovati i kontrolu nad stanjem svih bankovnih računa kako bi se stvorila što bolja slika o sredstvima preduzeća. Stoga je bitan i podatak o tome *da li se u anketiranim preduzećima sprovode mesečna usklađivanja bankovnih računa.*

Tabela 5. Str. odgovora: obavlj. mesečnih usklađ. bankovnih račun. u anketir. predu.

Obavljanje meseč. usklađ.bank.računa u anket. preduzeć.	**Broj anketiranih**	**Udeo u %**
Sprovodi se	9	75,00%
Ne sprovodi se	1	8,33%
Postoje ogranič.	2	16,66%
UKUPNO	12	100,00%

Slika 5. Udeo obavlj. mesecn. uskl. bank.rač. u anketir.pred.



Izvor: *Autorsko istraživanje, obrada i prikaz*

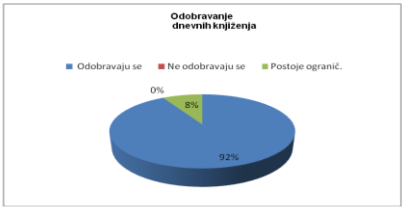
Prema tabeli 5. moguće je dobiti sliku o sprovođenju mesečnih usklađivanja bankovnih računa u anketiranim preduzećima. Tako se od ukupnog broja anketiranih poduzeća, njih 9, odnosno 75,00% izjasnilo kako redovno obavljaju mesečna usklađivanja bankovnih računa.

Poznato je da je ažurnost jedno od temeljnih načela računovodstva i krajnje je nužno pridržavati ga se kako bi se osigurale kvalitetne i pravovremene informacije o prošlim poslovnim događajima. U tom smisl, bitno je uvideti *da li se u anketiranim preduzećima sprovode dnevna knjiženja kako bi se utvrdila ažurnost u evidentiranju poslovnih događaja.*

Tabela 6. Struktura odgovora: odobravanje dnevnih knjiženja

Odobravanje dnevnih knjiženja	**Broj anketiranih**	**Udeo u %**
Odobravaju se	11	91,66%
Ne odobravaju se	0	0,00%
Postoje ogranič.	1	8,33%
UKUPNO	12	100,00%

Slika 6. Udeo odobravanja dnevnih knjiženja



Izvor: *Autorsko istraživanje, obrada i prikaz*

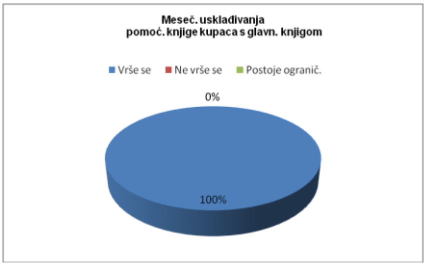
Iz tabele 6 je vidljivo kako 11 od 12 ankeiranih preduzeća odobrava dnevna knjiženja, odnosno vrlo su ažurna u evidenciji poslovnih događaja. Samo jedno anketirano preduzeće ne odobrava takvu vrstu knjiženja, ali to bi se moglo opravdati njegovom veličinom i prirodom njegove delatnosti.

Ispitanici su iskazali mišljenje i o tome *da li se u anketiranim preduzećima vode pomoćne knjige i da li se vrši njihovo usklađivanje s glavnom knjigom*. Jedna od pomoćnih knjiga je pomoćna knjiga kupaca koja daje uvid u broj kupaca, zatim potraživanja koja su nastala u poslovanju sa njima, datum njihovog nastanka, kao i njihovo trenutno stanje.

Tabela 7. Str. odgovora: meseč. usklađivanja pomoćne knjige kupaca sa glavnom knjigom

Slika 7. Udeo meseč. usk.pom-oćne knjige kupaca sa gla. knj.

Meseč.usklađivanje pomoć.knjige kup. sa glavnom knjig.	**Broj anketiranih**	**Udeo u %**
Vrše se	12	100,00%
Ne vrše se	0	0,00%
Postoje ogranič.	0	0,00%
UKUPNO	12	100,00%



Izvor: *Autosko istražіvnje, obrada i prikaz*

Iz tabele 7 vidimo kako sva anketirana preduzeća sprovode mesečno usklađivanje pomoćne knjige kupaca i glavne knjige i u skladu sa tim može se zaključiti kako sva anketirana preduzeća vode izuzetnu brigu od trenutnim stanjima konta kupaca.

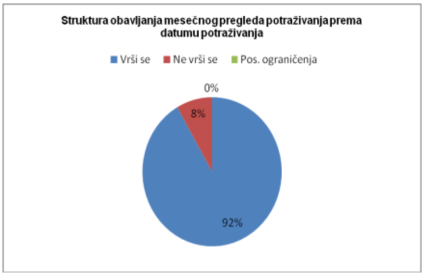
Potraživanja su vrlo važna stavka imovine poduzeća i izuzetno utiču na likvidnost pojedinog poduzeća. Stoga je važan podatak *da li se u anketiranim preduzećima radi mesečni pregled potraživanja prema datumu potraživanja,* kako bi se mogao adekvatno planirati budući tok novca i imati u vidu koja potraživanja su ostala nenaplaćena i za koja postoji opasnost da će takva i ostati.

Tabela 8. Str. odgovora: obavlj. mesečn-og pregl. potraž. prema datumu. potraž.

Obavljanje meseč. pregled. potrž.prema dat.potraživanja	**Broj anketiranih**	**Udeo u %**
Vrši se	11	91,66%
Ne vrši se	1	8,33%
Postoje organ.	0	0,00%
Ukupno	12	100,00%

Izvor: *Autorsko istraživanje, obrada i prikaz*

Slika 8. Udeo obavljanja mesečnog preg. potraž. prema dat.potraživa.



Podaci iz tabele 8 prikazuju kako većina anketiranih preduzeća sprovodi mesečne preglede potraživanja prema datumu potraživanja. Konkretno radi se o 91,66% anketiranih poduzeća, odnosno njih 11 od ukupno 12 posmatranih vodi brigu o ovom pitanju. To je izuzetno pozitivno jer to ujedno znači da anketirana preduzeća vode računa o toku gotovine i o stanju vlastite likvidnosti.

Kako bi se adekvatno mogli pratiti odnosi s kupcima, nove narudžbe, isporučena roba, odobreni krediti i samo kretanje robe, *potreban je i podatak da li anketirana preduzeća imaju i detaljno razrađenu dokumentaciju*, koja će u svakom trenutku prikazivati u kojem je stadijumu prodaja, otprema i sve prateće aktivnosti vezane uz razmenu robe između preduzeća i kupca.

Tabela 9. Str. odgovora: numerisanje i kontrola naloga, rač. prodaje, otpr. kred.dokum.

Numerisanje i kont. naloga, rač. prodaje, otprem, kred. dokum.	**Broj anketiranih**	**Udeo u %**
Vrše se	12	100,00%
Ne vrše se	0	0,00%
Postoje ogranič.	0	0,00%
UKUPNO	12	100,00%

Slika 9. Udeo numerisanja i k kontr. nalog. rač. prodaje,

Izvor: *Autorsko istraživanje , obrada i prikaz*

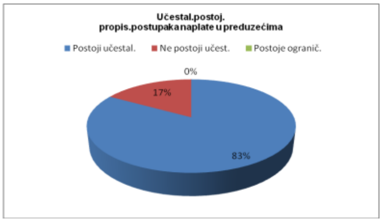
Analizom prikupljenih odgovora uvidelo se kako sva anketirana preduzeća sprovode numeriranje i kontrolisanje naloga, računa prodaje, otpremnica i kreditnih dokumenata, pa se prema tome može zaključiti kako sva posmatrana preduzeća vode izrazitu brigu o odnosu s kupcima i pažljivo sprovode kontrolu nad otpremom robe i prateće dokumentacije.

Jedan od kriterijuma u ispitivanju uloge interne kontrole u području potraživanja od kupaca i prodaje je *i da li postoji učestalost postojanja propisanih postupaka naplate potraživanja u anketiranim preduzećima*. Kako bi preduzeća regulisala nastala potraživanja, važno je uvesti standardizovane postupke i procedure naplate.

Tabela 10. Str. odgovora : učestalost posto. propisanih postupaka naplate u preduzećim.

Učestal.postoj. propis.postupaka naplate u preduz.	**Broj anketiranih**	**Udeo u %**
Postoji učestal.	10	83,33%
Ne postoji učest.	2	16,66%
Postoje ogranič.	0	0,00%
UKUPNO	12	100,00%

Slika 10. Udeo učestalosti post. propis. postup. naplate u pred.



Izvor: *Autorsko istraživanje, obrada i prikaz*

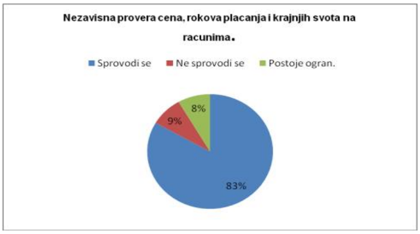
Podaci iz tabele 10 prikazuju da od ukupno 12 anketiranih subjekata njih 10 (odnosno 83,33%) se izjasnilo kako u njihovim preduzećima postoje propisani postupci naplate, što predstavlja zadovoljavajući pokazatelj kontrolisanja ovog područja poslovanja. Samo 2 preduzeća, tj. 16,66 % ispitanika je potvrdilo kako takvi postupci i procedure nisu uvedeni u njihovu radnu praksu.

Naredno anketno pitanje odnosilo se na to *da li u anketiranim preduzećima u nadležnost interne kontrole i ostalih delova koji se bave nadzorom ulazi i nezavisna provera cena, rokova plaćanja i krajnjih svota na rčunima*.

Tabela 11. Str. odgovora: nez.provera cen. rokova plaćanja i krajnjih svota na račun.

Nez. pro. cen., rok. plać. i kraj. svota na rač.	Broj anketiranih	Udeo u %
Sprovodi se	10	83,33%
Ne sprovodi se	1	8,33%
Postoje ograni.	1	8,33%
UKUPNO	12	100,00%

Slika 11. Udeo nezavisne prove. plaćanj. i karjnjih svota na rač.



Izvor: *Autorsko istraživanje, obrada i prkaz*

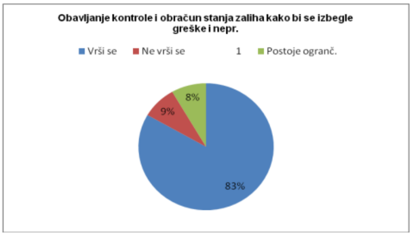
Iz podataka datih u tabeli 11 može se uočiti da 83,33% anketiranih preduzeća sprovodi nezavisne provere cena, rokova plaćanja i krajnjih svota na računima i taj broj korespondira broju preduzeća koja su odgovorila da sprovode neki oblik internog nadzora, i konkretnije kontrole.

Kontrola zaliha je jedna od stavki interne kontrole. Stoga je važan podatak *da li se u anketiranim preduzećima obavlja kontrola i obračun zaliha kako bi se izbjegle nepravilnosti u poslovanju.*

Tabela 12. Str. odgo: obavlj.kont. i stanja zaliha kako bi se izbegle greške i nepravilnosti

Obavljanje kont. i obrač. stanja zal. kako bi se izb.greške i nep.	**Broj anketiranih**	**Udeo u %**
Vrši se	10	83,33%
Ne vrši se	1	8,33%
Postoje organč.	1	8,33%
UKUPNO	12	100,00%

Slika 12. Udeo obav. kontrole i satanj.zaliha kako bi se izbegle greške i nepravilnosti



Izvor: *Autorsko istraživanje, obrada i prikaz*

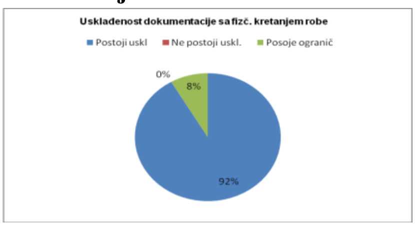
Iz podataka datih u tabeli 12 može se uočiti da 83,33% anketiranih preduzeća sprovodi nezavisnu proveru cena, rokova plaćanja i krajnjih svota na računima i taj broj korenspondira broju preduzeća koja su odgovorila da potvrde neki oblik internog nadzora, i konkretnije kontrole. Jedno anketirano poduzeće je navelo kako takve postupke ne sprovodi, a drugo pak kako ovaj podatak nije primjenjiv, što je u ovom slučaju uslovljeno prirodom delatnosti preduzeća.

Na anketno pitanje *da li u anketiranim preduzećima postoji usklađenosti dokumentacije sa fizičkim kretanjem robe* došlo se do sledećih pokazatelja:

Tabela 13. Struktura odgovora: usklađen. dokumentacije sa fizičkim kretanjem robe

Usklađ. dok. sa fizič.kreta. robe	**Broj anketiranih**	**Udeo u %**
Postoji uskl.	11	91,66%
Ne postoji uskl.	0	0,00%
Postoje organč.	1	8,33%
UKUPNO	12	100,00%

Slika 13. Udeo usklađenosti dok-umenacije sa fizičkim kret. robe



Izvor: *Autorsko istraživanje, obrada i prikaz*

Istraživanjem o protoku robe došlo se do zaključka kako 91,66% anketiranih preduzeća, odnosno njih 11 od ukupno 12 usklađuje dokumentaciju sa spomenutim fizičkim kretanjem robe. Jedno anketirano preduzeće smatra kako pitanje nije primjenjivo na poslovanje, te se radi o preduzeću koje se ne nalazi u takvoj delatnosti gde bi postojale zalihe robe.

Određivanje optimalnog nivoa zaliha, može menadžmentu preduzeća predstavljati problem, jer ono mora voditi računa o nivou kako ne bi došlo do gomilanja što iziskuje velike novčane izdatke ili pak nedostatak koji uzrokuje zastoj u poslovanju ili samoj proizvodnji. U tom smislu na pitanje *da li se u anketiranim preduzećima obavlja popis zaliha barem jednom godišnje* dobijena je sledeća struktura odgovora:

Tabela 14. Str. odgovora: vršenje popisa zaliha na godišnjem nivou

Obavlj.pop.zal.na godiš. nivou	**Broj anketiranih**	**Udeo u %**
Vrši se	11	91,66%
Ne vrši se	0	0,00%
Pstoje ogranič.	1	8,33%
UKUPNO	12	100,00%

Slika 14. Udeo vršenja popisa zaliha na godišnjem nivou

\

Izvor: *Autorsko istraživanje, obrada i istraživanje*

Iz podataka datih u tabeli 14 potvrdno je odgovorilo 11 anketiranih preduzeća. Samo jedno anketirano poduzeće ne vrši popis zaliha barem jednom godišnje, a razlog je naveden u analizi prethodnog pitanja.

U svrhu izbegavanja gubitaka i nepravilnosti u poslovanju važno je kontrolisanje i beleženje zaliha. U tom smislu važan podatak je *da li u anketiranim preduzećima popis zaliha obavlja još neko osim skladištara ili osoba odgovorna za stalno praćenje i beleženje* stanja zaliha.

Tabela 15. Str. odgovora: uključ. sklad. i drug. odgovo. osoba za prać. i beleženje stanja zaliha

Uklj. skladiš. i drug.odgv. osba	**Broj anketiranih**	**Udeo u %**
Vrši se	11	91,66%
Ne vrši se	0	0,00%
Postoje organ.	1	8,33%
UKUPNO	12	100,00%

Slika 15. Udeo uključenosti sk-lad. i drugog odgov. osoba za praćnje i beleže. stanja zaliha

Izvor: *Autorsko istraživanje, obrada i prikaz*

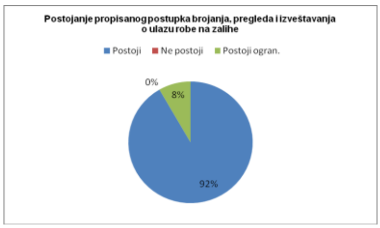
Od ukupno 12 ispitanika, 91,66% odnosno njih 11 se izjasnilo kako uz skladištare i odgovorne osobe, u proces praćenja i beleženja zaliha su uključene i druge osobe u poduzeću. Samo 1 ispitanik tvrdi kako informacija nije primenjiva na preduzeće, što opet upućuje na prirodu delatnosti.

Konzistentnost u odgovorima vezanih uz kontrolu zaliha se uočava i pri analizi rezultata ankete na pitanje *da li u anketiranim preduzećima postoji propisani postupak brojanja, pregleda i izveštavanja o ulazu robe na zalihe.*

Tabela 16. Str. odgovora: pro.postupak brojanja, pregleda i izveštavanja o ulazu robe na zalihe

Postojanje pro.post.brojanja preg. i izveš.o ulaz.	**Broj anketiranih**	**Udeo u %**
Postoji	11	91,66%
Ne postoji	0	0,00
Postoje ogranič.	1	8,33%
UKUPNO	12	100,00%

Slika 16. Udeo pro.postupka brojanja pregleda i izveštav. o ulazu robe na zalihe



Izvor: *Autorsko istraživanje, obrada i prikaz*

Od ukupno 12 ispitanika 11 njih je odgovorilo potvrdno na navedeno pitanje, što upućuje na zaključak kako ta preduzeća propisanim postupcima skraćuju vreme potrebno za obavljane navedenih radnji i postižu efikasnost praćenjem procedura. Jedno anketirano preduzeće ne može primeniti ovu konstataciju u svom poslovanju zbog prirode delatnosti kojoj pripada.

U anketi je bilo postavljeno i pitanje *da li se u preduzećima upoređuju i usklađuju mesečni izveštaji nabavke sa knjiženjima ulaznih računa.* Ovakav pristup upućuje na međusobnu saradnju delova i pojedinih funkcija preduzeća, što je od posebne važnosti kako bi se smanjili rizici poslovanja i kako bi se njima što efikasnije upravljalo.

Tabela 17. Str. odg. upoređuju li se i usklađ. mesečni izveš. nab, sa knjiž, ulznih računa

Upoređ. li se i uskl.mesečni izveštaji naba. sa knji. ulaz.rač	**Broj anketiranih**	**Udeo u %**
Upoređuju	11	91,66%
Ne upoređuju	0	0,00%
Postoje ogranič.	1	8,33%
UKUPNO	12	100,00%

Slika 17. Udeo upoređ. li se i usklad . mes.izveštaji naba sa knjiž, ulaznih računa

Izvor: *Autorko istraživanje, obrada i prikaz*

Iz podataka datih u tabeli 17 može se uočiti da 91,66% anketiranih preduzeća sprovodi usklađivanja i upoređivanja izveštaja nabavke sa knjiženjima ulaznih računa. Samo jedno anketirano preduzeće od ukupno posmatranog broja ovaj podatak ne može primeniti na vlastitom poslovanju, zbog delatnosti u kojoj se nalazi.

Kako bi se bolje razlučile obveze prema dobavljačima od ostalih funkcija, važno je pratiti i sam tok ulaska dobavljačevih dobara u preduzeće. Stoga su ispitanici kao jedno od pitanja na koje su trebali odgovoriti i to *da li je funkcija nabavke odvojena od računovodstvene funkcije i prijema robe.*

Tabela 18. Str. odgovora: da li je funkcija nabav. odvoj. od rać. funkc. i prijema robe

Odvojeno. funkcije nabavke od račun. funk. i prijem. robe.	**Broj anketiranih**	**Udeo u %**
Odvojena je	10	83,33%
Nije odvojena	1	8,33%
Postoje organč.	1	8,33%
UKUPNO	12	100,00%

Slika 18. Udeo kolik. je funkcij. odvojena od rač. funkc. i prij. r.

Izvor: *Autorsko istraživanje, obrada i prikaz*

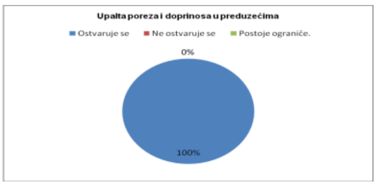
Podaci iz tabele 18 pokazuju da većina ispitanika, tj. 83,33%% je potvrdno odgovorilo na postavljeno pitanje. Samo jedno anketirano preduzeće od ukupno 12 je odgovorilo ne, odnosno nije primjenjivo što je, kao i u prethodnim slučajevima, uzrokovano tipom delatnosti kojim se poduzeće bavi.

Uvid u to *da li se u anketiranim preduzećima vrši uplata poreza i doprinosa u skladu sa propisima* prilikom sprovođenja interne kontrole je od velike važnosti, jer se reguliše odnos preduzeća prema svojim radnicima, ali i zakonskim obvezama, što umanjuje rizik poslovanja.

Tabela 19. Struktura odgovora: uplata porez/doprinos u skladu sa propisima

Upl. porez/dop. u preduzećima	**Broj anketiranih**	**Udeo u %**
Ostvaruje se	12	100,00%
Ne ostvaruje se	0	0,00%
Postoje ogran.	0	0,00%
UKUPNO	12	100,00%

Slika 21. Udeo uplate porez/ dorinos u skladu sa propisima



Izvor: *Autorsko istraživanje, obrada i prikaz*

Kao što se vidi iz tabele 19 sva anketirana preduzeća su odgovorila kako to redovno rade. Ovo upućuje kako se sva posmatarana preduzeća pridržavaju propisa.

Ograničenja istraživanja

Prilikom tumačenja istraživanja treba uzeti u obzir ograničenje sprovedenog istraživanja s obzirom da je istraživanje sprovedeno na slučajnom uzorku od 12 proizvodnih preduzeća(ispitanika) koji su dobrovoljno hteli da ispune anketni upitnik. Takođe, u Nišavskom okrugu prema podacima Regionane privredne komore Niš ima nekoliko desetina proizvodnih preduzeća, a u istraživanju su sobzirom da je uzorak slučajan zastupljeni ispitanici 12 proizvodnih preduzeća. Za generalizaciju zaključaka trebalo bi povećati uzorak i učiniti ga reprezentativnim.

Zaključna razmatranja

Preduzeća kako bi zadžala svoju poziciju, na tržištu ili išli korak napred, moraju posvetiti posebnu pažnju analizi i upravljanju rizicima. Upravljanje rizicima (risk management) povećava se njihova transparentnost i na taj način se pruža podrška strateškom i poslovnom planiranju, takođe i procesu odlučivanja, obzirom da menadzment ima jasniju predstavu o uticaju potencijalnih činilaca na ostvarenje ciljeva preduzeća. U tom procesu oblici kontrole igraju ključnu ulogu. Stoga, interna kontrola bi trebala predstavljati temeljni kontrolni oblik. Sam delokrug, organizacija, i vrsta interne kontrole zavisiće će o djelatnosti preduzeća, odnosno svako preduzeće moći će prilagoditi ovaj sistem svojim potrebama. Iako predstavlja najniži oblik kontrole, interna kontrola predstavlja ujedno i osnovu za razvoj sofisticiranijih oblika: interne revizije i sistema kontrolinga.

Sprovođenjem empirijskog istraživanja dokazuje se kako je interna kontrola kao oblik kontrole u preduzeću važan alat u upravljanju rizicima. Istraživanje koje je sprovedeno na 12 preduzeća proizvodnog sektora Nišavskog okruga pokazuje da se kontrola obavlja u svim poslovnim aktivnostima preduzeća i stvara nužnost komunikacije među različitim delovima istog preduzeća. Tako se pomoću interne kontrole kontroliše usklađenost stvarnog stanja zaliha sa poslovnim knjigama, usklađenost glavne knjige, izvršavanje obaveza prema dobavljačima i regulisanje potraživanja od kupaca, itd.

U skladu sa teoretskim pregledom i empirijskim istraživanjem, dokazana je prva hipoteza koja glasi: “Interna kontrola bitno doprinosi kvalitetu poslovanju proizvodnih preduzeća Nišavskog okruga“, jer je 11 anketiranih proizvodnih preduzeća od ukupno 12, potvrdilo da interna kontrola značajno doprinosi poboljšanju kvaliteta njihovog poslovanja. Druga hipoteza koja glasi: „Interna kontrola adekvatno potpomaže proces upravljanja rizicima i njihovog minimiziranja“ se delimično prihvata. Ovakav zaključak je donet jer pojedina proizvodna preduzeća Nišavskog okruga ažurno obavljaju određene aktivnosti koje utiču na smanjenje rizika, poput kontrole zaliha ili potraživanja i sl. Ova hipoteza se ne može u potpunosti prihvatiti, jer navedene aktivnosti ne obavljaju sva anketirana proizvodna preduzeća Nišavskog okruga. Treća hipoteza je glasila: „Sva područja poslovanja koja podležu internoj kontroli, usklađuju se na mesečnom nivou“ se odbacuje. Pojedina proizvodna preduzeća Nišavskog okruga su navela kako usklađivanja pojedinih stavki vrše isključivo na godišnjem nivou, poput usklađivanja zaliha sa ostalom dokumentacijom.

U skladu sa sprovedenim istraživanjem, može se izvesti zaključak da postoji uticaj interne kontrole u podizanju kvaliteta poslovanja proizvodnih preduzeća Nišavskog okruga. Ipak, u određenim aktivnostima postoji prostor za unapređenje sistema interne kontrole, i u skladu s tim, podizanje niva zaštite od rizika poslovanja.

Rezultati ovog istraživanja mogu služiti kao podloga za dalja istraživanja za dobivanje mišljenja i iskustava koja se odnose na internu kontrolu kao podrsci funkciji menadzmenta u svrhu otkrivanja nepravilnosti i upravljanja rizicima.

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INTERNAL CONTROL AS SUPPORT TO THE MANAGEMENT FUNCTION FOR THE PURPOSE OF DETECTING IRREGULARITIES AND RISK MANAGEMENT

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Abstract

Risk management is an important component of the competitiveness of every business entity and a prerequisite for making timely and correct decisions. Bearing this in mind, the question arises as to how the risk management process is established in companies, how developed it is, that is, what is the role of the internal control system for the purpose of detecting irregularities and risk management. This question also represents the basic research problem of this paper. The goal of the research is to theoretically and empirically process the connection between internal control and company management and to investigate the degree of development of internal control in manufacturing companies operating in Nišava District. Empirical research provides answers to the key question that is the basis of the research itself, namely: does internal control support the management function for the purpose of detecting irregularities and managing risks?

Keywords: *risks, internal control, management, goals, efficiency*

Jel classification: *D04, D81*

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Introduction

In the modern and globalized business environment, business operations are becoming more and more complex and are accompanied by an increasingly intensive use of information and communication technologies. In such conditions, it is often said that business risks increase. Along with the mentioned changes, each company has its own phase of growth and development, which represents an additional source of risk for the company in question. In order for the company to minimize the resulting risks, that is, to manage them well, it uses different methods of business supervision. One of the forms of supervision in companies is internal control, which becomes an indispensable risk management mechanism and a mechanism by which the entire management process can be improved. The responsibility for the establishment and functioning of the internal control system is assumed by the management of the company, and the system includes policies and procedures aimed at improving the management performance of economic entities. The paper raises the question of how the process of risk management in companies is established, how developed it is, that is, what is the role of the internal control system for the purpose of detecting irregularities and risk management. The goal of the research is to examine the role of internal control for the purpose of detecting irregularities and risk management within manufacturing companies that operate in the Nišava district. Based on the defined area and research problem, the research hypotheses are as follows: The first hypothesis refers to the frequency of application of the internal control system in companies, and reads: "Internal control significantly contributes to the operations of manufacturing companies in the Nišava District". The second hypothesis refers to risk management and the role of internal control and reads: "Internal control adequately supports the process of risk management and their minimization." are adjusted on a monthly basis".

Literature review

The complexity of the business environment and the complexity of the connections between the environment and the company affect the appearance of uncertainty and risk in business, which can have a positive or negative aspect, considering that it can refer to potential opportunities to achieve additional value for companies or to an opportunity, i.e. a threat , reductions in its value. Consequently, in order to maintain their place in the market and move forward, companies must pay special attention to business risks.

Different authors define the concept of risk differently.

There are several different definitions of risk depending on the aspect from which they are viewed.

They are traditionally defined in terms of uncertainty and loss. One such definition is described by Rejda as "the uncertainty of realizing a loss" (Rejda, 2005).

Some authors equate "uncertainty and risk" (Ostojic, 2007).

Vaughan T. and E. Vaughan define risk "as a condition in which there is a possibility of a negative deviation from the desired outcome that we expect or hope for." (Vaughan, Vaughan, 2003).

The common thread for many definitions of risk is "that a risk is an event that can affect the achievement of a defined business goal" (srđansimic.com/upravlenje-risicima-i-kontinuitet- rusobaja/pojam risika/)

Precisely because of the existence of risks, company management must constantly take care of internal and external factors that can affect the achievement of company goals, efficiency, rational use of resources, etc. These facts highlight the importance of risk management and risk assessment. Risk management can be defined as an organized analytical process by which a company discovers, observes, identifies, reduces and controls possible risks and losses to which it is exposed (Crnković et al., 2010). The goal of risk assessment is to find out which risks are more likely and more dangerous, how which risk will affect the company, and in the last case, providing an answer to the question of how to manage a particular risk.

When risks are identified, they become a catalyst for the growth of the company's income, and by revealing them, all uncertainty disappears. In order to determine the risks in time and undertake the necessary activities, it is necessary to organize an adequate system of internal control. Krstić and Đorđević (2012) in their investigation of the complexity of the relationship between the company and the environment point to the possibility of the occurrence of events whose outcome cannot be assessed with appropriate probability. In doing so, they conclude that internal control is a mechanism that, with its potential, significantly contributes to increasing the efficiency of the risk management process. Research by Tušek and Žager, (2008) showed that, mathematically speaking, the higher the quality of internal controls, the lower the final value of the risk index.

The internal control system is considered an "extended arm of management", given that it develops as a function of management. The process of internal control includes all those policies and procedures adopted by the management of the company, which can help in achieving the goal related to the security of: operations, policies, protection of funds, prevention of fraud and errors, accuracy and competence of accounting documents and timely preparation of reliable financial information (Simijonović , 2017). In addition to these basic, internal control objectives can be grouped into: strategic, tactical and operational and all should be included in the business functions of the company's units as a system. The objectives of internal control can be divided into subgroups: operational objectives, informational objectives and objectives related to uniformity and consistency.

The fact is that without timely and precise internal control, management will not be able to properly direct the company towards the set goals that should basically lead to business development and the security of the company itself as a whole (Popović et al., 2014). In this sense, management is responsible for establishing an appropriate business culture in order to facilitate effective internal control processes and to constantly monitor effectiveness (Stanišić, 2014). Quality reporting that management receives on a daily, weekly or monthly basis contributes to making better business decisions. It is crucial that the internal control system, as a risk management tool, should be designed in such a way that it provides reasonable assurance that specific goals within the company will actually be achieved, and thus the goals of the company as a whole. An effective internal control system should bear the characteristics of establishing standards, should analyze and compare the achieved results in relation to the standards, take care of the plan and program of corrective activities and analyze and revise the standards. An important characteristic of successful internal control is the economy of time and resources, which are used to measure success in relation to planned results. Timeliness and simplicity in application by employees form the basis of measuring the crucial points of the system. In addition, the ratio of non-achievement of goals and costs of established controls is also important. In the end, it should be borne in mind that too many controls are too expensive and counterproductive, and too little represents an unnecessary risk. (Popović et al., 2014). The composition of internal controls differs from company to company, which is a reflection of different characteristics, such as: company size, organizational form, the way it is managed, people's abilities, etc. The basic components of the internal control system are: control environment, risk assessment system, control activities, information and communication system and supervision system (Trifunac, Stanojević, 2009). The environment or conditions in which internal control is implemented greatly affects the behavior and decisions of the company's management. Risk assessment includes the functions of determining, analyzing and managing risks that affect the preparation of objective financial statements. Control activities support policies and procedures that ensure that all necessary risk management activities are undertaken to achieve the company's objectives. Information and communication enable detailed and timely reporting on business transactions. The activities of supervision and constant checking of the effects of internal control are procedures that ensure the achievement of the company's goals.

Internal control can be divided into: executive or administrative control, information-accounting control and management control (Crnković et al., 2010). At the same time, executive or administrative control is established in certain business units of the company. Information-accounting control refers to a set of measures, procedures and rules that strive to ensure the accuracy, validity and comprehensiveness of accounting records and reports. Management control refers to the subsequent verification of the functioning of the administrative and accounting control system and the taking of the necessary measures and actions for their operation. Certain authors list the types of internal control from the point of view of the subject and the object, then, according to work methods, according to customs, etc. When it comes to internal control techniques, they can be: preventive, detection and reactive (Dawis et all, 2008). Preventive controls are built into the system to prevent an error or event from going unnoticed. An elementary type of preventive control is an organizational structure that delimits the duties of certain functions. The purpose of detection control is to alert management to errors or problems when they occur or shortly thereafter. An example of a detection control is counting cash and reconciling the cash register at the end of the day. Along with detector controls, corrective controls are used to recover from the consequences of unwanted events. Thus, an insurance policy that charges a loss is one type of corrective control. In response to the assessed risk, the control mechanisms for its reduction must be focused, qualitative and meaningful. Focused and quality controls have their price, so the benefits realized through them in reducing risk must be greater than the costs of those controls. Management has the ability to choose the way in which it will perform risk assessment and establish the appropriate type of controls over risks. This prevents confusion when managing the company and achieves greater reliability of information and ensures adaptability to the company's strategy.

At the end of the presentation of the internal control literature review, it is important to emphasize that although an internal control system can help a company achieve its goals, it cannot be a cure-all. Regardless of how well it is designed and how well it functions, the internal control system cannot provide absolute assurance to management about the achievement of the company's goals or its survival, all because of the existence of various risk factors that exist in the company's environment. In addition to cost limitations, the effectiveness of the internal control system can be impaired by: irresponsibility of management members, secret agreements, employee mistakes, etc. In addition to the above, there are numerous other factors that can damage the internal control system, such as: inappropriate organization, inappropriate procedures in completing the risk assessment, failure to fulfill tasks, manipulation and misuse of documentation, errors in the application of accounting rules, etc. Therefore, the internal control system in modern conditions should cover a wide area (not only the accounting-financial subsystem), i.e. it should be incorporated into the entire business process.

Management has the task of evenly distributing control procedures and types of controls within the company, so that all business parts and all processes within the company are covered. Only a comprehensive system of internal control, which includes the company as a whole, can achieve the goals of the company and protect its assets. This is precisely the reason why the necessity of cooperation and the application of the concept of ERM (Enterprise Risk Management) in internal control matters is increasingly emphasized. Internal control and ERM are important from a business perspective, because they provide security against uncertainty, reduce financial risks and create reliable reports on business. Their purpose is not to eliminate risks, but to adequately control and manage risks.

Research methodology

The methodology used in the work clarifies the very purpose, structure and goal of the work. In the first part of the work, the topic of the work is introduced. The second part includes a review of scientific and professional literature related to internal control as support for the management function for the purpose of detecting irregularities and risk management. In the third part of the paper, the methodology of the conducted research is described, while in the fourth part, the results of the conducted research are presented through a survey questionnaire. The main conclusions of the work, obtained on the basis of the conducted research, are presented in the final part of the work.

Presentation and interpretation of research results

Sample research

12 production companies from the area of Nišava District participated in the conducted survey. In the paper, the names of the manufacturing companies that participated in the research are not given, in order to protect the company's privacy and data confidentiality. The survey questionnaire was distributed online from June 10, 2023. until 12.10.2023. year. For the purposes of this work, 21 questions from the survey questionnaire were analyzed. All responses were anonymous. The respondents and the authors of the research could not influence each other, which ensured independence of perception.

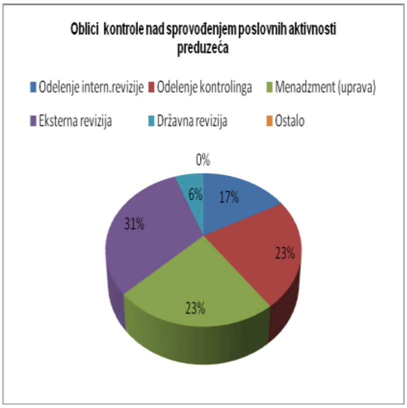
Research results and discussions

In order to achieve the highest degree of business security, it is possible, and even desirable, to use several forms of supervision over the company. At the same time, the supervision can be within the company itself and can be performed by the internal audit part, the controlling part or the management, i.e. the management of the company. Outside the company, supervision is performed by external auditing companies or the state audit. In this sense, one of the relevant information is: what forms of supervision do the surveyed companies use?

Table 1.

Forms of control.nad. implementation of business activities of the company	**Number of responses (more are possible)**	**Share in %**
Internal Audit Department	6	17,14%
Controlling department	8	22,85%
Management	8	22,85%
External audit	11	31,42%
	2	5,71%
The rest	0	0,00%
TOTAL	35	100,00%

Figure 1.



Source: *Author's research, processing and display*

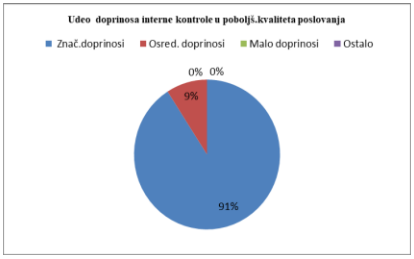
Data from the survey show that a significant number of surveyed manufacturing companies in the Nišava district rely on external auditing (31.42% compared to other responses). Also, when individual answers are observed, it is visible that out of 12 manufacturing companies that participated in the survey, 11 of them included external audit as one of the possible answers, from which it could be concluded that the role of external, independent auditors is very important in business. modern companies.

Furthermore, the data from the research show that all production companies have some form of internal supervision within the company, which leads to the conclusion that most of the surveyed companies rely on the work of the controlling and management department in the implementation of supervisory activities. Only 2 companies mentioned state audit as one of the forms of supervision. One of the important indicators is the understanding of the employees of certain production companies in the Nišava district about the extent and what kind of role internal control plays in the business itself, because this understanding can be crucial for the efforts that will be made in the control process and in its further development. The following data illustrate the opinions of the surveyed companies about the contribution of internal control in increasing the quality of their operations.

Table 2.

Support inte. con. in improvement qual. business	**Number surveyed**	**Share in %**
It contributes significantly	11	91,00%%
Medium contributions	1	9,00%
It contributes little	0	0,00%
The rest	0	0,00%
Total	12	100,00%

Figure 2.



Source: *Author's research, processing and display*

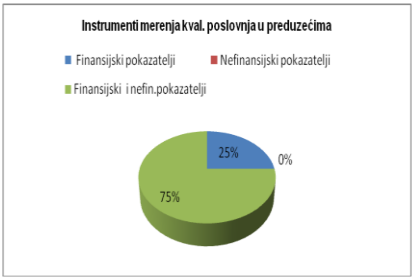
Based on the given answers, we notice that the majority of surveyed companies believe that internal control significantly contributes to the improvement of business quality. As many as 75% of companies, or 9 of them, chose that answer. Only 16.66% of surveyed companies consider that contribution to be mediocre, while 8% consider that contribution to be negligible. Such results are encouraging and indicate that, although all surveyed companies rely on external forms of supervision, a significant number of surveyed companies understand internal control as an important part of business that enables more successful results and progress of the entire company.

In the continuation of the questionnaire, the respondents expressed their opinion about which business quality measurement instruments they use when assessing business quality.

Table 3.

Instruments for measuring business quality	**Number surveyed**	**Share in %**
Financial indicators	3	25,00%
Non-financial indicators	0	0,00%
Financial and non-financial indicators	9	75,00%
Total	12	100,00%

Figure 3.



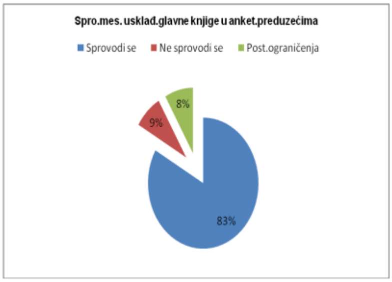
Source: *Author's research, processing and display*

According to the data in Table 3, it is visible how the surveyed companies follow current trends and give importance to both financial and non-financial types of indicators (9 of them, out of a total of 12 surveyed, use both indicators). However, if one takes into account the fact that not a single surveyed company stated as an answer only non-financial indicators, and 3 surveyed companies stated only financial indicators, one can come to the conclusion that in some surveyed companies there is still not a sufficient level of awareness about the importance and non-financial indicators in assessing the quality of business. Bearing in mind the fact that the general ledger is a basic business ledger in which all business events are chronologically entered, it is also relevant to know whether the surveyed companies carry out monthly reconciliations of general ledger accounts in order to avoid irregularities and possible errors.

Table 4.

Enforcement The month. reconciliation of the general ledger to the survey. companies	**Number surveyed**	**Share in %**
It is being implemented	10	83,33%
It is not implemented	1	8,33%
There are limits.	1	8,33%
Total	12	100,00%

Figure 4.



Source: *Author's research, processing and display*

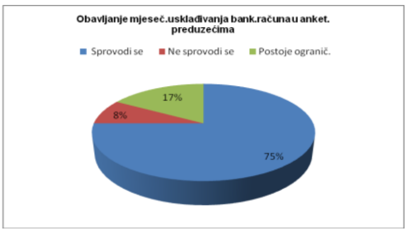
In Figure 4, we notice that 83.33% of surveyed companies carry out reconciliation of the general ledger on a monthly basis, which means that the possibilities of not detecting possible errors are significantly reduced. Only one surveyed company gave a negative answer to the above question. For the operation of any company, it is important to have control over the balance of all bank accounts in order to create the best possible picture of the company's assets.

Therefore, it is also important to know whether monthly adjustments of bank accounts are carried out in the surveyed companies.

Table 5.

Carrying out the month. bank account reconciliation in the survey. company	**Number surveyed**	**Share in %**
It is being implemented	9	75,00%
It is not implemented	1	8,33%
There are limits.	2	16,66%
Total	12	100,00%

Figure 5.



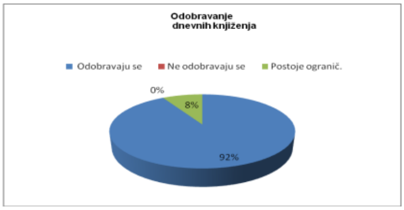
Source: *Author's research, processing and display*

According to table 5, it is possible to get a picture of the implementation of monthly reconciliations of bank accounts in the surveyed companies. Thus, out of the total number of companies surveyed, 9 of them, or 75.00%, declared that they regularly perform monthly reconciliations of bank accounts. It is known that timeliness is one of the fundamental principles of accounting and it is extremely necessary to adhere to it in order to ensure quality and timely information about past business events. In this sense, it is important to see if daily entries are carried out in the surveyed companies in order to determine the up-to-dateness in recording business events.

Tabela 6.

Approval of daily postings	**Number surveyed**	**Share in %**
Approval of daily postings	11	91,66%
They are not approved	0	0,00%
There are limits .	1	8,33%
Total	12	100,00%

Figure 6.



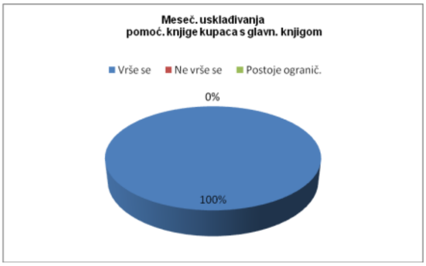
Source: *Author's research, processing and display*

Table 6 shows that 11 out of 12 surveyed companies approve daily entries, that is, they are very up-to-date in the records of business events. Only one surveyed company does not approve of this type of accounting, but this could be justified by its size and the nature of its activity. Respondents also expressed their opinion on whether auxiliary ledgers are kept in the surveyed companies and whether they are reconciled with the main ledger. One of the auxiliary ledgers is the auxiliary ledger of customers, which provides an insight into the number of customers, then the claims that arose in business with them, the date of their origination, as well as their current state.

Table 7.

Month. reconciliation help. book purchase. with the ledger.	**Number surveyed**	**Share in %**
They are done	12	100,00%
They are not carried out	0	0,00%
There are limits.	0	0,00%
Total	12	100,00%

Figure 7.



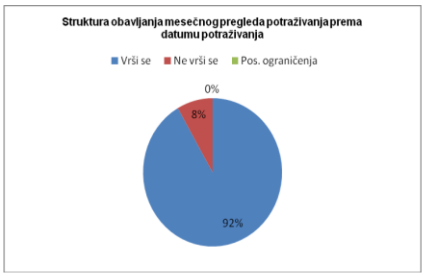
Source: *Author's research, processing and display*

From Table 7, we see how all surveyed companies carry out a monthly reconciliation of the customer's subsidiary ledger and the general ledger, and accordingly it can be concluded that all the surveyed companies take exceptional care of the current balances of customers' accounts. Receivables are a very important item of a company's assets and have a significant impact on the liquidity of an individual company. Therefore, it is important to know whether the surveyed companies perform a monthly review of receivables according to the date of receivables, in order to be able to adequately plan the future flow of money and to keep in mind which receivables have remained unpaid and for which there is a risk that they will remain so.

Table 8.

Month. reconciliation help. book purchase. with the ledger.	**Number surveyed**	**Share in %**
They are done	11	91,66%
They are not carried out	1	8,33%
There are limits.	0	0,00%
Total	12	100,00%

Figure 8.



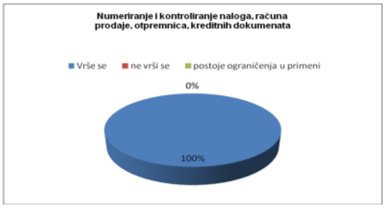
Source: *Author's research, processing and display*

The data from Table 8 show how most of the surveyed companies conduct monthly reviews of receivables according to the date of receivables. Specifically, it is about 91.66% of surveyed companies, that is, 11 of them out of a total of 12 observed take care of this issue. This is extremely positive because it also means that the surveyed companies take care of the cash flow and the state of their own liquidity. In order to be able to adequately monitor relations with customers, new orders, delivered goods, approved loans and the movement of goods itself, it is also necessary to know whether the surveyed companies have detailed documentation, which will show at all times the stage of sales, shipping and all accompanying activities related to the exchange of goods between the company and the customer.

Table 9.

Numbering and cont. account, account sales, shipping, credit. document.	**Number surveyed**	**Share in %**
They are done	12	100,00%
They are not carried out	0	0,00%
There are limits.	0	0,00%
Total	12	100,00%

Figure 9.



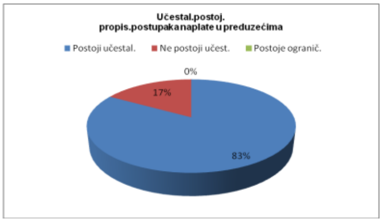
Source: *Author's research, processing and display*

The analysis of the collected responses showed that all surveyed companies carry out numbering and control of orders, sales invoices, delivery notes and credit documents, so it can be concluded that all observed companies take great care of the relationship with customers and carefully control the shipment of goods and accompanying documentation . One of the criteria in examining the role of internal control in the area of receivables from customers and sales is whether there is a frequency of prescribed receivables collection procedures in the surveyed companies. In order for companies to regulate the receivables, it is important to introduce standardized procedures and collection procedures.

Table 10.

It is frequent. regulation. collection procedure in the company.	Broj anketiranih	Udeo u %
There is frequent.	10	83,33%
There is no participation.	2	16,66%
There are limits.	0	0,00%
Total	12	100,00%

Figure 10.



Source: *Author's research, processing and display*

The data from Table 10 show that out of a total of 12 subjects surveyed, 10 of them (that is, 83.33%) declared that there are prescribed collection procedures in their companies, which is a satisfactory indicator of controlling this area of business. Only 2 companies, ie. 16.66% of respondents confirmed that such procedures and procedures were not introduced in their work practice.

The next survey question was about whether in the surveyed companies, the competence of internal control and other parts that deal with supervision includes the independent checking of prices, payment terms and final amounts on invoices.

Table 11.

Numbering and cont. account, account sales, shipping, credit. document.	Number surveyed	Share in %
They are done	10	83,33%
They are not carried out	1	8,33%
There are limits.	1	8,33%
Total	12	100,00%

Figure 11.

Source: *Author's research, processing and display*

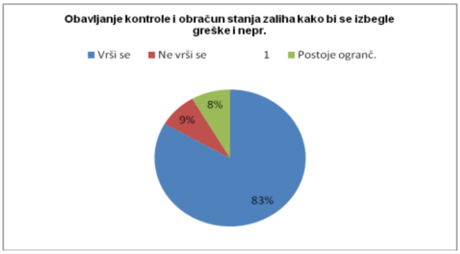
From the data given in table 11, it can be seen that 83.33% of surveyed companies carry out independent checks of prices, payment terms and final sums on accounts, and this number corresponds to the number of companies that answered that they carry out some form of internal supervision, and more specific control. Inventory control is one of the items of internal control.

Therefore, it is important to know whether the surveyed companies control and calculate stocks in order to avoid irregularities in business.

Table 12.

Carrying out cont. and turn. state of affairs in order to avoid mistakes and	**Number surveyed**	**Share in %**
They are done	10	83,33%
They are not carried out	1	8,33%
There are limits	1	8,33%
Total	12	100,00%

Figure 12.



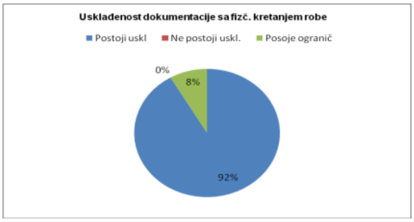
Source: *Author's research, processing and display*

From the data given in table 12, it can be seen that 83.33% of the surveyed companies carry out an independent check of prices, payment terms and final sums on the accounts, and this number corresponds to the number of companies that answered to confirm some form of internal supervision, and more specific control. One surveyed company stated that it does not carry out such procedures, and another stated that this information is not applicable, which in this case is conditioned by the nature of the company's activities. In response to the survey question, whether there is compliance of documentation with the physical movement of goods in the surveyed companies, the following indicators were found:

Tabela 13.

Align. doc. with physical movement. goods	**Number surveyed**	**Share in %**
There is compliance	11	91,66%
No there is compliance	0	0,00%
There are limits	1	8,33%
Total	12	100,00%

Figure 13.



Source: *Author's research, processing and display*

The research on the flow of goods came to the conclusion that 91.66% of surveyed companies, that is 11 of them out of a total of 12, harmonize the documentation with the mentioned physical movement of goods. One surveyed company believes that the question is not applicable to business, and it is about a company that is not in such an activity where there would be stocks of goods.

Determining the optimal level of inventory can be a problem for the company's management, because it must take care of the level in order not to accumulate it, which requires large monetary expenditures, or lack of it, which causes a stoppage in business or production itself. In this sense, the following structure of answers was obtained to the question of whether the surveyed companies take stock inventory at least once a year:

Table 14.

Perform annual census. level	**Number surveyed**	**Share in %**
They are done	11	91,66%
They are not carried out	0	0,00%
There are limits.	1	8,33%
Total	12	100,00%

Figure 14.

Source: *Author's research, processing and display*

From the data given in table 14, 11 surveyed companies answered affirmatively. Only one surveyed company does not take inventory at least once a year, and the reason is stated in the analysis of the previous question.

In order to avoid losses and irregularities in business, it is important to control and record stocks. In this sense, an important piece of information is whether in the surveyed companies, the stock inventory is performed by someone other than the storekeeper or the person responsible for the constant monitoring and recording of stock levels.

Table 15.

Incl. you store. and friend person	**Number surveyed**	**Share in %**
They are done	11	91,66%
They are not carried out	0	0,00%
There are limits	1	8,33%
Total	12	100,00%

Figure 15.

Source: *Author's research, processing and display*

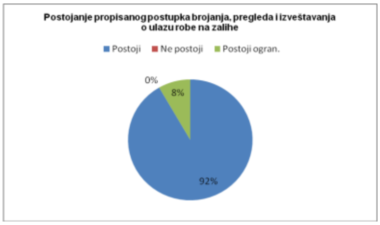
Out of a total of 12 respondents, 91.66% or 11 of them stated that in addition to storekeepers and responsible persons, other persons in the company are also involved in the process of monitoring and recording stocks. Only 1 respondent claims that the information is not applicable to the company, which again points to the nature of the activity.

Consistency in the responses related to inventory control is also observed when analyzing the results of the survey on the question of whether there is a prescribed procedure for counting, inspecting and reporting on the entry of goods into inventory in the surveyed companies.

Table 16.

Existence of pro.post.counting preg. and report the entrance.	**Number surveyed**	**Share in %**
There is compliance	11	91,66%
No there is compliance	0	0,00
There are limits	1	8,33%
Total	12	100,00%

Figure 16.



Source: *Author's research, processing and display*

Out of a total of 12 respondents, 11 of them answered affirmatively to the above question, which points to the conclusion that these companies use prescribed procedures to shorten the time needed to perform the above actions and achieve efficiency by following the procedures. One surveyed company cannot apply this statement in its operations due to the nature of the activity to which it belongs.

The survey also asked the question whether companies compare and harmonize monthly procurement reports with incoming invoices. This approach refers to the mutual cooperation of parts and individual functions of the company, which is of particular importance in order to reduce business risks and manage them as efficiently as possible.

Table 17.

Compare. are the monthly reports available as well? with books. input	**Number surveyed**	**Share in %**
There is compliance	11	91,66%
No there is compliance	0	0,00%
There are limits	1	8,33%
Total	12	100,00%

Figure 17.

Source: *Author's research, processing and display*

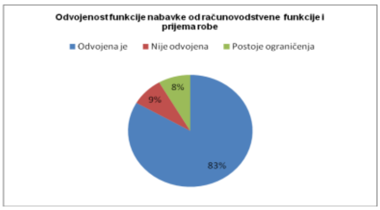
From the data given in table 17, it can be seen that 91.66% of the surveyed companies carry out reconciliations and comparisons of procurement reports with the entry of incoming invoices. Only one surveyed company out of the total observed number cannot apply this information to its own business, due to the activity in which it is located.

In order to better distinguish obligations towards suppliers from other functions, it is important to monitor the very flow of the supplier's goods entering the company. Therefore, one of the questions that the respondents should have answered was whether the procurement function was separated from the accounting function and the receipt of goods.

Table 18.

Separately. procurement functions from account. funk. and reception. goods.	**Number surveyed**	**Share in %**
There is compliance	10	83,33%
No there is compliance	1	8,33%
There are limits	1	8,33%
Total	12	100,00%

Figure 18.



Source: *Author's research, processing and display*

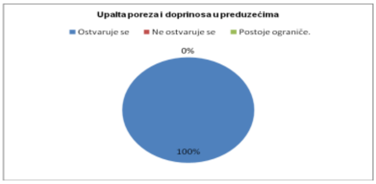
The data from table 18 show that the majority of respondents, i.e. 83.33%% answered the question in the affirmative. Only one surveyed company out of a total of 12 answered no, that is, it is not applicable, which, as in previous cases, is caused by the type of activity the company is engaged in.

Insight into whether the surveyed companies pay taxes and contributions in accordance with the regulations during the implementation of internal control is of great importance, as it regulates the company's relationship with its workers, as well as legal obligations, which reduces business risk.

Tabela 19.

Upl. porez/dop. u preduzećima	**Broj anketiranih**	**Udeo u %**
Ostvaruje se	12	100,00%
Ne ostvaruje se	0	0,00%
Postoje ogran.	0	0,00%
UKUPNO	12	100,00%

Figure 19.



Source: *Author's research, processing and display*

As can be seen from table 19, all surveyed companies answered that they do it regularly. This indicates that all observed companies are complying with the regulations.

Limitations of the research

When interpreting the research, the limitation of the conducted research should be taken into account, considering that the research was conducted on a random sample of 12 manufacturing companies (respondents) who voluntarily wanted to fill in the survey questionnaire. Also, according to the data of the Niš Regional Chamber of Commerce, there are several dozen manufacturing companies in the Nišava district, and since the sample is random, respondents from 12 manufacturing companies are represented in the survey. To generalize the conclusions, the sample should be increased and made representative.

Concluding considerations

Companies, in order to secure their position in the market or take a step forward, must pay special attention to risk analysis and management. Risk management increases their transparency and thus provides support for strategic and business planning, as well as the decision-making process, given that management has a clearer idea of the impact of potential factors on the achievement of the company's goals. In this process, forms of control play a key role. Therefore, internal control should represent a basic control form. The scope, organization, and type of internal control will depend on the company's activities, that is, each company will be able to adapt this system to its needs. Although it represents the lowest form of control, internal control also represents the basis for the development of more sophisticated forms: internal audit and controlling system.

Conducting empirical research proves that internal control as a form of control in an enterprise is an important tool in risk management. The research conducted on 12 companies in the production sector of the Nišava district shows that control is carried out in all business activities of the company and creates the necessity of communication between different parts of the same company. Thus, internal control is used to control the compliance of the actual stock balance with business books, the compliance of the general ledger, the fulfillment of obligations to suppliers and the regulation of receivables from customers, etc.

In accordance with the theoretical review and empirical research, the first hypothesis was proven, which reads: "Internal control significantly contributes to the quality of operations of manufacturing companies in the Nišava district", because 11 surveyed manufacturing companies out of a total of 12 confirmed that internal control significantly contributes to the improvement of the quality of their operations. The second hypothesis which reads: "Internal control adequately supports the process of risk management and their minimization" is partially accepted. This conclusion was reached because some production companies of the Nišava district are promptly performing certain activities that affect risk reduction, such as inventory control or receivables, etc. This hypothesis cannot be fully accepted, because the mentioned activities are not carried out by all surveyed production companies of the Nišava district. The third hypothesis was: "All business areas subject to internal control are reconciled on a monthly basis" is rejected. Certain production companies of the Nišava district stated that they perform adjustment of individual items only on an annual level, such as adjustment of inventory with other documentation.

In accordance with the conducted research, it can be concluded that there is an influence of internal control in raising the quality of operations of manufacturing companies in the Nišava district. However, in certain activities, there is room for improving the internal control system, and accordingly, raising the level of protection against business risks.

The results of this research can serve as a basis for further research to obtain opinions and experiences related to internal control as a support to the management function for the purpose of detecting irregularities and managing risks.

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ZNAČAJ PRIMENE STATISTIČKIH MODELA U RAZVOJU REJTING SISTEMA FINANSIJSKIH INSTITUCIJA

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Apstrakt

Najbitniji sistem za upravljanje rizicima i merenje finansijski performansi jeste rejting sistem. Rejting sistem se smatra integralnim delom bankarskih tekućih poslova i njihove kulture upravljanja rizicima. Sve banke se trude da istaknu tu njegovu pripadnost tekućim poslovima, kako bi pokazali supervizorima neophodnost njegovog korišćenja u svrhu determinisanja zahteva minimalnog regulatornog kapitala.

Komitet u Bazelu za pojedine klase izloženosti rizicima, preporučuje korišćenje osnovne metodologije kod koje bankarske institucije kao ulaznu veličinu koriste sopstvenu procenu rizika neplaćanja dužnika, dok se procene dodatnih faktora rizika primenjuju putem standardizovonih pravila supervizora.

Ova osnovna metodologija je dostupna za bankarske institucije koje imaju mogućnost da svoje supervizore uvere da su one sposobne da odgovore na određene minimalne zahteve bankarskog sistema, proces upravljanja rizika i sposobnost procene njegovih bitnih komponenti.

Takođe pored osnovne metodologije definisane su i napredne metodologije koje pružaju mogućnost unutrašnje procene komponenti rizika. Široka primena navedenih procena je važan deo dinamičkog i risk-senzitivnog IRB

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pristupa (Internal Rating Based). Tako mogu da se identifikuju i razlikuju one bankarske institucije koje imaju sposobnost da sprovedu određenu validnu i kvantifikovanu procenu rizika.

Neki određeni modeli, postupci i procesi procene verovatnoće neplaćanja u određenim situacijama, putem dobijenih rezultata, omogućuju menadžmentu bankarskih institucija detaljno analiziranje realne slike mogućih dužnika što u krajnjem pruža i moguću bolju analizu njihovog difolta.

Ključne reči: *verovatnoća neplaćanja, dužnik, modeli, interni rejting, statistička analiza, adekvatnost bankarskog kapitala.*

JEL: C26, G21

Uvod

Osnovnu bazu determinisanja rejtinga izloženosti riziku ili rejtinga drugih ugovornih strana kod manjeg broja bankarskih institucija, a u okviru određenih portfolia, činio je postupak verovatnoće ispunjenja obaveza ili drugi kvantitativni alati.

Takvi postupci trebalo bi da imaju mogućnost da budu razvijeni od strane isporučioca (vendor) i uglavnom pored kvalitativnih i kvantitativnih faktora (finansijske proporcije), sadrže i stadardizovane faktore (istorija plaćanja, kreditni izveštaji itd). (Bessis J, 2019)

Ovakve alate kod velike korporativne izloženosti, primenjivalo je mali broj bankarskih institucija, dok je nekoliko njih koristilo ove alate u situacijama srednjeg tržišta ili korisnika iz malog biznisa. Kao primer za navedenu situaciju može se navesti korišćenje kreditnih skor modela (kategorije „scorecard”, modele difolta, isporučioca (vendor) i konsultanata).

Takođe navedeni modeli imaju u sebi bitne elemente u postupcima procene rizika u velikom broju institucija. Kod konstruisanja banaka, prvo se definišu finansijske zavisne varijable, koje se pojavljuju prilikom pružanja informacionih podataka o procentu verovatnoće neispunjenja obaveza.

Putem uzorka razmatranog kredita, a primenom dostupnih istorijskih podataka, bankarska institucija procenjuje uticaj svake od ovih zavisnih varijabli na postupak neispunjenja obaveza. Utvrđenih koeficijenti procene se dalje koriste na podatke trenutnih zajmova i pojavljuju kao rezultat koji je utvrđen u proceni pitanja procenta verovatnoće neispunjenja obaveza. Rezultat se zatim konvertuje u rejting stepen (realni inputi kod takvih modela su vrlo identični kvantitativnim elementima rizika, utvrđenog od strane procenitelja).

Aktivnosti i procesi koji počivaju na statističkim modelima imaju bitniju ulogu kod manjih korporativnih zajmova nego na tržištima srednje veličine ili kod velikih korporacija.

Pojedine bankarske institucije su zasnovale svoje rejtinge isključivo na statističkim skor modelima difolta i kredita ili specijalnim ciljevima finansijskih analiza, ne uzimajući u obzir jednostavne mehaničke procese. Takci rejtinzi omogućuju dodeljivanje rejtinga radi podešavanja rejtinga na određeni unapred ograničeni stepen koji počiva na faktorima procene. (Brealey R., 2021)

U određenoj situaciji definisanog procesa scorecard definiše stepen, dok procenitelj po ličnoj analizi, može definisati finalni stepen naniže ili naviše i to maksimalno za jedan ili dva stepena.

Pored toga, kvantitativnim i faktorima procene se mogu dodeliti maksimalni poeni što efikasno ograničava uticaj razmatranja određene procene na konačni rejting. Skoro 20% bankarskih institucija primenjuje ovaj koncept u svojim velikim korporacijama, dok se identičan procenat institucija izjasnio da primenjuje ovaj koncept za svoje manje korporacije i srednja tržišta. Stavljanje ograničenja na proceni je profesionalnije kada se te procene isključivo primenjuju za rast rejtinga, a ne za njegov pad. Najveći broj institucija rejtinge dodeljuje primenom najznačajnijih delova procene, gde je relativna značajnost ukazana delovima koji nisu ograničeni.

Regresiona analiza

U statističkom modeliranju, regresiona analiza predstavlja proces statističkih analiza na osnovu kojih se vrši vrednovanje uzajamne povezanosti zavisne ili kriterijumske promenljive i nezavisnih (predikatorskih) promenljivih. (Matz L., 2017)

Dobijeni rezultati na osnovu regresione analize ističu da se vrednosni podatak zavisne promenljive menja sa promenom vrednosnog podatka neke nezavisne promenljive, dok ostali vrednosni podaci nezavisnih promenljivih ostaju nepromenjeni.

Kao stalan zadatak regresione analize pojavljuje se aproksimacija regresone funkcije, pomoću koje se ističe veza između promenljivih zavisnih i nezavisnih. Ova analiza se pored toga koristi i za vrednovanje funkcionalne zavisnosti izmedju pomenutih promenljivih, kao i prirodu tih zavisnosti.

U praksi nas može recimo zanimati zavisnost između zarada zaposlenih i njihovog obrazovanja, stopa i to kamatnih i ponude novca. Da bi se utvrdilo da li postoji zavisnost između određenih pojava i u kojoj meri je njihova zavisnost, neophodno je primeniti određeni model regresije.

Analiza regresije se primenjuje u dve totalno različite svrhe. Najpre se primenjuje za planiranje, prognoziranje i moguće predviđanje, u situacijama u kojima se njeno korišćenje poistovećuje se poljem mašinskog učenja. Zatim se koristi i u situacijama za utvrđivanje uzročno posledičnih veza između zavisnih i nezavisnih promenljivih.

Da bi se uspešno koristila ova vrsta analize za predviđanje, lice koje istražuje treba da oprezno definiše i objasni postojanje uzročne posledične veze između promenljivih odnosno njihovu funkcionalnu vezu. Funkcionalna veza je naročito važna u situacijama u kojima istraživači imaju mišljenje da će se za procenjivanje uzročno posledične veze koristiti samo podaci iz uzorka ili statističkog skupa i odgovarajuće funkcionalne relacije.

Regresiona analiza u finansijskim institucijama

Ključna prednost regresionih modela u finansijskim institucijama je njihova sposobnost da analiziraju složene veze između promenljivih i pruže kvantitativne procene koje podržavaju donošenje utemeljenih poslovnih odluka. (Gitman L., 2019)

Ulazne karakteristike koje nisu značajne za model mogu ozbiljno narušiti kvalitet i stabilnost modela kada se koriste radi predviđanja dužničkog rizika u vezi sa ovim podacima. Poželjno je da se promenljive, koje nemaju veliki uticaj na rezultate modela, jednostavno ignorišu i time pojednostavi model, što u svakom slučaju licima koja vrše regresionu analizu olakšava rad.

Način da se ponesemo sa ovim problemom se nalazi u podeli uzroka na dva dela, gde se jedan deo (uzorak obuke) koristi radi procene modela a drugi deo je hold-out uzorak (ostatak uzorka) koji se koristi kod validacije rezultata.

Konzistentnost rezultata oba uzorka se jednovremeno uzimaju kao indikatori stabilnosti modela.

U finansijskim institucijama regresiona analiza se najčešče se koristi u sledećim slučajevima:

a) Kreditna analiza: Regresijski modeli se koriste za procenu kreditnog rizika klijenata. Modeli poput logističke regresije se koriste za predviđanje verovatnoće da će klijent otplaćivati kredit redovno.
b) Upravljanje aktivom i pasivom: Finansijske institucije koriste regresione modele za predviđanje nivoa depozita i kredita, što im pomaže u upravljanju svojim bilansom i rizicima povezanim sa likvidnošću.
c) Marketinške strategije: Regresiona analiza se koristi za identifikovanje najisplativijih segmenata klijenata i utvrđivanje najdelotvornijih marketinških kanala i kampanja.
d) Prevencija prevare: Regresioni modeli se koriste za otkrivanje sumnjivih transakcija i obrazaca ponašanja koji mogu ukazivati na prevaru.
e) Prilagođavanje cena: Banke koriste regresione modele za određivanje optimalnih kamatnih stopa i naknada zasnovanih na tržišnim uslovima i profilu rizičnosti klijenata.
f) Upravljanje rizicima: Regresioni modeli se koriste za procenu kreditnog, tržišnog i operativnog rizika kojem je banka izložena.

Analiza diskriminante

Analiza diskriminante se vrši na sličan način kao u kod linearnog regresionog modela.

Zapravo proporcije između koeficijenata regresionog modela su jednake sa odgovarajućim proporcijama analize diskriminante. Razlika između ova dva metoda je teorijska: dok u regresionom modelu karakteristike imaju determinističku prirodu, a stanje difolta je slučajna promenljive. Kod analize determinante je sasvim suprotno tj. karakteristike predstavljaju slučajnu promenljivu dok je stanje difolta determinisano. Ove su razlike u praksi virtuelno nevažne.

Možemo zaključiti da su prednosti i mane analize diskriminante putem ovog modela slične onima kod regresionog modela, a to su:

- Analiza diskriminante je široko poznata metoda sa algoritmima procene koji su raspoloživi;
- Kada se jednom koeficijenti procene tada rezultati mogu da se obračunaju direktno kao linearne funkcije;
- Pošto se karakteristike X_i realizuju na osnovu slučajnih promenljivih tada se statistički testovi značajnosti modela i koeficijenata baziraju na pretpostavkama multivarijantne normalnosti. Ovo je međutim nerealno kod promenljivih koje se tipično koriste u modelima rejtinga, kao na primer, kod finansijskih proporcija dobijenih na osnovu bilansa. Stoga su metode analize stabilnosti modela i mogućnosti koeficijenata ograničene u poređenju između uzorka i ostatka uzorka; i
- Apsolutne vrednosti funkcije diskriminante se ne mogu interpretirati po nivoima.

Jedan mogući način dobijanja homoshedastičnih veličina predstavlja izračunavanje procenjenih veličina putem metode najmanjih kvadrata sa težinama (WLS). Iako je ovo moguće to i nije česta praksa zbog toga što, u cilju dobijanja učestalosti difolta, podaci moraju biti grupisani pre izvršenja procene. (Greuning H., 2018)

Grupisanje uključuje značajne praktične probleme kao što su određivanje veličina i broja grupa i način tretmana različitih kovarijanti unutar jedne jedine grupe (Zhou et al., 2024).

Logit i Probit modeli predstavljaju bolji način procene jer ne zahtevaju prethodno grupisanje kao u ML metodu (to je metod maksimalne verodostojnosti - verovatnoće). Kod binomno zavisnih promenljivih funkcija verovatnoće glasi:

$$\mathbf{L(b)} = \mathrm{P}(b' \times \mathbf{X_i})^{\mathbf{yi}} \times \mathbf{(1\text{-}P(}b' \times \mathbf{X_i)^{1\text{-}yi})} \qquad \mathbf{(1)}$$

Kod probit modela funkcija P predstavlja funkciju normalnog rasporeda verovatnoćaa u Logit modelu ona predstavlja logaritamsku funkciju rasporeda verovatnoća. Putem ove jednačine procena modela je teoretski ubedljiva i jednostavna za rukovanje. (Samuels J., 2016)

Nadalje, ovakav ML pristup nas vodi do širokog seta testova radi evaluacije modela i njegovih promenljivih. Obično se izbor link funkcije ne zasniva na teorijskoj osnovi. Korisnici kojima je bliža upotreba normalnog rasporeda verovatnoća opredeliće se za Probit model.

I stvarno, razlike u rezultatima po obe klase modela su često zanemarljive. To je zbog toga što obe funkcije imaju slične forme osim tail-ova, koje su teže za obračunavanje kod Logit modela. Istina je da je Logit model lakši za rukovanje jer je lakše obračunavanje estimatora (procenitelja).

Međutim složenost proračunavanja danas je često beznačajna pošto najveći broj korisnika upotrebljava statističke softverske pakete gde su algoritmi procene integrisani u softverska rešenja. Važna je i činjenica da se koeficijenti Logit modela mogu lakše interpretirati (Ochuba et al., 2024).

Da bismo to razumeli tranformisaćemo Logit model dat jednačinom (1) na sledeći način:

$$P_i/(1-P_i) = e^{\beta'} \times X_i \qquad (2)$$

Na levoj strani jednačine (2) nalaze se odnosi između verovatnoće difolta i verovatnoće preživljavanja (survival).

Sada se lako može videti da varijacija jedne promenljive $\mathbf{x_i}$ u jednoj jedinici ima učinak koji je jednak $e^{\beta'}$ na verovatnoću kada veličina $\boldsymbol{\beta_k}$ koeficijent promenljive $\mathbf{x_i}$.

Transformisani koeficijent $\mathbf{e^{\beta}}$ se zove odnos verovatnoće (adds-ratio). On predstavlja multiplicirani učinak karakteristika dužnika na verovatnoću. Stoga u Logit modelu koeficijent se može interpretirati na verovatan način što nije slučaj u Probit modelu.

Panelni modeli

Do sada opisane metode predstavljaju poprečne metode zbog toga što se sve promenljive odnose na isti vremenski period. Finansijske institucije tipično raspoređuju setove promenljivih na više od jednog perioda kod svakog dužnika. U ovom slučaju moguće je proširiti poprečne inpute podataka na panelske setove podataka.

Na taj način povećavamo broj raspoloživih posmatranja kod procenitelja a takođe povećavamo stabilnost i preciznost rejting modela. Panelni modeli mogu integrisati u sebe i makroekonomske promenljive.

Makroekonomske promenljive mogu poboljšati model iz nekoliko razloga. Najpre mnogi izvori makroekonomskih podataka su ažurniji i dostupniji od mezo i mikro podataka, jer podatke o makroekonomskim promenljivim objavljuje zvanična nacionalna statistika. Na primer, finansijski odnosi obračunati po osnovu bilansnih informacija obično se ažuriraju na godišnjem nivou i nisu stariji od dve godine kada ih koristimo radi procene rizika. (Dowling E.T., 2017)

Cene nafte na primer, su nam na raspolaganju po dnevnoj učestalosti podataka, isto tako cene plemenitih metala, cene akcija na berzama i slično menjaju se više puta u toku dana i mi te informacije možemo dobiti.

Naglašavanjem makroekonomskih inputa u modelu možemo koristiti radi formiranja stress testova kreditnog rizika. Pošto makroekonomske promenljive primarno utiču na apsolutne vrednosti verovatnoća difolta, razumno je inkorporirati makroekonomske impute u ove klase modela kod procenjivanja verovatnoće difolta. (Engeimann B., at.all. 2018)

Na prvi pogled panelni modeli su slični presečnim modelima. Ustvari, mnogi razvojni programeri zanemaruju dinamički obrazac promenljivih i jednostavno ih uključuju u Logit i Probit model. (Alastair L., 2022)

Generalno uzevši poprečni podaci ispunjavaju ovakve zahteve ali panelski podaci ne ispunjavaju iste zahteve, i to stoga što posmatranja istog perioda i posmatranja istog dužnika mogu biti u korelaciji. Uvođenje korelacije u procedure procene je komplikovano. (Mishkin F., 2020)

Na primer, estimator sa fiksnim učinkom koji nam je poznat iz analize panela kod neprekidne zavisne promenljive nije na raspolaganju u Probit modelu. Pored toga, modifikovani estimator sa fiksnim efektom u Logit modelu isključuje sve dužnike koji nisu u difoltu iz analize pa nam se zbog toga čini kao da je neodgovarajući. Na kraju, estimatori sa slučajnim efektom koji su propisani u literaturi mogu biti obračunati samo po osnovu upotrebe specijalizovanih softverskih paketa.

Modeli hazarda

Svi modeli koji su do sada navedeni pokušavali su da ocene rizičnost dužnika putem procenjivanja određenog tipa ili rezultata koji bi indikovao da li dužnik jeste ili nije sklon difoltu unutar specifičnog horizonta predviđanja.

Međutim, nije izvedeno ni jedno egzaktno predviđanje difolta u vremenu. Pored toga ovakvi pristupi ne omogućavaju evaluaciju dužnikovog rizika u budućnosti koji ne bi ušao u difolt u toku jednog referentnog vremenskog perioda.

Ovi nedostaci se mogu prevladati pomoću modela hazarda, koji eksplicitno obrađuje funkciju preživljavanja i sledstveno tome vreme u kome uzimamo u obzir dužnički difolt.

Unutar ove klase modela Coxov proporcionalni model hazarda je najzastupljeniji regresioni model pošto on nije zasnovan na bilo kakvim pretpostavkama koje razmatraju prirodu ili oblik osnovne distribucije preživljavanja.

Model ocenjuje da je utemeljena stopa hazarda (pre nego vreme preživljavanja) funkcija nezavisne promenljive. Ne čini se nikakva pretpostavka o prirodi ili obliku funkcije hazarda. Stoga je Coxov regresioni model ustvari semiparametarski model.

On se može opisati kao: $h_i(t/x_i) = h_0(t) \times e^{\beta \times xi}$ **(3)** **,** gde veličina $h_i(t/x_i)$ označava rezultirajući hazard koji je zadat prema kovarijatima kod respektivnog dužnika u respektivnom periodu preživljavanja t.

Izraz $h_0(t)$ se naziva osnovna linija hazarda i predstavlja hazard kada su sve nezavisne promenljive jednake nuli. Ako se kovarijati mere kao devijacije u odnosu na njihove respektivne srednje vrednosti tada veličina $h_0(t)$ može biti interpretirana kao stopa hazarda po nekom prosečnom dužniku. Model koji je gore prikazan sadrži važne pretpostavke. Najpre on specificira višestruki odnos između funkcije hazarda i logaritamske linearne funkcije zavisne promenljive koja ukazuje da odnos hazarda kod dva dužnika ne zavisi od vremena tj. da je relativna rizičnost dužnika konstantna odakle potiče ime za Coxov proporcionalni model hazarda.

U ovom modelu se pretpostavlja da je tačka difolta u vremenu neprekidna slučajna promenljiva. Međutim, često se dešava da se finansijski uslovi dužnika ne posmatraju kontinelno (neprekidno) već kao diskretne vrednosti u vremenu. Štaviše, kovarijati su tretirani kao da su konstantni u vremenu dok se, tipične zavisne promenljive kao što su, na primer finansijski odnosi, menjaju tokom vremena.

Iako postoje neki napredniji modeli koji sadrže gore pomenute osobine procena u ovakvim modelima postaje kompleksna.

Prednosti i mane modela hazarda mogu se sumarno prikazati kao (Alirezaie et al., 2024):

- Modeli hazarda omogućavaju procenu funkcije preživljavanja za sve dužnike. Vremenski period istorijskih podataka o difoltu je osnova za procenu preživljavanja dužnika i verovatnoću difolta u narednom vremenskom periodu i
- Ovi modeli indirektno procenjuju realne pretpostavke o difoltu u budućem vremenskom periodu.

Neuronske mreže

Neuronske mreže su vrsta računarskog sistema inspiriranog strukturom i funkcijama bioloških neuronskih mreža u mozgu. Glavne komponente neuronskih mreža su (Abrahams et al., 2024a):

- Arhitektura mreže - Sastoji se od međusobno povezanih "čvorova" ili "neurona" koji obrađuju informacije. Najčešće imaju ulazni, skriveni i izlazni sloj.
- Učenje - Neuronske mreže uče iz podataka, automatski otkrivajući obrasce i karakteristike, dok se parametri veza između neurona podešavaju tokom procesa učenja.
- Nelinearnost - Sposobnost da modeliraju kompleksne, nelinearne odnose između ulaza i izlaza.
- Paralela s biološkim mozgom - Slično kao biološke neuronske mreže, veze između neurona imaju "snagu" koja se prilagođava tokom učenja.
- Primena - Koriste se za zadatke raspoznavanja uzoraka, predviđanja, klasifikacije i sl. Primenjuju se u raznim domenama kao što su obrada prirodnog jezika, robotika, itd.
- Neuronske mreže predstavljaju moćan alat mašinskog učenja kojim može spoznati i modelirati kompleksne odnose među podacima. Intenzivno se istražuju i imaju široku primenu u savremenoj informatici i tehnologiji.

Primena neuronskih mreža u finansijskom sektoru ima veliki značaj od kojih su najvažnije:

Otkrivanje prevare: Neuralne mreže mogu analizirati velike količine podataka o transakcijama kako bi identifikovale obrasce lažnih aktivnosti, kao što su neobično ponašanje u potrošnji ili sumnjive transakcije. Ovo pomaže finansiskim institucijama da efikasnije otkriju i spreče prevare.

Procena kreditnog rizika: Neuronske mreže mogu analizirati kreditnu istoriju, prihode i druge finansijske podatke kako bi procenile kreditnu sposobnost podnosilaca zahteva za kredit. Ovo omogućava finansijskim institucijama da donose preciznije kreditne odluke zasnovane na dobijenim podacima.

Modeliranje ponašanja kupaca: Neuronske mreže se mogu koristiti za analizu podataka o klijentima, kao što su istorije transakcija i obrasci pregledanja, da bi se bolje razumelo ponašanje i preferencije kupaca. Ovo pomaže finansijskim institucijama da svoje proizvode i usluge prilagode potrebama klijenata.

Osiguranje zajma: Neuronske mreže se mogu koristiti za automatizaciju i pojednostavljenje procesa preuzimanja kredita analizom informacija o podnosiocima zahteva i donošenjem preciznijih odluka o odobravanju kredita.

Predviđanje cene akcija: Neuronske mreže se mogu obučiti na istorijskim podacima o akcijama kako bi pokušale da predvide buduća kretanja cena akcija, što može biti korisno za strategije ulaganja i trgovanja.

Čet-botovi i virtuelni pomoćnici: Finansijske institucije koriste čet-botove i virtuelne asistente na neuronskim mrežama za pružanje personalizovane korisničke usluge i podrške, odgovaranje na pitanja i pomoć u zadacima.

Ključne prednosti korišćenja neuronskih mreža u bankarstvu uključuju poboljšanu tačnost, brzinu i skalabilnost u oblastima kao što su procena rizika, otkrivanje prevara i uvid u klijente. Ovo pomaže poveriocima da donesu bolje odluke i pruže bolju uslugu svojim klijentima.

U prethodnim godinama neuronske mreže su intezivno razmatrane kao alternative statističkim modelima.

Snaga i slabost neuronskih mreža može se sumarno prikazati kao (Abrahams et al., 2024):

- Neuronske mreže lako modeliraju visokosložene, nelinearne odnose između inputa i outputa;
- One su oslobođene bilo kakvih pretpostavki o distribuciji;
- Ovi modeli mogu biti brzo adaptirani na nove informacione inpute (u zavisnosti od algoritma treninga ili obuke);
- Nema formalnih procedura koje bi odredile optimum i vrstu mreže za povezivanje slojeva i čvorova koji povezuju ulazne i izlazne promenljive;
- Neuronske mreže su crne kutije pošto su vrlo teške za interpretaciju; i
- Izračunavanje verovatnoće difolta je moguće samo do određenih granica uz znatan dodatni napor.

Neuronske mreže su delimično podesne u slučaju kada ne postoje očekivanja (zasnovana na iskustvu ili na teoretskim argumentima).

Analiza internog kreditnog rejtinga i procena efekata uvođenja Bazelskih standarda

Bazel standardi su delo Bazelskog skupa za bankarsku kontrolu, osnovani sa težištem da se prema unapred utrđenim pravilima proceni stepen rizika i to kreditnog, koji se nalazi u bankarskom kreditnom portfoliju odnosno njenoj aktivi. Ovi standardi ističu identifikaciju kreditnog portfolija određenih bankarskih klijenata, a zasnovani su isključivo na prihodima ostrarenim po osnovu prodaje (BCBS, 2006). Veliki broja bankarskih institucija je već prihvatio i primenio ovakavu vrstu identifikacije bankarskih klijenata, a isključivo za potrebe projektovanja kreditnog rizika. Utvrđivanje stepena rizika propisanog RW formulama Bazelskih standarda, čini završnu aktivnost u internoj proceni rejtinga i to kreditnog. Sličan vid procene i prognoze efekata primene Bazelskih standarda ističe se i u radu (Altman & Sabato, 2007), u kojem su prognozirani Bazelski standardi primenjeni za preduzeća u Americi.

Rezultati istraživanja su zaključili da se korišćenjem Bazel standarda i njegovih usavršenih i modernizovanih pravila smanjuju kapitalni zahtev prema kreditnim rizicima (Danielsson et al., 2021). Takođe bitno je istaknuti, da nema razlike u formulama Bazelskih pristupa I, II i III za deo preduzeća, a priliom utvrđivanja pondera rizika koji se primenjuju kod analize i vrednovanja kreditnog rizika.

Tabela 1. Bazel parametri i ponderi rizika za segment malih preduzeća, na osnovu uspostavljenog internog kreditnog rejtinga

					Kratkoročni kredit (ef. ročnost M=1)		Srednjoročni kredit (ef. ročnost M=2.5)		Dugoročni kredit (ef. ročnost M=5	
Rejting	PD	LGD	b	R	RW Std. pristup	RW Napredni pristup	RW Std. pristup	RW Napredni pristup	RW Std. pristup	RW Napredni pristup
AAA	0,31%	46,00%	0,20	0,1819	100%	32,65%	100%	45,88%	100%	68,94%
AA	1,14%	46,00%	0,15	0,1469	100%	63,37%	100%	79,27%	100%	105,77%
A	2,92%	46,00%	0,11	0,1047	100%	88,50%	100%	103,49%	100%	128,27%
BBB	7,02%	46,00%	0,09	0,0839	100%	117,50%	100%	131,61%	100%	145,05%
BB	13,18%	46,00%	0,07	0,0804	100%	156,86%	100%	170,62%	100%	193,54%
B	23,03%	46,00%	0,05	0,0802	100%	185,38%	100%	207,48%	100%	227,81%
CCC	50,57%	46,00%	0,03	0,0802	100%	185,88%	100%	192,75%	100%	204,34%

Izvor: Prilagođeno prema Altman & Sabato, 2007

U Tabeli 1. prikazani su po definisanim rejting klasama sledeći pokazatelji rizika: PD (verovatnoća difolta), LGD (Gubitak pri difoltu *Loss Given Default*), b (faktor ročnog prilagođavanja koji odražava uticaj PD) i R (predstavlja korelaciju za izloženosti prema privrednim društvima), koji se smatraju bitnim faktorima u definisanim formulama (Hunt et al., 2020). Na osnovu ovih pokazatelja, za privredna društva manje veličine (gde ukupni godišnji prihod od prodaje iznosi 5 miliona EUR) formulisan je ponder rizika RW, koji odgovara savremenom konceptu Bazel-a. Pored toga, formulisan je i tradicionalan pristup i njemu određeni ponder rizika. Razlika u određivanju RW (ponder kreditnog rizika) postoji samo kod preduzeća velike veličine. Analizira pondera rizika po klasama intenog kreditnog rejtinga je prikazana i za različite ročnosti kredita. U propisanim formulama Bazela, ročnost je prikazana na osnovu pokazatelja efektivne ročnosti M, koji ima vrednost od 1 do 5. Za kredite u kratkom, srednjem i dugom roku prikazane su i određene referentne vrednosti ovog pokazatelja. Interesantno je zapaziti, da se stepen pondera rizika RW povećava, pri porastu ročnosti plasmana. Tako je na primer

RWBBB, M (1) = 117,50% > RWBBB, M (5) = 145,05%, odnosno ponder rizika se povećava sa porastom ročnosti uzimajući PD vrednost za nepromenjenu veličinu. Takođe, interesantno je i zapaziti i situacije kada lošija rejting kategorija, sa većim procenjenim PD parametrom, ima manji RW. Ova situacija se događa kada vrednost PD dostigne tzv. tačku kontaminacije (eng. contamination point). Tako, na primer RWB > RWCCC, gde je RWB = 185,38%, a PDB = 23,03%, dok je RWCCC = 185,88%, a PDCCC = 50,57%. Obrazloženo tumačenje za takvu situaciju stoji u oblazloženju da se za rejting klase koje dostignu tačku sistematizacije PD, ukupni kreditni gubitak većim delom formuliše iz očekivanog gubitka (EL), što dovodi do smanjenja neočekivanog gubitka (UL) koji neposredno zavisi od procenjenog RW tj. pondera rizika (Genest & Brie, 2013). Drugim rečima, nastupa promena u strukturi ukupnog gubitka i to prelivanjem neočekivanog u očekivani gubitak.

Tabela 2. Bazel parametri i ponderi rizika za segment srednjih preduzeća, na osnovu uspostavljenog internog kreditnog rejtinga

					Kratkoročni kredit (ef. ročnost M=1)		Srednjoročni kredit (ef. ročnost M=2.5)		Dugoročni kredit (ef. ročnost M=5	
Rejting	PD	LGD	b	R	RW Std. pristup	RW Napredni pristup	RW Std. pristup	RW Napredni pristup	RW Std. pristup	RW Napredni pristup
AAA	0,31%	46,00%	0,20	0,1999	100%	36,57%	100%	51,34%	100%	76,14%
AA	1,14%	46,00%	0,15	0,1523	100%	71,22%	100%	89,09%	100%	118,90%
A	2,92%	46,00%	0,11	0,1187	100%	101,16%	100%	118,16%	100%	146,50%
BBB	7,02%	46,00%	0,09	0,0998	100%	135,48%	100%	151,67%	100%	178,67%
BB	13,18%	46,00%	0,07	0,0974	100%	168,74%	100%	194,40%	100%	220,59%
B	23,03%	46,00%	0,05	0,0972	100%	218,31%	100%	231,89%	100%	254,37%
CCC	50,57%	46,00%	0,03	0,0967	100%	201,08%	100%	208,89%	100%	221,18%

Izvor: Prilagođeno prema Altman & Sabato, 2007

U Tabeli 2. Iskazani su prema unapred definisanim rejting klasama sledeći pokazatelji: PD, LGD, b i R parametri rizika, koji su definisani kao bitni fakotri propisanih formula, ali za privredna društva srednje veličine (ukupni godišnji prihod od prodaje jednak 25 miliona EUR). Formulisani su i iskazani, ponderi rizika RW, koji odgovaraju savremenom konceptu Bazel pristupa. Ako se izvrši upoređivanje podataka prikazanih u Tabelama 1. i 2., može se utvrditi da su ponderi rizika veći za privredna društva srednje veličine i to po svim rejting klasama i ročnostima. Objašnjenje za ovo može se naći u koloni R, koja definiše regulatorno određene korelacije, koje su zavisne od veličine privrednih društava. Stepen korelacije R, je obrnuto srazmeran stepenu diverzifikacije porftfolija (Crook, Edelman, & Thomas, 2007). Drugačije rečeno, difolt privrednog društva manje veličine u manjoj meri povlači difolte drugih privrednih društava, dok sa rastom njihove veličine ova međuzavisnost raste. Tabela 3. kao i Tabela 1. i 2. iskazuje parametre rizika i pondere rizika RW, za privredna društva velikih veličine (ukupni godišnji prihod od prodaje jednak 50 miliona EUR). Ponderi i parametri rizika, odgovaraju savremenom konceptu Bazel-a.

Tabela 3. Bazel parametri i ponderi rizika za segment velikih preduzeća, na osnovu uspostavljenog internog kreditnog rejtinga

					Kratkoročni kredit (ef. ročnost M=1)		Srednjoročni kredit (ef. ročnost M=2.5)		Dugoročni kredit (ef. ročnost M=5	
Rejting	PD	LGD	b	R	RW Std. pristup	RW Napredni pristup	RW Std. pristup	RW Napredni pristup	RW Std. pristup	RW Napredni pristup
AAA	0,31%	46,00%	0,20	0,2219	100%	41,68%	100%	58,45%	100%	86,40%
AA	1,14%	46,00%	0,15	0,1867	100%	81,31%	100%	101,64%	100%	135,51%
A	2,92%	46,00%	0,11	0,1394	100%	117,02%	100%	136,66%	100%	169,40%
BBB	7,02%	46,00%	0,09	0,1195	100%	157,21%	100%	176,12%	100%	207,24%
BB	13,18%	46,00%	0,07	0,1187	100%	204,41%	100%	222,30%	100%	252,13%
B	23,03%	46,00%	0,05	0,1155	100%	244,06%	100%	259,15%	100%	284,30%
CCC	50,57%	46,00%	0,03	0,1155	100%	216,74%	100%	224,87%	100%	238,41%

Izvor: Prilagođeno prema Altman & Sabato, 2007

Ako se izvrši upoređivanje podataka iskazanih u Tabelama 1., 2. i 3., može se utvrditi da su ponderi rizika, po svim rejting klasama i ročnostima, najveći kod privrednih društava velikih veličina. To utiče na pokazatelj RW, a zbog uvećanja koeficijenata korelacija. U Tabeli 3. pokazatelj RW ima najviše vrednosti po svim rejting kategorijama i ročnostima, za razliku od Tabele 1 i 2. Objašnjenje za opravdani prelazak na napredne koncepte za upravljanje rizikom, može se naći u zaključku sprovedene analize, da se umanjenje kapitalnih zahteva za kreditni rizik kod kredita u kratkom roku očekuje samo za prve tri najbolje rejting klase, što čini oko 52% ukupnog broja korisnika. Uzimajući u obzir da je u Tabeli 1, samo za ove pokazatelje naprednog pristupa RW niži za razliku od pokazatelja standardnog pristupa, moguće je samo za ove rejting klase postići uštedu tj. umanjenje kapitalnih zahteva. Kod kredita na srednjem i dugom roku u Tabeli 2. i 3. umanjenje kapitalnih zahteva za kreditni rizik se predviđa samo kod prve dve klase internog kreditnog rejtinga, što čini 30% ukupnog broja korisnika. U porođenju sa sprovedenim istraživanjem (Altman & Sabato, 2007), koji ističu da prognozirani efekti savremenog koncepta za merenje kreditnog rizika primenom standarda Bazel II dovode do smanjenja zahteva kapitalnih za kreditni rizik, ali na podacima američkih privrednih društava, u ovom radu je utvrđeno da bi efekat smanjenja zahteva kapitalnih postojao samo kod najboljih rejting klasa, u zavisnosti od ročnosti kreditnog plasmana, što čini 32% - 50% privrednih društava. S druge strane, kod svih drugih rejting klasa došlo bi do uvećanja zahteva kapitalnih za kreditni rizik u odnosu na tradicionalni koncept. Zato je na bankarskim institucijama u Srbiji da procene moguće efekte napredovanja i usavršavanja savremenog koncepta, a u pogledu korisnosti i mogućih troškova.

Zaključak

Metode, merenje i procena rizika unutar finansijskih institucija u poslednjoj deceniji su značajno unapređeni, što je uzrokovalo bolje predviđanje uspešnog poslovanja i smanjenje rizika, koji bi uzrokovali nemogućnost dužnika da svoje obaveze prema poveriocima ne mogu izvršavati blagovremeno ili ih uopšte ne mogu realizovati.

Nadalje, za neke klase izloženosti, Bazelski Komitet predlaže osnovnu metodologiju kojom finansijske institucije, kao ulaznu veličinu, uzimaju sopstvenu procenu rizika neplaćanja dužnika, a procene dodatnog faktora rizika su izvedene kroz primenu standardizovonih pravila supervizora.

Osnovna metodologija je dostupna za one finansijske institucije koje mogu da uvere supervizore da su sposobne da odgovore na specfične minimalne zahteve bankarskih sistema unutrašnjeg rejtinga, procesa upravljanja rizika i mogućnosti procene neophodnih komponenti rizika.

Aspekt pristupa zasnovan na internom rangiranju može biti realizovan na više načina. Prvo, tokom perioda i na nivou industrije, Bazelski Komitet očekuje da se sve više finansijskih institucija pomeraju od standardizovanog pristupa ka IRB pristupu i očekivanjima da će one to učiniti kada budu imale potrebne sisteme. Drugo, unutar IRB pristupa. od finansijskih institucija će se očekivati da se kreću od korišćenja osnovnog ka više naprednim metodologijama u skladu sa obogaćivanjem njihove prakse u upravljanju rizicima.

Pojedine finansijske intitucije su sposobne (ili će to postati) da sprovedu pogodnu i doslednu procenu dodatnih komponenti rizika, dok će drugima trebati više vremena da se prestruktuiraju na ovu vrstu procena. Ove dodatne komponente su gubici koji će nastati u slučaju neplaćanja dužnika, nivoa izloženosti dužnika u momentu neplaćanja, efekata garancija i rizika izloženosti kreditnih derivata. \

lstovremeno sa osnovnom metodologijom ustanovljene su i napredne metodologije koje omogućavaju da se koriste sopstvene unutrašnje procene komponenti rizika. Široko korišćenje takvih procena je jedan važan deo dinamičkog i risk-senzitivnog IRB pristupa na takav način da mogu da se prepoznaju i razlikuju one finansijske institucije koje su u mogućnosti da sprovedu dovoljno validnu i kvantifikovanu procenu rizika od onih koje to nisu u stanju.

Možemo zaključiti da validacija od strane finansijskih institucija uključuje dve ključne komponente-validaciju rejting sistema i procenu komponenti rizika i validaciju rejting procesa usmerenih na implementaciju rejtinga sistema. Validacija rejting sistema može nadalje biti razložena na dve komponente: evaluacija izrade rejting sistema ili izrade modela i procene komponenti rizika.

Finansijske institucije su u obavezi da poseduju sofisticirani sistem procene tačnosti i konzistentnosti rejting sistema, procesa, i interno pracene faktora rizika. Istorijski vremenski okviri za podatke koji se koriste u proceni stepena korelacije podataka treba da budu što je moguće duži i u idealnom slučaju da pokriju kompletan poslovni ciklus. Takođe ove institucije moraju do imaju na raspolaganju jasne stres testing procese koje koriste u proceni kapitalne adekvatnosti.

Testiranje mora da sadrži identifikaciju budućih promena ekonomskih uslova i mogućih događaja koji bi mogli nepovoljno uticati na procene difolta (neispunjenje obaveze dužnika) pa samim tim i na ukupni nivo kapitalne adekvatnosti. Testiranje na uslove stresa se mora sprovesti barem jednom u šest meseci. Rezultat testiranja periodično treba da se dostavi kroz izveštaj seniorskom menadžmentu banke.

Za procenu verovatnoće neplaćanja eksterni rejting podaci i interne procene verovatnoće neplaćanja, definicija difolt događaja i rezultirajuća definicija difolt rate (procena neplaćanja) moraju biti slične.

U ovom radu predstavljena je validacija internog kreditnog rejtinga, korišćenjem dostupnih analiza i tumačenja iz dostupne akademske literature. Rezultat sprovednog istraživanja, utvrdio je da je razvijeni interni kreditni rejting za sva privredna društva prošao sve preporuke validnosti i pravilnosti i da je u skladu sa stadardima Bazel koncepta. Takođe, on može da se koristi kao prvi korak kod interne procene potrebnog nivoa kapitala i pokrića mogućih očekivanih i neočekivanih gubitaka. Zato su u radu izračunati ponderi rizika (eng. risk weights - RW) koji se primenjuju kod vrednovanja rizičnosti plasmana na nivou bankarskog portfolija. Na kraju se može istaknuti da se sprovedena metodologija može primeniti na sve bankarske institucije koje posluju u Srbiji i Evropi.

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SIGNIFICANCE OF APPLICATION OF STATISTICAL MODELS IN THE DEVELOPMENT OF THE RATING SYSTEM OF FINANCIAL INSTITUTIONS

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Abstract

The most important system for managing risks and measuring financial performance is the rating system. The rating system is considered an integral part of banks' current operations and their risk management culture. All banks try to highlight its affiliation with current affairs, in order to show the supervisors the necessity of its use for the purpose of determining the minimum regulatory capital requirements.

The Committee in Basel for certain classes of exposure to risks recommends the use of a basic methodology where banking institutions use their own assessment of the risk of non-payment of debtors as an input, while assessments of additional risk factors are applied through the supervisor's standardized rules.

This basic methodology is available for banking institutions that have the ability to satisfy their supervisors that they are capable of meeting certain minimum requirements of the banking system, the risk management process and the ability to assess its essential components.

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In addition to the basic methodology, advanced methodologies have also been defined that provide the possibility of internal assessment of risk components. Wide application of the aforementioned assessments is an important part of the dynamic and risk-sensitive IRB approach (Internal Rating Based). Thus, those banking institutions that have the ability to carry out a certain valid and quantified risk assessment can be identified and distinguished.

Some specific models, procedures and processes of assessing the probability of non-payment in certain situations, through the obtained results, enable the management of banking institutions to analyze in detail the real picture of possible debtors, which ultimately provides a possible better analysis of their default.

Keywords: *default probability, debtor, models, internal rating, statistical analysis, adequacy of bank capital.*

JEL: C26, G21

Introduction

The basic basis for determining the risk exposure rating or the rating of other contracting parties at a smaller number of banking institutions, and within certain portfolios, was the procedure of the probability of fulfillment of obligations or other quantitative tools.

Such procedures should have the possibility to be developed by the supplier (vendor) and mostly in addition to qualitative and quantitative factors (financial ratios), contain standardized factors (payment history, credit reports, etc.). (Bessis J, 2019)

Such tools were applied by a small number of banking institutions with large corporate exposure, while a few of them used these tools in situations of the middle market or users from small businesses. The use of credit score models ("scorecard" categories, models of defaults, vendors and consultants) can be cited as an example of the above situation.

Also, the mentioned models contain essential elements in risk assessment procedures in a large number of institutions. When constructing banks, financial dependent variables are first defined, which appear when providing information on the percentage of probability of default.

Through the sample of the considered loan, and by applying the available historical data, the banking institution evaluates the influence of each of these dependent variables on the default procedure. The established assessment coefficients are further used on the data of current loans and appear as a result that is determined in the assessment of the issue of percentage probability of default. The result is then converted into a rating degree (the real inputs in such models are very identical to the quantitative elements of risk, determined by the appraiser).

Activities and processes based on statistical models play a more important role in smaller corporate loans than in mid-sized markets or large corporations.

Some banking institutions have based their ratings exclusively on statistical default and credit score models or special objectives of financial analysis, without taking into account simple mechanical processes. Tactic ratings allow the assignment of ratings to adjust the rating to a certain pre-limited degree based on assessment factors. (Brealey R., 2021)

In a certain situation of a defined process, the scorecard defines the degree, while the evaluator, based on personal analysis, can define the final degree downward or upward, by a maximum of one or two degrees.

In addition, quantitative and assessment factors can be assigned maximum points, effectively limiting the impact of consideration of a particular assessment on the final rating. Almost 20% of banking institutions apply this concept in their large corporations, while an identical percentage of institutions declared that they apply this concept to their smaller corporations and mid-markets. Putting limits on the assessment is more professional when these assessments are exclusively applied to the growth of the rating, not to its decline. The largest number of institutions assign ratings by applying the most significant parts of the assessment, where the relative importance is indicated by the parts that are not limited.

Regression analysis

In statistical modeling, regression analysis is a process of statistical analysis based on which the mutual relationship between the dependent or criterion variable and independent (predicator) variables is evaluated. (Matz L., 2017)

The results obtained on the basis of the regression analysis point out that the value data of the dependent variable changes with the change of the value data of some independent variable, while the other value data of the independent variables remain unchanged.

Approximation of the regression function appears as a permanent task of regression analysis, which highlights the connection between dependent and independent variables. This analysis is also used to evaluate the functional dependence between the mentioned variables, as well as the nature of those dependencies.

In practice, for example, we may be interested in the dependence between employees' earnings and their education, interest rates and money supply. In order to determine whether there is a dependence between certain phenomena and to what extent their dependence is, it is necessary to apply a specific regression model.

Regression analysis is used for two totally different purposes. First of all, it is applied for planning, forecasting and possible prediction, in situations where its use is identified with the field of machine learning. It is then used in situations to determine cause-and-effect relationships between dependent and independent variables.

In order to successfully use this type of predictive analysis, the researcher should carefully define and explain the existence of a cause-and-effect relationship between the variables, that is, their functional relationship. A functional relationship is particularly important in situations where researchers believe that only data from a sample or statistical set and the appropriate functional relationship will be used to assess a cause-and-effect relationship.

Regression analysis in financial institutions

A key advantage of regression models in financial institutions is their ability to analyze complex relationships between variables and provide quantitative estimates that support informed business decision making. (Gitman L., 2019)

Input characteristics that are not relevant to the model can seriously impair the quality and stability of the model when used to predict the credit risk associated with this data. It is preferable that the variables, which do not have a great influence on the results of the model, are simply ignored and thereby simplify the model, which in any case makes the work easier for persons performing regression analysis.

The way to deal with this problem is to divide the cause into two parts, where one part (the training sample) is used to evaluate the model and the other part is the hold-out sample (the rest of the sample) which is used in the validation of the results.

The consistency of the results of both samples are simultaneously taken as indicators of model stability.

In financial institutions, regression analysis is most often used in the following cases:

a) Credit analysis: Regression models are used to assess the credit risk of clients. Models such as logistic regression are used to predict the likelihood that a customer will repay the loan regularly.
b) Asset and liability management: Financial institutions use regression models to predict deposit and loan levels, which helps them manage their balance sheet and liquidity risks.
c) Marketing strategies: Regression analysis is used to identify the most profitable customer segments and determine the most effective marketing channels and campaigns.
d) Fraud prevention: Regression models are used to detect suspicious transactions and behavior patterns that may indicate fraud.
e) Price adjustment: Banks use regression models to determine optimal interest rates and fees based on market conditions and the risk profile of clients.

f) Risk management: Regression models are used to assess the credit, market and operational risk to which the bank is exposed.

Discriminant analysis

The discriminant analysis is performed in a similar way as in the linear regression model.

In fact, the proportions between the coefficients of the regression model are equal to the corresponding proportions of the discriminant analysis. The difference between these two methods is theoretical: while in the regression model, the characteristics have a deterministic nature, and the default state is a random variable. With determinant analysis, it is quite the opposite, ie. characteristics represent a random variable while the default state is deterministic. These differences are virtually unimportant in practice.

We can conclude that the advantages and disadvantages of discriminant analysis using this model are similar to those of the regression model, namely:

- Discriminant analysis is a widely known method with estimation algorithms available;
- Once the coefficients are estimated, the results can be calculated directly as linear functions;
- Since the characteristics Xi are realized on the basis of random variables, then the statistical tests of the significance of the model and coefficients are based on the assumptions of multivariate normality. This is however unrealistic for variables typically used in rating models, such as balance sheet financial ratios. Therefore, the methods of analyzing model stability and the possibilities of coefficients are limited in the comparison between the sample and the rest of the sample; and
- Absolute values of the discriminant function cannot be interpreted by levels.

One possible way of obtaining homoscedastic quantities is the calculation of estimated quantities through the weighted least squares (WLS) method. Although this is possible, it is not a common practice because, in order to obtain the frequency of defaults, the data must be grouped before performing the estimation. (Greuning H., 2018)

Clustering involves significant practical problems such as determining the size and number of groups and how to treat different covariates within a single group (Zhou et al., 2024).

Logit and Probit models represent a better way of estimation because they do not require prior grouping as in the ML method (it is a maximum likelihood method). For binomially dependent variables, the probability function reads:

$$\mathbf{L(b)} = \mathrm{P}(b' \times X_i)^{y_i} \times (1-P(b' \times X_i)^{1-y_i}) \qquad \mathbf{(1)}$$

In the probit model, the function P represents the function of the normal probability distribution, and in the Logit model, it represents the logarithmic function of the probability distribution. Through this equation, the estimation of the model is theoretically convincing and easy to handle. (Samuels J., 2016)

Furthermore, this ML approach leads us to a wide set of tests to evaluate the model and its variables. Usually, the choice of link function is not based on a theoretical basis. Users who are closer to using the normal probability distribution will opt for the Probit model.

And really, the differences in results for both classes of models are often negligible. This is because both functions have similar shapes except for the tails, which are more difficult to account for in the Logit model. It is true that the Logit model is easier to handle because it is easier to calculate the estimator.

However, the complexity of calculations today is often insignificant, since the largest number of users use statistical software packages where estimation algorithms are integrated into software solutions. The fact that the coefficients of the Logit model can be interpreted more easily is also important (Ochuba et al., 2024).

To understand this, we will transform the Logit model given by equation (1) as follows:

$$\mathbf{P_i/(1\text{-}P_i) = e^{\beta'} \times X_i} \qquad (2)$$

On the left side of equation (2) there are relations between the probability of default and the probability of survival (survival).

Now it can be easily seen that the variation of one variable $\mathbf{x_i}$ by one unit has an effect equal to $e^{\beta'}$ on the probability when the quantity $\boldsymbol{\beta_k}$ coefficient of the variable $\mathbf{x_i}$.

The transformed coefficient $\mathbf{e^{\beta}}$ is called the adds-ratio. It represents the multiplied effect of borrower characteristics on probability. Therefore, in the Logit model, the coefficient can be interpreted in a probable way, which is not the case in the Probit model.

Panel models

The methods described so far are cross-sectional methods because all variables refer to the same time period. Financial institutions typically spread sets of variables over more than one period with each borrower. In this case, it is possible to extend cross-sectional data inputs to panel data sets. 42

In this way, we increase the number of observations available to the appraiser and also increase the stability and precision of the rating model. Panel models can also integrate macroeconomic variables.

Macroeconomic variables can improve the model for several reasons. First, many sources of macroeconomic data are more up-to-date and more accessible than meso and micro data, because data on macroeconomic variables are published by official national statistics. For example, financial ratios

[42] In statistics and econometrics, the term panel data refers to multidimensional data. They contain observations of multiple phenomena over multiple time periods in the same individual. Time-series or cross-sectional data are special cases of panel data that are unidimensional.

calculated on the basis of balance sheet information are usually updated annually and are no older than two years when we use them for risk assessment. (Dowling E.T., 2017)

Oil prices, for example, are available to us according to the daily data frequency, likewise, the prices of precious metals, the prices of shares on the stock exchanges, and the like change several times during the day, and we can get that information.

Emphasizing macroeconomic inputs in the model can be used to create credit risk stress tests. Since macroeconomic variables primarily affect the absolute values of default probabilities, it is reasonable to incorporate macroeconomic imputations into these classes of models when estimating default probabilities. (Engeimann B., at.all. 2018)

At first glance, panel models are similar to sectional models. In fact, many developers ignore the dynamic pattern of variables and simply plug them into Logit and Probit models. (Alastair L., 2022)

In general, cross-sectional data meet these requirements, but panel data do not meet the same requirements, and this is because observations of the same period and observations of the same debtor may be correlated. Introducing correlation into estimation procedures is complicated. (Mishkin F., 2020)

For example, the fixed effect estimator familiar to us from panel analysis of a continuous dependent variable is not available in the Probit model. In addition, the modified fixed-effect estimator in the Logit model excludes all non-defaulting debtors from the analysis and thus appears to us to be inappropriate. Finally, the random effect estimators prescribed in the literature can only be calculated using specialized software packages.

Hazard models

All the models listed so far have tried to assess the riskiness of the borrower by estimating a certain type or score that would indicate whether or not the borrower is prone to default within a specific forecast horizon.

However, no exact prediction of default in time has been made. In addition, such approaches do not allow the evaluation of the debtor's risk in the future, which would not enter into default during a reference period of time.

These shortcomings can be overcome by using a hazard model, which explicitly treats the survival function and consequently the time at which we consider debt default.

Within this class of models, the Cox proportional hazards model is the most common regression model since it is not based on any assumptions regarding the nature or shape of the underlying survival distribution.

The model estimates that the underlying hazard rate (rather than survival time) is a function of the independent variable. No assumption is made about the nature or form of the hazard function. Therefore, the Cox regression model is actually a semiparametric model.

It can be described as: $h_i(t/x_i) = h_0(t) \times e^{\beta \times \mathbf{xi}}$ **(3)**, where the quantity $h_i(t/x_i)$ indicates the resulting hazard given by the covariates of the respective debtor in the respective survival period t.

The expression h0(t) is called the hazard baseline and represents the hazard when all independent variables are equal to zero. If the covariates are measured as deviations in relation to their respective mean values, then the quantity h0(t) can be interpreted as the hazard rate for some average borrower. The model presented above contains important assumptions. First, he specifies a multiple relationship between the hazard function and the logarithmic linear function of the dependent variable, which indicates that the hazard ratio for two debtors does not depend on time, ie. that the relative riskiness of the debtor is constant, hence the name for the Cox proportional hazard model.

In this model, the default point in time is assumed to be a continuous random variable. However, it often happens that the debtor's financial conditions are not viewed continuously (continuously) but as discrete values in time. Furthermore, covariates are treated as constant over time while typical dependent variables such as, for example, financial relationships change over time.

Although there are some more advanced models that contain the above-mentioned features, the evaluation in such models becomes complex.

The advantages and disadvantages of the hazard model can be summarized as (Alirezaie et al., 2024):

- Hazard models enable estimation of the survival function for all borrowers. The time period of historical data on default is the basis for assessing the debtor's survival and the probability of default in the following time period and
- These models indirectly estimate realistic assumptions about default in the future time period.

Neural networks

Neural networks are a type of computer system inspired by the structure and functions of biological neural networks in the brain. The main components of neural networks are (Abrahams et al., 2024a):

- Network architecture - Consists of interconnected "nodes" or "neurons" that process information. Most often they have an input, hidden and output layer.
- Learning - Neural networks learn from data, automatically discovering patterns and features, while the parameters of connections between neurons are adjusted during the learning process.
- Nonlinearity - Ability to model complex, non-linear relationships between inputs and outputs.
- Parallel to the biological brain - Similar to biological neural networks, the connections between neurons have a "strength" that adjusts during learning.
- Application - They are used for the tasks of pattern recognition, prediction, classification, etc. They are applied in various domains such as natural language processing, robotics, etc.
- Neural networks are a powerful machine learning tool that can recognize and model complex relationships between data. They are intensively researched and widely used in modern IT and technology.

The application of neural networks in the financial sector is of great importance, the most important of which are:

Fraud detection: Neural networks can analyze large amounts of transaction data to identify patterns of fraudulent activity, such as unusual spending behavior or suspicious transactions. This helps financial institutions detect and prevent fraud more effectively.

Credit risk assessment: Neural networks can analyze credit history, income and other financial data to assess the creditworthiness of loan applicants. This allows financial institutions to make more accurate credit decisions based on the data obtained.

Modeling customer behavior: Neural networks can be used to analyze customer data, such as transaction histories and browsing patterns, to better understand customer behavior and preferences. This helps financial institutions to tailor their products and services to the needs of their customers.

Loan underwriting: Neural networks can be used to automate and streamline the loan underwriting process by analyzing information about applicants and making more accurate loan approval decisions.

Stock price prediction: Neural networks can be trained on historical stock data to try to predict future stock price movements, which can be useful for investment and trading strategies.

Chatbots and virtual assistants: Financial institutions use neural network-based chatbots and virtual assistants to provide personalized customer service and support, answer questions and assist with tasks.

Key benefits of using neural networks in banking include improved accuracy, speed and scalability in areas such as risk assessment, fraud detection and customer insight. This helps creditors make better decisions and provide better service to their customers.

In previous years, neural networks have been intensively discussed as alternatives to statistical models.

The strength and weakness of neural networks can be summarized as (Abrahams et al., 2024):

- Neural networks easily model highly complex, non-linear relationships between input and output;
- They are free from any assumptions about distribution;
- These models can be quickly adapted to new information inputs (depending on the training or training algorithm);
- There are no formal procedures that would determine the optimum and type of network for connecting layers and nodes that connect input and output variables;
- Neural networks are black boxes because they are very difficult to interpret; and
- Calculating the probability of default is only possible up to certain limits with considerable additional effort.

Neural networks are partially suitable in the case where there are no expectations (based on experience or on theoretical arguments).

Analysis of internal credit rating and assessment of the effects of the introduction of Basel standards

The Basel standards are the work of the Basel Group for Banking Control, established with the aim of assessing the degree of credit risk in the bank's credit portfolio, i.e. its assets, according to pre-established rules. These standards emphasize the identification of the credit portfolio of certain banking clients, and are based solely on revenues obtained from sales (BCBS, 2006). A large number of banking institutions have already accepted and applied this type of identification of banking clients, exclusively for the purposes of projecting credit risk. Determining the degree of risk prescribed by the RW formulas of the Basel standards is the final activity in the internal assessment of the credit rating. A similar type of assessment and forecast of the effects of the implementation of the Basel standards is highlighted in the paper (Altman & Sabato, 2007), in which the Basel standards applied to companies in America are forecast. The results of the research concluded that using the Basel standard and its improved and modernized rules reduce the capital requirement for credit risks (Danielsson et al., 2021). It is also important to point out that there is no difference in the formulas of Basel

Approaches I, II and III for a part of the company, and when determining the risk weights that are applied in the analysis and evaluation of credit risk.

Table 1. Basel parameters and risk weights for the small business segment, based on the established internal credit rating

					Short-term loan (effective maturity M=1)		Medium-term loan (effective maturity M=2.5)		Long-term loan (effective maturity M=5)	
Rating	PD	LGD	b	R	RW Std. access	RW Advanced access	RW Std. access	RW Advanced access	RW Std. access	RW Advanced access
AAA	0,31%	46,00%	0,20	0,1819	100%	32,65%	100%	45,88%	100%	68,94%
AA	1,14%	46,00%	0,15	0,1469	100%	63,37%	100%	79,27%	100%	105,77%
A	2,92%	46,00%	0,11	0,1047	100%	88,50%	100%	103,49%	100%	128,27%
BBB	7,02%	46,00%	0,09	0,0839	100%	117,50%	100%	131,61%	100%	145,05%
BB	13,18%	46,00%	0,07	0,0804	100%	156,86%	100%	170,62%	100%	193,54%
B	23,03%	46,00%	0,05	0,0802	100%	185,38%	100%	207,48%	100%	227,81%
CCC	50,57%	46,00%	0,03	0,0802	100%	185,88%	100%	192,75%	100%	204,34%

Source: Adapted from Altman & Sabato, 2007

Table 1 shows the following risk indicators by defined rating classes: PD (probability of default), LGD (Loss Given Default), b (term adjustment factor that reflects the impact of PD) and R (represents the correlation for exposures to commercial companies), which are considered essential factors in defined formulas (Hunt et al., 2020). Based on these indicators, a risk weight RW was formulated for smaller companies (where the total annual revenue from sales is EUR 5 million), which corresponds to the modern concept of Basel. In addition, a traditional approach was formulated and a risk weight was assigned to it. The difference in determining the RW (credit risk weight) exists only for large-sized companies. It analyzes the risk weights by classes of the internal credit rating and is shown for different loan maturities. In the prescribed Basel formulas, maturity is shown based on the effective maturity indicator M, which has a value from 1 to 5. For loans in the short, medium and long term, certain reference values of this indicator are also shown. It is interesting to note that the level of risk weighting of RW increases with an increase in the maturity of the placement. For example, RWBBB, M (1) = 117.50% > RWBBB, M (5) = 145.05%, that is, the risk weight increases with the increase in maturity, taking the PD value for the unchanged size. Also, it is interesting to note the situations when a worse rating category, with a higher estimated PD parameter, has a lower RW. This situation occurs when the PD value reaches the so-called contamination point (eng. contamination point). So, for example RWB > RWCCC, where RWB = 185.38% and PDB = 23.03%, while RWCCC = 185.88% and PDCCC = 50.57%. The reasoned interpretation for such a situation is based on the reasoning that for rating classes that reach the PD systematization point, the total credit loss is mostly formulated from the expected loss (EL), which leads to a reduction of the unexpected loss (UL) which directly depends on the estimated RW, i.e. risk weighting (Genest & Brie, 2013). In other words, there is a change in the structure of the total loss, and that is by spilling the unexpected into the expected loss.

Table 2. Basel parameters and risk weights for the segment of medium-sized companies, based on the established internal credit rating

					Short-term loan (effective maturity M=1)		Medium-term loan (effective maturity M=2.5)		Long-term loan (effective maturity M=5)	
Rating	PD	LGD	b	R	RW Std. access	RW Advanced access	RW Std. access	RW Advanced access	RW Std. access	RW Advanced access
AAA	0,31%	46,00%	0,20	0,1999	100%	36,57%	100%	51,34%	100%	76,14%
AA	1,14%	46,00%	0,15	0,1523	100%	71,22%	100%	89,09%	100%	118,90%
A	2,92%	46,00%	0,11	0,1187	100%	101,16%	100%	118,16%	100%	146,50%
BBB	7,02%	46,00%	0,09	0,0998	100%	135,48%	100%	151,67%	100%	178,67%
BB	13,18%	46,00%	0,07	0,0974	100%	168,74%	100%	194,40%	100%	220,59%
B	23,03%	46,00%	0,05	0,0972	100%	218,31%	100%	231,89%	100%	254,37%
CCC	50,57%	46,00%	0,03	0,0967	100%	201,08%	100%	208,89%	100%	221,18%

Source: Adapted from Altman & Sabato, 2007

Table 2 shows the following indicators according to predefined rating classes: PD, LGD, b and R risk parameters, which are defined as important factors of prescribed formulas, but for medium-sized companies (total annual sales revenue equal to EUR 25 million). RW risk weights, which correspond to the modern concept of the Basel approach, have been formulated and presented. If the data shown in Tables 1 and 2 are compared, it can be determined that the risk weightings are higher for medium-sized companies in all rating classes and maturities. An explanation for this can be found in column R, which defines regulatory determined correlations, which depend on the size of the companies. The degree of correlation R is inversely proportional to the degree of portfolio diversification (Crook, Edelman, & Thomas, 2007). In other words, the default of a smaller company leads to a smaller extent of the defaults of other companies, while with the growth of their size, this interdependence increases. Table 3, as well as Tables 1 and 2, shows the risk parameters and risk weights of RW, for large-sized companies (total annual sales revenue equal to EUR 50 million). Risk weights and parameters correspond to the modern concept of Basel.

Table 3. Basel parameters and risk weights for the segment of large companies, based on the established internal credit rating

					Short-term loan (effective maturity M=1)		Medium-term loan (effective maturity M=2.5)		Long-term loan (effective maturity M=5)	
Rating	PD	LGD	b	R	RW Std. access	RW Advanced access	RW Std. access	RW Advanced access	RW Std. access	RW Advanced access
AAA	0,31%	46,00%	0,20	0,2219	100%	41,68%	100%	58,45%	100%	86,40%
AA	1,14%	46,00%	0,15	0,1867	100%	81,31%	100%	101,64%	100%	135,51%
A	2,92%	46,00%	0,11	0,1394	100%	117,02%	100%	136,66%	100%	169,40%
BBB	7,02%	46,00%	0,09	0,1195	100%	157,21%	100%	176,12%	100%	207,24%
BB	13,18%	46,00%	0,07	0,1187	100%	204,41%	100%	222,30%	100%	252,13%
B	23,03%	46,00%	0,05	0,1155	100%	244,06%	100%	259,15%	100%	284,30%
CCC	50,57%	46,00%	0,03	0,1155	100%	216,74%	100%	224,87%	100%	238,41%

Source: Adapted from Altman & Sabato, 2007

If the data presented in Tables 1, 2 and 3 are compared, it can be determined that the risk weights, for all rating classes and maturities, are the highest for large companies. This affects the RW indicator, and due to the increase in correlation coefficients. In Table 3, the RW indicator has the highest values for all rating categories and maturities, in contrast to Tables 1 and 2. The explanation for the justified transition to advanced risk management concepts can be found in the conclusion of the conducted analysis, that the reduction of capital requirements for credit in the short term, he expects credit risk only for the first three best rating classes, which makes up about 52% of the total number of users. Taking into account that in Table 1, only for these indicators of the advanced approach, the RW is lower in contrast to the indicators of the standard approach, it is possible only for these rating classes to achieve savings, i.e. reduction of capital requirements. For medium- and long-term loans in Tables 2 and 3, the reduction of capital requirements for credit risk is predicted only for the first two classes of internal credit rating, which makes up 30% of the total number of users. In connection with the conducted research (Altman & Sabato, 2007), which points out that the forecasted effects of the modern concept for measuring credit risk using the Basel II standard lead to a reduction in capital requirements for credit risk, but based on the data of American companies, in this paper it was determined that the effect of reducing capital requirements would exist only in the best rating classes, depending on the maturity of the credit placement, which accounts for 32% - 50% of companies. On the other hand, with all other rating classes, there would be an increase in capital requirements for credit risk compared to the traditional concept. Therefore, it is up to the banking institutions in Serbia to assess the possible effects of advancing and improving the modern concept, in terms of usefulness and possible costs.

Conclusion

The methods, measurement and assessment of risk within financial institutions have been significantly improved in the last decade, which has resulted in better forecasting of successful operations and reduction of risks, which would cause debtors to be unable to fulfill their obligations to creditors in a timely manner or unable to realize them at all.

Furthermore, for some classes of exposure, the Basel Committee proposes a basic methodology by which financial institutions, as an input size, take their own assessment of the risk of non-payment of the debtor, and assessments of the additional risk factor are derived through the application of standardized supervisor rules.

The core methodology is available to those financial institutions that can satisfy supervisors that they are capable of meeting the specific minimum requirements of banking internal rating systems, risk management processes and the ability to assess the necessary risk components.

The aspect of access based on internal ranking can be realized in several ways. First, over the period and at the industry level, the Basel Committee expects more and more financial institutions to move away from the standardized approach to the RBI approach and expects that they will do so once they have the necessary systems in place. Second, within the RBI approach. financial institutions will be expected to move from the use of basic to more advanced methodologies in line with the enrichment of their risk management practices.

Certain financial institutions are capable (or will become) of conducting a convenient and consistent assessment of additional risk components, while others will need more time to restructure to this type of assessment. These additional components are the losses that will occur in case of non-payment by the debtor, the level of exposure of the debtor at the moment of non-payment, the effects of guarantees and the risk of exposure to credit derivatives.

At the same time as the basic methodology, advanced methodologies have been established that allow the use of one's own internal assessments of risk components. The widespread use of such assessments is an important part of a dynamic and risk-sensitive RBI approach in such a way that those financial institutions that are able to conduct a sufficiently valid and quantified risk assessment can be recognized and distinguished from those that are unable to do so.

We can conclude that the validation by financial institutions includes two key components - the validation of the rating system and the assessment of the risk components and the validation of the rating processes aimed at the implementation of the rating system. The validation of the rating system can further be broken down into two components: the evaluation of the development of the rating system or the development of the model and the assessment of the risk components.

Financial institutions are required to have a sophisticated system of assessing the accuracy and consistency of the rating system, process, and internal monitoring of risk factors. Historical time frames for the data used in assessing the degree of data correlation should be as long as possible and ideally cover the entire business cycle. Also, these institutions must have at their disposal clear stress testing processes that they use in assessing capital adequacy.

The testing must contain the identification of future changes in economic conditions and possible events that could adversely affect default assessments (debtor's default) and therefore the overall level of capital adequacy. Stress testing must be conducted at least once every six months. The results of the testing should be submitted periodically through a report to the senior management of the bank.

To assess the probability of default, external rating data and internal estimates of the probability of default, the definition of the default event and the resulting definition of the default rate (estimate of default) must be similar.

This paper presents the validation of the internal credit rating, using available analyzes and interpretations from the available academic literature. As a result of the conducted research, it was established that the developed internal credit rating for all economic companies passed all recommendations of validity and regularity and that it is in accordance with the standards of the Basel concept. Also, it can be used as a first step in an internal assessment of the required level of capital and the coverage of possible expected and unexpected losses. That is why the paper calculated risk weights (eng. risk weights - RW) which are applied when evaluating the riskiness of placements at the level of the banking portfolio. Finally, it can be pointed out that the implemented methodology can be applied to all banking institutions operating in Serbia and Europe.

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CAUSE (GROUND) OF OBLIGATION OF THE CONTRACT ON REPRESENTATION IN SPORT[43]

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Pregledni rad

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Abstract

In the law of the Republic of Serbia, the cause of contractual obligation has the significance of a general assumption of the validity of the contract. It represents an essential condition for the creation and survival of every contract. Accordingly, "every contractual obligation must have a permissible cause. The cause is impermissible if it is contrary to cogent rules, public policy, or good morals" (Article 51(1-3) of Law on Obligations). It is assumed that the contractual obligation has a cause, even though it is not expressed. The legal consequence of the non-existence or impermissibility of the cause is the nullity of the contract.

The subject of interest in this paper is the consideration of peculiarities regarding the cause of obligation of the contract on representation in sports, which distinguish it from other types of contracts. For that purpose, special attention is devoted to the analysis a few characteristic cases of concluding contracts on representation in sport in contractual practice. It has been observed that existence of false (unreal) cause in the practice of formation of these contracts are not rare. Additionally, the unreal ground is, as a rule, the result of the will of the contractors themselves. The existence of a putative cause in contracts on representation in sports is difficult to imagine due to the mandatory written form prescribed by law. Therefore, the false cause in these contracts can be manifested in the form of a fictitious or simulated contract. The falseness of the ground is most often expressed in the form of a reduction

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or increasing of the obligations stated in the written contracts, compared to those that were actually contracted. It would be difficult to say that such payments, outside of legal payment flows, are an unusual phenomenon in modern sports.

Considering the above, it is necessary to take a position regarding the solution of the exposed legal problem from the point of view of national legislation. On the ground of the rules contained in the legislation of the Republic of Serbia, the author concludes that the existence of an false cause results in the nullity of all contracts that were used in the simulation operation. Therefore, the sanction would consist in the absolute nullity of the fictitious, simulated and dissimulated contract due to the circumvention of legal regulations, the mutual confiscation of the object of performance due to violation of cogent regulations and public policy, as well as compensation for damage caused due to the violation of legally protected interests of *bona fide* third parties.

Key words: contractual representation in sport; putative cause; fictitious cause; simulated cause; nullity.

Introductory remarks

A contract on representation in sport is a contract in which the sports agent undertakes that, with or without compensation, he/she will try to find and bring in contact with the client a suitable person for the purpose of negotiating the conclusion of an employment contract, i.e. a transfer contract, as well as to the obtained authorization during negotiations to protect the interests of the client and to conclude a employment contract, i.e. a transfer contract, on his/her behalf and for his/her account. An athlete, a sports expert, or a sports organization can act as the principal of a sports agent.

The conclusion of a legally binding contract on representation in sports, likewise the formation of any other contract, presupposes the exchange of agreed statements of wills suitable for the creation of the desired legal effect. The exchange of agreed statements of wills is the meaning and essence of every contract (Jakšić.&Stojanović, 1995). Accordingly, in order for a contract on representation in sports to be valid, certain assumptions must be met that relate to: the content of consent statements of wills (will and its attributes, internal and declared will, ways of expressing will); the absence of defects in consensual declarations of wills (absence of delusion, fraud, coercion in the narrower sense-physical coercion, threats-psychological coercion); achieving concurrence of wills between the parties (negotiations, offer and acceptance of the offer). In the contracts we are considering, the exchange of agreed declarations of wills must be expresed in the qualified written form, prescribed by law.

In addition to the agreed declarations of wills and form, in order for a contract on representation in sport to be validly created and produce legal effects, the other general conditions for the validity of the contract must be met, which relate to: capacity to contract, object and cause (ground) of contractual obligation. Further exposition is devoted to the consideration of peculiarities regarding the cause (ground) of contractual obligation of the contract on representation in sports.

Contemporary theoretical understandings of the cause (ground) of contractual obligation in the fields of contract on representation in sports

In domestic civil law, the ground of obligation has the importance of a general assumption of the valid contractual agreement. There are no disagreements in jurisprudence about the general concept of cause of the contractual obligation (Markesinis&Unberath&Johnston, 2006; Zimmermann, 2005; Carbonnier, 2004). The ground is determined as the reason for the creation of the contractual obligation and the contract itself (Dudaš, 2011; Perović, 2011; Antić, 2005). However, there is no unique position on what is specifically meant by the reason for the creation of the contractual obligation. If we exclude the understanding that denies the existence of the ground, within the framework of modern theoretical considerations on the cause, subjective, objective and mixed approaches can be distinguished. That is, subjective, objective and mixed theories about the cause of the contractual obligation.

Representatives of the subjective theory see the ground of obligation in the motives that leads the contracting parties to conclude the contract. In this case, only the decisive motive can be considered, i.e. the one that decisively influenced the shaping of the will of a person in the direction of concluding a specific contract. Given that the contracting parties motives can be very diverse, insufficiently clear, changeable, and that everything depends on the current personal convictions and attitudes of the contracting parties, it would be very difficult to prove them in the event of a dispute (Perović, 2011). In this sense, the legal theory emphasizes that "proving decisive motives in practice creates almost insurmountable difficulties, because it is often practically impossible to prove what were the decisive motives for entering into a contractual relationship of one or the other party" (Antić, 2005). In this regard, the main reason that conditioned subjective understandings of the cause of contractual obligations did not find much support in the doctrine, lies in legal uncertainty. Such a claim can be substantiated without too much effort on the example of a contract on representation in sport.

Thus, the athletes decisive motive for concluding a contract on representation in sport could be to find a suitable work engagement. In the sense of concluding a employment contract with a sports organization in which the player would have the best conditions for sports advancement, training and achieving top results in the sport he is engaged in. However, bearing in mind that a professional sports career is, on average, of short duration, it is also possible that the decisive motive for concluding a contract on representation in sports is the desire to achieve as much financial income as possible from playing professional sports. Therefore, players are aware that the help of a qualified sports agent is practically necessary for them to make the most of their own sports talent and positive public image during the relatively short duration of their professional sports career. In this regard, it is a common occurrence in modern sports that prominent athletes move to less attractive and competitively underdeveloped teams and leagues, motivated by extremely high compensation amounts for their engagement. Significantly higher than those offered to them by teams in the highest quality professional competitions. At the same time, some sports agents have specialized in certain sports markets and direct their principals in that direction. Thus, an increasing number of famous football players are hired by Saudi Arabia football clubs, or clubs from the United Arab Emirates, or Qatar, or China. The sums paid for their engagement are, on average, twice the sums they earned at the clubs where they played in Europe's best football leagues. The situation is similar in basketball, handball, etc. It also happens that the athletes decisive motive for concluding a contract on representation in sport is his desire to play in a specific club. For example, because he has supported that club since early childhood, or because of the "rich" sports tradition of the club and its recognizable sports successes and results. It is precisely for this reason that the athlete wants to hire a sports agent who successfully cooperates with the representatives of the specific sports organization for a long period of time.

As with athletes, coaches motives for concluding a contract on representation in sport can be diverse. For example, the decisive motive can be the coaches desire to work in a club where he will have the opportunity to achieve satisfactory sports results. However, it could also be his desire to work in a sports organization that pays special attention to the development of young talented players. That is, in a sports environment where results are not the primary goal of the competition.

It is similar when we talk about the motives of sports organizations and sports agents. Thus, the decisive motive on the side of a sports organization for concluding a contract on representation in sports could be the desire to increase its own sports capacities by hiring a talented and quality athlete. But, the decisive motivation could also be reflected in the desire to achieve the most favorable financial arrangement during the transfer of the athlete.

Recognition of the decisive motivation of the sports agent causes particular difficulties in situations where a contract on representation in sports was concluded as a benevolence. Of course, except when one of the close relatives is in that role. It is conceivable that it would be a desire for a free presentation of an athlete with whom there is a long-standing successful cooperation, which has grown into a friendship. Or, on the other hand, the desire to present without compensation a young talented player with whom he intends to cooperate for a long period of time. It goes without saying that in all the mentioned situations there can be an intertwining of motives that significantly influence the decision to enter into a contract on representation in sports.

Proponents of the objective theory believe that the ground of the obligation is the economic effect that is intended to be achieved by entering into a specific contract, so this understanding is also referred to as economic theory. The cause is, therefore, an economic goal permitted by law that has a decisive influence on one's decision to enter into a contract (Gams, 1959; Kapor, 1951). Like that, the cause of contractual obligations was treated as an economic aim in some decisions of domestic courts (Judgement of Federal Court of Federal Republic of Yugoslavia Gzs 15/2000, 29. 06. 2000). The achievement of a certain economic goal is expressed in the form of exchange of goods and services (See more: Ječmenić, 2022). Adherents of objective understandings about the cause of obligations encounter difficulties when trying to explain the ground in gratuitous contracts. In this respect, these contracts are either without a ground, or it, on the other hand, consists of a negative economic effect (exempli causa, the donor wants to reduce its own property by the value of the gift).

The application of this theory to the contract on representation in sports would lead to the conclusion that the sports agent is obligated to the athlete, i.e. the sports organization because he wants money as an economic good in the form of an intermediary commission, while the athlete, i.e. the coach wants the appropriate earnings (salary). When it comes to sports organizations, there is a difference in the basis of the obligation of a sports organization that hires a player and such an organization that the player leaves. Thus, the sports organization to which the player joins wants the economic use of the player's sports capacities, while the sports organization that the athlete leaves wants to achieve property profit in the form of transfer remuneration. In our opinion, the objective theory cannot provide a satisfactory explanation of the ground of obligation of the contract on representation in sport in cases where it is concluded as a benevolence. Consistent application of this theory would imply that the cause consists of a negative economic effect that the sports agent seeks to achieve by concluding the contract. Such an effect would be expressed in the wish of the sports agent to make his workforce (in the sense of representation services in sports transfers) available to the athlete, sports expert, or sports organization, without any economic effect. Such an explanation does not seem tenable to us.

Proponents of the mixed theory of the cause of contractual obligation take into account both objective and subjective elements. According to this understanding, the cause of obligation is the legal purpose of the obligation. In the case of synalagmatic contracts that purpose consists in the fulfilling of the contractual obligation of the other party (Antić, 2005). That is an objective element. The legal importance of the contractor's motivations, which represent a subjective element, differs in the case of mutually binding and benevolence contracts. With the former, motives are taken into account only if they are immoral and prohibited and when both parties were negligent. That is, when they knew or had to know that legally impermissible motives would lead them to an unlawful purpose. In contrast, in the case of gratutous contracts, the motives are equated with the ground due to their small number, since they represent a decisive reason for making a choise on assuming a contractual obligation.

The mixed theory of the ground of contractual obligation is accepted in our Law on Obligations. This Law stipulates that "every contractual obligation must have a permissible cause, and the cause is impermissible if it is contrary to cogent rules, public policy, or good morals" (Article 51(1-3) of Law on Obligations). It is assumed that the contractual obligation has a ground, even though it is not expressed. The legal consequence of the non-existence or impermissibility of the cause is the nullity of the contract (Article 52 of Law on Obligations). The legal significance and influence of the motive on the validity of the contract is much more pronounced in the case of gratuitous than in the case of mutually binding contracts. In principle, "the motives that prompted the contracting parties to conclude the contract do not affect its validity" (Article 53(1) of Law on Obligations). However, "if an impermissible motive significantly influenced the decision of one contracting party to conclude a synalagmatic contract and if the other contracting party knew or should have known this, the contract will remain void. Benevolence contract has no legal effect even when the other contracting party did not know that an illegal or immoral motive significantly influenced the decision of his co-contractor to conclude the contract" (Article 52(2-3) of Law on Obligations).

The application of the mixed theory on the cause of contractual obligations to the contract on representation in sports leads to the conclusion that the sports agent is obligated to the athlete, sports expert, or sports organization due to the fulfillment of their obligation to pay compensation, when the contract is concluded as mutually binding. In the case of a gratuitous contract on representation in sports, the ground of contractual obligation could be represented by any legally permissible motive that prompted the sports agent to enter into a contract without monetary payment. On the contrary, an athlete, a sports expert, or a sports organization is obligated to a sports agent due to the fulfillment of the obligation of mediation or representation in sports transfers.

False cause (ground) of obligation in the practice of concluding contracts on representation in sports

In the practice of concluding contracts on representation in sports, cases of the existence of an false (unreal) ground are not rare. Moreover, the unreal ground is, as a rule, the result of the agreement of wills of the contractors themselves (James, 2017; Gardiner, 2012). The presence of a putative cause in these contracts is difficult to imagine due to the mandatory written form. Therefore, the false cause in contract on representation in sports can be manifested in the form of a fictitious or simulated contract.

A fictitious contract exists when the contracting parties try to present to third parties (the public) that they have concluded a contract, but in reality they have not concluded it. The contracting parties here do not want the realization of the legal effects of a fictitious contract. They only create the appearance in front of third parties that they have concluded it, in the pursuit of achieving a specific, as a rule, prohibited goal. This, for example, can be the evasion of some legal or contractual obligation or the realization of some right for which the necessary legal conditions have not been met (Đurović, 1997).

The main feature of a simulated contract is the simultaneous existence of two contracts, one of which is public but false (simulated contract) and the other secret but true (dissimulated contract). A simulated contract, therefore, conceals a dissimulated contract. The first is addressed to third parties, but its legal effects are not desired by the contracting parties. The second expresses the true will of the contracting party and the realization of its effects they want to achieve. At the same time, the dissimulated contract, as a rule, changes or cancels the obligations from the simulated contract. The aim of the simulation action is to circumvent some legal rules (most often tax law) or the rights of third parties, that is, to circumvent some legal prohibition (Ibidem).

According to the regulations contained in the Law on Obligations, an false contract has no effect between the contracting parties. In the event that an false contract conceals another contract, that other contract is valid if the conditions for its validity are met, with the fact that the falseness nature of the contract cannot be emphasized to bona fide third parties (Article 66(1-3) Law of Obligation).

As for the grounds of nullity of false contracts, there are two understandings in legal theory, the so-called subjective and objective conception. According to the subjective conception, the basis of nullity of these contracts is reflected in the absence of the true will of the parties. According to the objective conception, the basis of the nullity of false contracts lies in the prohibited non-contractual purpose of an objective character which, as a rule, consists in circumventing some imperative norm, principle of public policy, or morality, so false contracts are qualified as illegal, prohibited or immoral (Đurović, 1995; Salma, 1979).

The falseness of the ground of contractual obligation of the contract on representation in sport is most often reflected in the form of a reduction or increasing of the obligations expressed in the written contracts, compared to those that were actually contracted (Amson, 2010; Buy, 2009). In this connection, we cite the case of the conclusion of false contracts by representatives of the French football club Paris Saint Germain (Le Paris Saint - Germain FC), in the period from 1998 to 2003. The leaders of this club wanted to hire well-known and quality players. However, at that time the club did not have the financial capacity needed to implement that plan. Although, in order to achieve the set goal, they resorted to concluding false contracts. Thus, simulated employment contracts were concluded with football players, in which the compensation was shown to be less than the real one. The real compensation was in the dissimulated contract. The remaining part, up to the actual compensation, was paid through sports agents. For that purpose, fictitious contracts of representation in sport were concluded with sports agents, for non-existent mediation services in sports transfers. This kind of operation made it possible to reduce the base for calculating taxes and contributions paid on the earnings of football players, as well as solidarity contributions, in an impermissible way. A solidarity contribution is paid if the transfer of a professional football player was made before the expiration of his contract, in the amount of five percent of the transfer compensation, and is shared between all the clubs that contributed to his training and development (Article 21 and Anex 5 FIFA’s Regulations of Status and Transfers of Players). So, we are dealing with amounts that can reach millions of euros. During the transfer of Pedro Miguel Pauleta from Bordeaux (Bordeaux FC) to PSG for ten million euros, another two million euros were paid to the player through two fictitious contracts concluded with sports agents. During the transfer of Nicolas Anelka from Real Madrid (Real Madrid FC) to PSG for twenty-four million euros, through fictitious contracts concluded with his brothers in the role of sports agents, the player was paid another four million euros, by payment to the account of the Swiss company Fidustar, which managed his finances. During the transfer of Frédéric Déhu from Barcelona (Barcelona FC) to PSG, the player received an additional six hundred thousand euros through sports agent Ranko Stojić. In all the mentioned cases, it was discovered that the sums paid to sports agents were later passed on to the footballers (*https://www.liberation.fr/.../psg-transferts-sales-a-la-barre_615...*PSG: transferts sales à la barre – Libération).

It would be difficult to say that such payments, outside of legal payment flows, are an unusual phenomenon in modern sports. Therefore, we believe that it is necessary to take a position regarding the solution of the exposed legal problem from the point of view of national legislation.

Conclusion

According to the rules contained in the Law on Obligations, a fictitious contract concluded between a sports organization and a sports agent would be void. The same would apply to a simulated contract concluded between a sports organization and an athlete, while a dissimulated contract concluded between a sports organization and an athlete could produce legal effect if the conditions for its validity are met. Let's see if they are.

A sports organization is obliged to establish a working relationship with a professional athlete. According to the provisions of the Law on Labour of the Republic of Serbia “the employment contract should be concluded in written, before the employee starts work. If the employer does not conclude a employment contract with the employee in accordance with the above, it is considered that the employee has established an employment relationship for an indefinite period of time on the day of starting work” (Article 32 Law on Labour). Nevertheless, the Law on Sports in the domain in which it regulates the establishment of an employment relationship between a sports organization and professional athletes represents a lex specialis in relation to the Law on Labour. The Law on Sports stipulates that a professional athlete establishes a employment relationship with a sports organization by concluding an employment contract for a certain period of time, up to five years at most (Article 13(1) of the Law on Sport), and “failure to conclude an employment contract is a misdemeanor for which the sports organization can be fined from 500,000 to 2,000 000 dinars” (Article 175(8) of the Law on Sport). We have the opinion that the provisions of the Law on Sports are of such a nature that they derogate from the provisions of the Law on Labour, regarding the fiction of establishing an employment relationship.

The Law on Sport stipulates that contracts between sports organizations and athletes, as well as all amendments and additions to contracts, must be concluded in writing and certified in accordance with the law. The legal consequence of non-compliance with this rule is the nullity of the contract (Article 12(1) of the Law on Sport). It is our opinion that the rule from Article 73 of the Law on Obligations, which foresees the possibility of subsequent validation of a contract that was not concluded in the prescribed legal form, by mutual performance of contractual obligations, could not be applied to this contract. Therefore, this possibility of strengthening a contract that lacks the prescribed form exists only if nothing else obviously follows from the purpose for which the form is prescribed (Article 73 of the Law on Obligations). There is no doubt that the purpose of the regulation, which stipulates a mandatory written form for all contracts concluded between sports organizations and athletes, in addition to protecting the interests of the athletes themselves, is also the protection of public interests. It confirms that, according to this criterion, a dissimulated contract concluded orally between a sports organization and athletes could not be empowered.

Therefore, based on the rules contained in the legislation of the Republic of Serbia, in the aforementioned case both the fictitious contract concluded between the sports organization and the sports agent, as well as the simulated and dissimulated contract concluded between the sports organization and the athlete, would be null and void.

Finally, we have the opinion that in the situation of simulation, simulated and dissimulated contracts should not be treated separately. Their different consideration is a consequence of the acceptance of the subjective conception of the grounds of nullity of false contracts. Simulation should be viewed as an operation having an impermissible non-contractual purpose, and accordingly all contracts used in the simulation operation would be void. This conclusion is in accordance with the objective conception of the basis of nullity of false contracts (Salma, 1979). In the case that we have analyzed, the sanction would consist in the absolute nullity of the fictitious, simulated and dissimulated contract due to the circumvention of legal regulations, the mutual confiscation of the object of performance due to violation of cogent regulations and public policy, as well as compensation for damage caused due to the violation of legally protected interests of bona fide third parties.

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POSLOVANJE S KRIPTOVALUTAMA I NjIHOVA PERSPEKTAVA U BUDUĆNOSTI

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Apstrakt

Pojava kriptovaluta je revolucionirala finansijski pejzaž, nudeći nov i inovativan način pojedincima da investiraju i upravljaju svojim bogatstvom. Ulaganje u kriptovalute, kao što su Bitcoin, Ethereum i druge, ima brojne prednosti koje ga čine atraktivnom opcijom za one koji žele da diverzifikuju svoje portfelje. Jedna od primarnih prednosti ulaganja u kriptovalute je njihov potencijal za visoke prinose. Kako popularnost i usvajanje kriptovaluta nastavlja da raste, njihova vrednost može značajno da varira, pružajući investitorima značajan profit. Pored toga, kriptovalute nude nivo likvidnosti i pristupačnosti koji ne može da se poredi sa tradicionalnim sredstvima, omogućavajući investitorima da kupuju i prodaju brzo i lako. Ovaj članak ima za cilj da istraži prednosti ulaganja u kriptovalute i njihovu perspektivu u budućnosti. Ispitaćemo prednosti diverzifikacije investicionih portfolija sa kriptovalutama, potencijal za visoke prinose i potencijalne rizike. Nadalje, razgovaraćemo o trenutnom stanju tržišta i budućim izgledima kriptovaluta.

Ključne reči: *kriptovaluta, MMF, bitkoin.*

Uvod

Poslednjih godina koncept kriptovalute je stekao široku pažnju i popularnost, sa mnogim pojedincima i institucijama koji ulažu u ovu novu klasu sredstava. Kriptovalute, kao što su Bitcoin, Ethereum i druge, hvale se kao potencijalni menjač igre u svetu finansija, nudeći novi način čuvanja vrednosti, obavljanja transakcija i generisanja prinosa(Milanović, 2023). Kako tržište nastavlja da se razvija, neophodno je razumeti prednosti ulaganja u kriptovalute i kako se one mogu uključiti u diversifikovani investicioni portfolio.

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Jedna od primarnih prednosti kriptovaluta je njihova decentralizovana priroda. Za razliku od tradicionalnih valuta, koje kontrolišu centralne banke ili vlade, kriptovalute rade nezavisno, bez potrebe za posrednicima(Trifunović et al., 2023). Ova decentralizacija osigurava da su transakcije sigurne, transparentne i zaštićene od neovlaštenih radnji, što ih čini atraktivnom opcijom za one koji žele da izbegnu vladinu intervenciju ili cenzuru(Gervais et al., 2016). Štaviše, upotreba napredne kriptografije i blokchain tehnologije osigurava da transakcije kriptovalutama praktično nisu hakovane. Decentralizovana priroda blockchain tehnologije onemogućava jednom entitetu da manipuliše ili menja transakcije, pružajući dodatni nivo sigurnosti za investitore.

Još jedna značajna prednost kriptovaluta je njihova ograničena ponuda. Za razliku od tradicionalnih valuta, koje centralne banke mogu štampati ili kreirati po želji, kriptovalute imaju fiksnu ponudu(Milenković et al., 2023). Ova ograničena ponuda stvara osećaj oskudice, što može povećati potražnju i povećati vrednost valute(Nakamoto, 2008). Pored toga, fiksna ponuda takođe otežava centralnim bankama ili vladama da manipulišu novčanom masom, smanjujući rizik od inflacije i devalvacije. Ova predvidljivost je posebno privlačna u vremenima ekonomske neizvesnosti.

Kriptovalute često nude niže naknade za transakcije u poređenju sa tradicionalnim metodama plaćanja. Kod tradicionalnih sistema plaćanja, naknade za transakcije mogu se kretati od 1-3% vrednosti transakcije. Nasuprot tome, transakcije kriptovalutama obično imaju naknade u rasponu od 0,1% do 1% vrednosti transakcije(Pastory & Lwanga 2024). Ova niža struktura troškova čini kriptovalute atraktivnom opcijom za mikro plaćanja i svakodnevne transakcije, gde tradicionalni sistemi plaćanja mogu biti preskupi. Za investitore, niže transakcione naknade znače povećanje profita i smanjenje troškova.

Kriptovalute nisu vezane geografskim granicama ili ograničenjima. Sa internet vezom, svako ko ima pametni telefon ili računar može pristupiti i trgovati kriptovalutama širom sveta. Ova globalna dostupnost omogućava pojedincima iz celog sveta da učestvuju na tržištu kriptovaluta. Pored toga, kriptovalute pružaju priliku pojedincima koji nemaju ili nemaju banku da pristupe finansijskim uslugama koje im možda nisu dostupne putem tradicionalnih sredstava(Janković & Golubović, 2024).

Ulaganje u kriptovalute može pružiti jedinstvenu priliku za diversifikaciju za investitore. Dok su tradicionalna sredstva kao što su akcije i obveznice često u korelaciji jedna sa drugom, kriptovalute imaju tendenciju da se kreću nezavisno(Vukosavljević et al., 2023). Ovaj nedostatak korelacije znači da investitori mogu potencijalno smanjiti svoj ukupni rizik uključivanjem kriptovaluta u svoj portfolio. Štaviše, kriptovalute nude novi izvor povrata koji nije vezan za tradicionalnu imovinu.

Kriptovalute nude niz mogućnosti za investiranje osim kupovine i držanja pojedinačnih novčića.

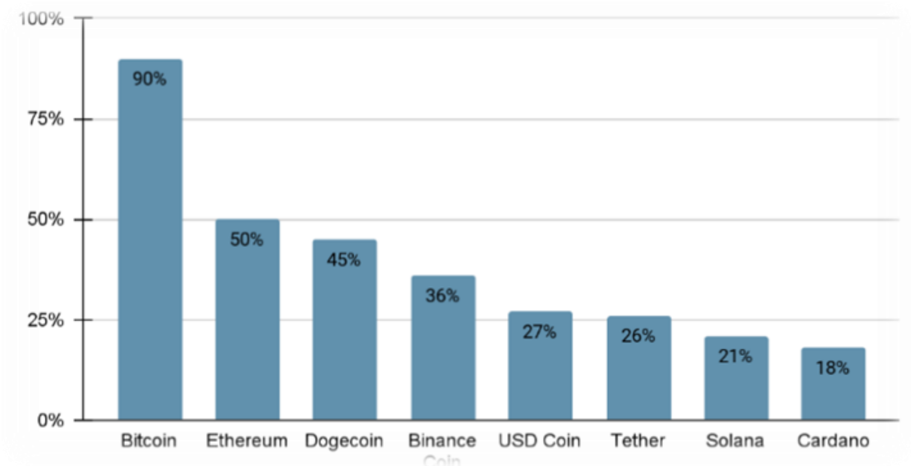
Na primer(Kyoung et al., 2023):

- Rudarenje: Investitori mogu da učestvuju u operacijama rudarenja da bi zaradili nove novčiće kao nagradu za rešavanje složenih matematičkih problema.
- Ulaganje: Investitori mogu zaraditi pasivni prihod ulaganjem svojih novčića i validacijom transakcija na blokchain mrežama.
- Pozajmljivanje: Investitori mogu pozajmljivati novčiće zajmoprimcima po kamatnim stopama koje su konkurentne tradicionalnim opcijama pozajmljivanja.

Kako tržište nastavlja da se razvija, od suštinskog je značaja za investitore da razumeju ove prednosti i kako se one mogu uključiti u svoje investicione strategije. Bez obzira da li ste iskusan investitor ili tek počinjete, ulaganje u kriptovalute nudi novu granicu za rast i mogućnosti.

Prednosti ulaganja u kriptovalute

Svet finansija je bio svedok značajne promene poslednjih godina, sa pojavom kriptovaluta kao popularne opcije ulaganja. Od Bitcoin-a do Ethereuma, Litecoin-a i drugih, kriptovalute su stekle široko priznanje i pažnju. Bitcoin ima najveću prepoznatljivost u javnosti.



Slika 1: Prepoznatljivost kriptovaluta u 2024. godini

Dok su neki investitori skeptični u pogledu potencijala kriptovaluta, mnogi drugi su već prikupili značajne prinose ulaganjem u ova digitalna sredstva. Kao prednosti ulaganja u kriptovalute možemo izdvojiti(Tomić et al., 2020):

- Diverzifikacija i upravljanje rizikom,
- potencijal za visoke prinose,
- bezbednost i transparentnost,
- pristupačnost i likvidnost,
- poreske prednosti.

Jedna od primarnih prednosti ulaganja u kriptovalute je mogućnost da se diverzifikuje investicioni portfolio. Tradicionalne investicije kao što su akcije, obveznice i nekretnine mogu biti podložne tržišnim fluktuacijama, ekonomskim padovima i promenama kamatnih stopa. Ulaganjem u kriptovalute rizik se može rasporediti na različite klase imovine, smanjujući izloženost nestabilnosti tržišta i povećavajući potencijal za povraćaj(Cheng, 2023).

Kriptovalute nude jedinstven način za diverzifikovanje portfelja jer nisu u korelaciji sa tradicionalnom imovinom. To znači da kada jedna klasa sredstava ima loš učinak, kriptovalute i dalje mogu da obezbede zaštitu od gubitaka. Na primer, tokom finansijske krize 2008. godine, cene zlata su skočile dok su investitori tražili sredstva za sigurno utočište. Slično tome, kriptovalute kao što su Bitcoin i Ethereum su ojačale tokom pandemije 2020. godine dok su investitori tražili alternativne tržišta za stvaranje vrednosti (Souza et al., 2024).

Kriptovalute imaju potencijal da generišu visoke prinose zbog svoje ograničene ponude i sve veće potražnje. Ponuda većine kriptovaluta je ograničena, što znači da postoji ograničena količina na raspolaganju. Kako sve više ljudi postaje svesno prednosti ulaganja u kriptovalute, potražnja se povećava, povećavajući cene. Ova inflacija izazvana oskudicom može dovesti do značajnog povećanja cena tokom vremena. Pored toga, decentralizovana priroda kriptovaluta znači da one nisu podložne vladinoj kontroli ili manipulaciji. Ovaj nedostatak centralizacije osigurava da cene upravljaju tržišnim silama, a ne veštačkim stimulansima(Dašić et al., 2023). Kao rezultat toga, cene kriptovaluta mogu da variraju brzo i nepredvidivo, zbog čega je neophodno ostati informisan o tržišnim trendovima i raspoloženju.

U 2014, Financial Action Task Force (FATF)[46] izdala je izveštaj o virtuelnim valutama, u kojem su navedene smernice za zemlje za borbu protiv pranja novca i rizika finansiranja terorizma koji su povezani sa kriptovalutama. U izveštaju je naglašena potreba da zemlje implementiraju efikasne propise kako bi osigurale integritet finansijskog sistema. Smernice FATF usvojile su mnoge zemlje, uključujući Evropsku uniju, koja je uvela 5. Direktivu protiv pranja novca (5AMLD) koja posebno cilja na virtuelne valute(Goel & Mazhar, 2024).

Nekoliko zemalja je primenilo ili je u procesu implementacije posebnih propisa za kriptovalute. Neki značajni primeri uključuju:

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[46] FATF vodi globalnu akciju za borbu protiv pranja novca, terorizma i finansiranja širenja oružja. Telo od 40 članova postavlja međunarodne standarde kako bi osiguralo da nacionalne vlasti mogu efikasno da traže nezakonita sredstva povezana sa trgovinom drogom, ilegalnom trgovinom oružjem, sajber prevarama i drugim teškim zločinima.

Osnovana je 1989. Godine I ima sedište u Parizu.

- SAD: Komisija za trgovinu robnim fjučersima (CFTC) je regulisala određene vrste derivata kriptovaluta[47], dok je Komisija za hartije od vrednosti (SEC) klasifikovala određene kriptovalute kao hartije od vrednosti[48].
- Kina: Narodna banka Kine (PBOC) zabranila je inicijalnu ponudu novčića (ICO) i primenila je stroge propise o razmeni kriptovaluta.
- Japan: Japan je uveo sistem licenciranja za berze kriptovaluta, zahtevajući od njih da se registruju kod Agencije za finansijske usluge (FSA)[49].
- Evropska unija: 5AMLD EU[50] zahteva od berzi kriptovaluta i drugih finansijskih institucija da sprovode mere protiv pranja novca i poznaju svog klijenta.
- Singapur: Singapur je uspostavio regulatorni okvir za digitalne tokene plaćanja, uključujući zahteve za nosioce licenci da se pridržavaju propisa protiv pranja novca i finansiranja terorizma.

Kriptovalute su zasnovane na blokchain tehnologiji, koja pruža neuporediv nivo bezbednosti i transparentnosti. Decentralizovana priroda blockchaina osigurava da se transakcije evidentiraju u javnoj knjizi, što omogućava praćenje svih transakcija bez centralnog autoriteta. Svaka transakcija je verifikovana od strane čvorova na mreži putem složenih algoritama i kriptografije, obezbeđujući da je svaki blok bezbedan i zaštićen. Ovaj decentralizovani pristup eliminiše potrebu za posrednicima kao što su banke ili vlade, smanjujući transakcijske naknade i povećavajući efikasnost(Ho, 2024).

Još jedna prednost ulaganja u kriptovalute je njihova dostupnost i likvidnost. Sa porastom onlajn razmena i platformi za trgovanje, sada je lakše nego ikada kupiti i prodati kriptovalute(Digital Assets/Cryptocurrency, 2024). Mnoge berze nude interfejse prilagođene korisniku, omogućavajući početnicima da počnu da trguju sa minimalnim poznavanjem tržišta kriptovaluta. Pored toga,

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47 https://www.cftc.gov/solr-search/content?keys=cryptocurrencies

48 https://www.investor.gov/additional-resources/spotlight/crypto-assets

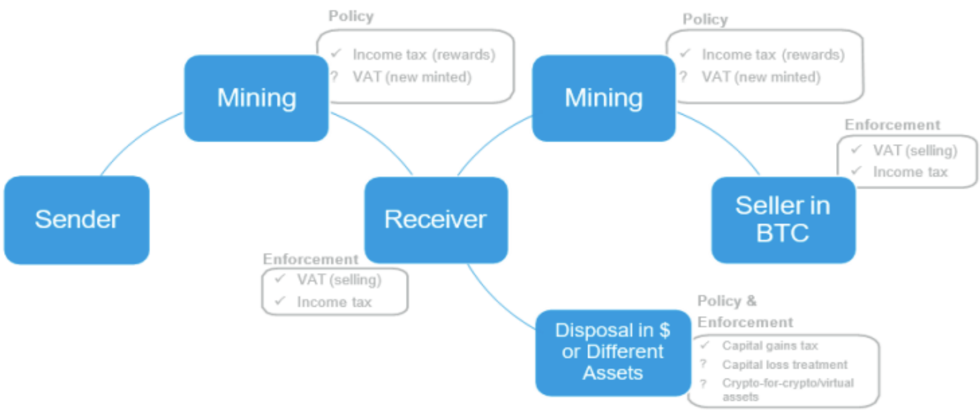
49 https://www.fsa.go.jp/en/news/2022/20221207/01.pdf

50 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32018L0843

likvidnost tržišta kriptovaluta značajno se poboljšala u poslednjih nekoliko godina. Mnogi novčići su uspostavili jake fondove likvidnosti, što olakšava brzu i efikasnu kupovinu i prodaju imovine.

Ulaganje u kriptovalute takođe može ponuditi poreske olakšice za neke investitore. U mnogim zemljama, dobici od kriptovaluta podležu stopama poreza na kapitalnu dobit, a ne stopama poreza na dohodak. To znači da investitori koji drže svoju imovinu u određenom periodu mogu imati koristi od nižih poreskih stopa(Živanović & Vitomir, 2022). Pored toga, neke zemlje nude poseban poreski tretman za ulaganja u kriptovalute, kao što je oslobađanje od poreza na dodatu vrednost (PDV) ili carine. Investitori bi trebalo da se konsultuju sa poreskim stručnjakom kako bi razumeli svoje specifične poreske obaveze i potencijalne koristi. Upotreba kriptovaluta ne bi trebalo da predstavlja veliku poteškoću u principu za osnovnu strukturu ovih poreza, budući da se – imajući na umu transakciju razmene – oni se obično formulišu u smislu ponude koja se ne vrši za zakonito sredstvo plaćanja, već za „razmatranje“, što je širok pojam. dovoljno da obuhvati kripto imovinu(Lekpek, 2022). (Međutim, mogu se pojaviti praktične poteškoće u primeni ovoga, neke od njih su se kasnije dotakle, zbog volatilnosti cena (koja može da izvrši poseban pritisak na verifikaciju tačno kada dođe do transakcije), prostora za prevaru i ugradnje u prekogranična pravila). Kako bi se osiguralo da sticanje kriptovalute za fiat novac samo po sebi ne podleže PDV-u, nekoliko zemalja (uključujući Australiju, Japan i Južnu Afriku) predviđaju izričito oslobođenje od PDV-a; u EU, Sud pravde je 2015. godine odlučio da PDV ne treba primenjivati na takve transakcije. Tretman PDV-a naknada i novih kriptovaluta koje dobijaju rudari takođe zahteva jasan stav politike. U principu, čini se da nema razloga zašto – opet osim putem stvaranja namernog (dez)stimulisanja – oni ne budu u potpunosti obveznici PDV-a, sa odgovarajućim pravom na kredit PDV-a naplaćenog na ulazne proizvode. Iako je to generalno prepoznato kao dobra praksa, u praksi mnogi PDV-i oslobađaju naknade za finansijske usluge. Ovo će dovesti do preteranog oporezivanja poslovne upotrebe kriptovalute (zbog nepovratnog ulaznog PDV-a rudara) i pod oporezivanjem individualne upotrebe(Manahov, 2024).

Na slici broj 3. su prikazani oporezivi događaji iz cirkulacije kriptovalute po metodologiji MMF-a — koja se ovde uzima kao Bitcoin (BTC)—, naglašavajući njihovu posebnu poresku politiku i administrativne izazove. Pošiljalac, preko rudara, kupuje uslugu od primaoca koristeći BTC, a primalac ima opcije da raspolaže BTC-om ili da kupi uslugu sa BTC-om. Simbol "?" ukazuje na posebnu potrebu za jasnoćom politike/zakona(Kelly et al., 2017).



Slika br. 2: Oporezivi događaji u cirkulaciji kriptovaluta

Ovde nije eksplicitno prikazano da ove transakcije mogu biti ravnopravne (P2P) ili putem decentralizovane ili centralizovane razmene, što ne utiče na tretman politike, ali utiče na sposobnost sprovođenja poreza (P2P je najteži, zatim decentralizovan i konačno centralizovan.

Potencijalni rizici

Brzi rast tržišta kriptovaluta privukao je značajnu pažnju i ulaganja iz celog sveta. Međutim, sa potencijalom za visoke prinose dolazi niz rizika kojih bi investitori trebalo da budu svesni pre ulaganja u kriptovalute. Kao potencijalne rizike ulaganje u kriptovalute možemo pomenuti(Au et al., 2024):

- promenljivost tržišta,
- nedostatak regulative,
- bezbednosni rizici,
- rizici likvidnosti,

- rizici druge strane,
- poreski rizici,
- reputacioni rizici.

Jedan od najznačajnijih rizika povezanih sa ulaganjem u kriptovalute je nestabilnost tržišta. Cene kriptovaluta mogu da fluktuiraju brzo i nepredvidivo, zbog čega je teško odrediti njihovu vrednost. Ova volatilnost može rezultirati značajnim gubicima ako investitori ne napuste svoje pozicije na vreme. Na primer, Bitcoin, najpoznatija kriptovaluta, doživeo je pad vrednosti od 70% između decembra 2017. i decembra 2018. Slično tome, Ethereum, druga najveća kriptovaluta po tržišnoj kapitalizaciji, doživeo je pad vrednosti od 90% tokom istog perioda.

Još jedan značajan rizik povezan sa ulaganjem u kriptovalute je nedostatak regulative. Kriptovalute ne podležu istom nivou regulatornog nadzora kao tradicionalni finansijski instrumenti, kao što su akcije i obveznice. Ovaj nedostatak regulative može otežati investitorima da povrate svoje gubitke ako nisu u mogućnosti da pristupe svojim računima ili ako su žrtve prevare. Pored toga, nedostatak regulacije takođe može dovesti do tržišne manipulacije i insajderske trgovine, što može rezultirati značajnim gubicima za investitore.

Kriptovalute su takođe podložne bezbednosnim rizicima, uključujući hakovanje i krađu. U 2014, Mt. Gok, jedna od najvećih Bitcoin berzi u to vreme, je hakovana i izgubila je bitkoin u vrednosti od približno 450 miliona dolara. Pored hakovanja, postoji i rizik od interne krađe od strane zaposlenih ili administratora berzi kriptovaluta ili novčanika(Beavers & Godek, 2024).

Kriptovalute su takođe podložne rizicima likvidnosti, što investitorima može otežati brzu ili poštenu prodaju svoje imovine. Ovo može biti posebno izazovno za velike investitore koji moraju brzo da likvidiraju svoju imovinu. Na primer, u vremenima velike nestabilnosti tržišta, investitorima može biti teško da prodaju svoje kriptovalute po fer ceni zbog nedostatka kupaca. Ovo može rezultirati značajnim gubicima ako su investitori primorani da prodaju svoju imovinu po niskoj ceni.

Kriptovalute takođe uključuju rizike druge strane, koji nastaju kada jedna strana ne ispuni svoje obaveze prema drugoj strani. Na primer, ako investitor kupi kriptovalutu na berzi koja bankrotira, može izgubiti ulaganje. Pored toga, postoji i rizik da programeri kriptovalute napuste svoje projekte ili ne ispune svoja obećanja, što rezultira značajnim gubicima za investitore.

Ulaganje u kriptovalute takođe može uključivati poreske rizike, uključujući neizvesnost oko oporezivanja i potencijalne kazne za nepoštovanje. Na primer, Internal Revenue Service (IRS)51 smatra Bitcoin i druge kriptovalute vlasništvom za poreske svrhe, što znači da investitori mogu biti podložni porezu na kapitalnu dobit na bilo koju dobit koju ostvare. Međutim, trenutno ne postoje jasne smernice o tome kako kriptovalute treba da se oporezuju, što investitorima može otežati poštovanje poreskih zakona.

Konačno, ulaganje u kriptovalute može uključivati i rizike po reputaciju, uključujući rizik da reputacija investitora može biti oštećena ako investira u projekat koji propadne ili je umešan u skandal. Na primer, ako investitor ulaže u kriptovalutu za koju se kasnije utvrdi da je lažna ili nezakonita, kao rezultat toga može biti oštećena njegova reputacija.

Budući izgledi

Tržište kriptovaluta je doživelo značajan rast i razvoj tokom protekle decenije, pri čemu su mnogi investitori i institucije primetili njegov potencijal. Dok su neki bili skeptični u pogledu dugoročne održivosti kriptovaluta, mnogi drugi vide ogroman potencijal za rast i usvajanje. U nastavku smo obradilli neke buduće izglede ulaganja u kriptovalute, naglašavajući mogućnosti i izazove koji su pred nama, a koje možemo izdvojiti kao(Petrović & Milaš, 2023):

- povećanje usvajanja i opšte prepoznatljivosti,
- poboljšana regulativa i infrastruktura,
- povećana institucionalna ulaganja.

Jedan od najznačajnijih trendova koji pokreću rast tržišta kriptovaluta je povećanje usvajanja i opšte prepoznatljivosti. Sve više pojedinaca, preduzeća i

[51] https://www.irs.gov/

institucija počinje da prepoznaje potencijalne prednosti kriptovaluta, što dovodi do povećane potražnje i ulaganja. U 2020. broj korisnika kriptovaluta je premašio 100 miliona, a očekuje se da će se još mnogo njih pridružiti u narednim godinama. Sve veće prihvatanje kriptovaluta kao legitimnog oblika plaćanja takođe je dovelo do povećanog prihvatanja među trgovcima i potrošačima(Bhattacharjee, 2023).

Još jedan značajan faktor koji pokreće rast na tržištu kriptovaluta je poboljšana regulativa i infrastruktura. Vlade širom sveta počinju da uzimaju nijansiraniji pristup regulisanju kriptovaluta, prepoznajući njihove potencijalne prednosti, istovremeno priznajući potrebu za nadzorom. Pored toga, razvoj robusne infrastrukture, kao što su berze, novčanici i procesori plaćanja, olakšao je pojedincima da kupuju, prodaju i koriste kriptovalute. Ova povećana dostupnost privukla je više investitora i trgovaca na tržište.

Povećana institucionalizacija tržišta kriptovaluta je još jedan značajan trend koji dobro ukazuje na njegove buduće izglede. Velike finansijske institucije, kao što su hedž fondovi i porodične kancelarije, počinju da primećuju potencijalne prinose koje nude kriptovalute. U 2020. godini, institucionalni investitori su činili preko 50% ukupnog obima trgovanja kriptovalutama, a očekuje se da će ih mnogo više slediti u narednim godinama. Ova povećana institucionalna ulaganja će verovatno povećati cene i povećati likvidnost na tržištu(Lee & Baek, 2023; Oonagh, 2021).

Novi slučajevi upotrebe i aplikacije

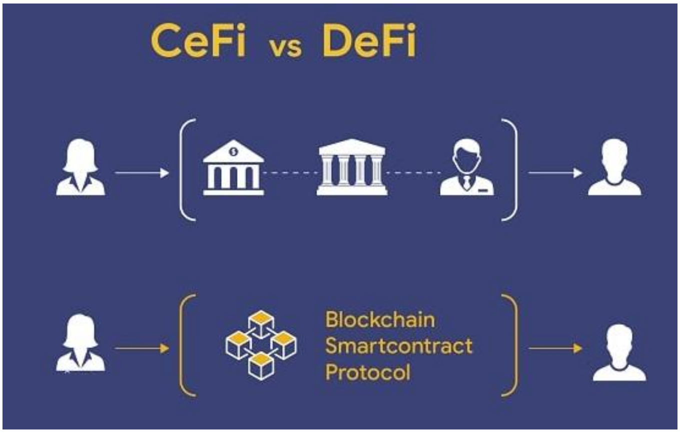
Kriptovalute se takođe istražuju za širok spektar novih slučajeva upotrebe i aplikacija osim samo digitalnih plaćanja.

Na primer:

- Decentralizovane finansije (DeFi)[52]: kriptovalute se koriste za kreiranje decentralizovanih platformi za pozajmljivanje, stabilnih skokova i drugih finansijskih instrumenata.
- Igre: Kriptovalute se koriste za kreiranje novih tipova onlajn igara koje nude jedinstvene nagrade i iskustva.

[52] https://www.weforum.org/agenda/2021/08/what-is-decentralized-finance/

- Upravljanje lancem snabdevanja: Kriptovalute se koriste za praćenje nivoa zaliha, praćenje vremena isporuke i obezbeđivanje autentičnosti u upravljanju lancem snabdevanja.
- Veštačka inteligencija (AI): kriptovalute se koriste za napajanje aplikacija koje pokreće veštačka inteligencija koje zahtevaju sigurne i transparentne transakcije.



Slika 3: CeFi vs DeFi

Ovi novi slučajevi upotrebe verovatno će podstaći dalji rast na tržištu kriptovaluta jer sve više industrija bude usvojilo tehnologiju blochain-a.

Uprkos ovim pozitivnim trendovima, još uvek postoji nekoliko izazova koji se moraju rešiti pre nego što kriptovalute ostvare svoj puni potencijal(Gojkov, 2024):

- Regulatorna nesigurnost: Dok neke vlade počinju da strože regulišu kriptovalute, druge ostaju nejasne kako bi se prema njima trebalo postupati.
- Bezbednosni rizici: Kriptovalute ostaju podložne hakovanju i drugim bezbednosnim rizicima koji mogu dovesti do značajnih gubitaka za investitore.
- Promenljivost: Cene kriptovaluta mogu da variraju brzo i nepredvidivo, što investitorima predstavlja izazov da predvide svoje prinose.

- Likvidnost: Iako se likvidnost poboljšala poslednjih godina, ona i dalje ostaje izazov za neka sredstva.

Zaključak

Ulaganje u kriptovalute nudi nekoliko prednosti koje ih čine atraktivnom opcijom za pametne investitore. Od diverzifikacije i potencijalnih visokih prinosa do sigurnosti i transparentnosti, pristupačnosti i likvidnosti i poreskih olakšica, postoji mnogo ubedljivih razloga da razmislite o uključivanju kriptovaluta u svoj investicioni portfolio. Iako postoje rizici povezani sa ulaganjem u kriptovalute, bitno je zapamtiti da sve investicije nose određeni nivo rizika. Obrazovanjem o prednostima i nedostacima ulaganja u kriptovalute i informisanjem o tržišnim trendovima i raspoloženju, možete donositi informisane odluke koje su u skladu sa vašim finansijskim ciljevima.

Kako tržište kriptovaluta nastavlja da se razvija i sazreva, verovatno ćemo videti nove mogućnosti za ulaganja. Bilo da ste iskusan investitor ili tek počinjete, sada je uzbudljivo vreme da istražite svet kriptovaluta i otkrijete njihov potencijal za sebe. Ulaganje u kriptovalute nosi niz potencijalnih rizika kojih bi investitori trebalo da budu svesni pre ulaganja. Ovi rizici uključuju nestabilnost tržišta, nedostatak regulative, bezbednosne rizike, rizike likvidnosti, rizike druge ugovorne strane, poreske rizike i rizike reputacije. Dok neki investitori mogu da vide ove rizike kao prihvatljive u zamenu za potencijalne prinose koje nude kriptovalute, drugi mogu smatrati da su preveliki da bi opravdali ulaganje u ova sredstva.

Na kraju, za investitore je od suštinskog značaja da sprovedu temeljno istraživanje i dužnu pažnju pre nego što ulože u kriptovalute i da razumeju potencijalne rizike. Takođe je važno da investitori diverzifikuju svoje portfelje i ne stavljaju sva svoja jaja u jednu korpu ulažući samo u kriptovalute. Budući izgledi za ulaganje u kriptovalute su svetli, sa sve većim usvajanjem, poboljšanom regulativom, povećanim institucionalnim investicijama, novim slučajevima korišćenja i aplikacijama na horizontu. Iako izazovi i dalje postoje, oni se mogu rešiti kroz kontinuirane inovacije i saradnju između vlada, institucija i pojedinaca. Za one koji su voljni da se suoče sa ovim izazovima, ulaganje u kriptovalute može ponuditi značajan povraćaj i novu granicu rasta. Kao i kod svake investicione prilike, od suštinskog je značaja da sprovedete temeljno istraživanje, diversifikujete svoj portfolio i razmislite o traženju stručnog saveta pre nego što donesete bilo kakvu investicionu odluku.

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DEALING WITH CRYPTOCURRENCIES AND THEIR PERSPECTIVE IN THE FUTURE

Milija Bogavac[53]

Abstract

The advent of cryptocurrencies has revolutionized the financial landscape, offering a new and innovative way for individuals to invest and manage their wealth. Investing in cryptocurrencies, such as Bitcoin, Ethereum, and others, has numerous advantages that make it an attractive option for those seeking to diversify their portfolios. One of the primary benefits of investing in cryptocurrencies is their potential for high returns. As the popularity and adoption of cryptocurrencies continue to grow, their value can fluctuate significantly, providing investors with substantial profits. Additionally, cryptocurrencies offer a level of liquidity and accessibility that is unmatched by traditional assets, allowing investors to buy and sell quickly and easily. This article aims to explore the advantages of investing in cryptocurrencies and their perspective in the future. We will examine the benefits of diversifying investment portfolios with cryptocurrencies, the potential for high returns, and the potential risks involved. Furthermore, we will discuss the current state of the market and the future prospects of cryptocurrencies.

Key words: *cryptocurrency, IMF, Bitcoin.*

Introduction

In recent years, the concept of cryptocurrency has gained widespread attention and popularity, with many individuals and institutions investing in this new asset class. Cryptocurrencies, such as Bitcoin, Ethereum and others, are hailed as a potential game changer in the world of finance, offering a new way to store value, perform transactions and generate returns (Milanović, 2023). As the market continues to evolve, it is imperative to understand the benefits of investing in cryptocurrencies and how they can be incorporated into a diversified investment portfolio.

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One of the primary advantages of cryptocurrencies is their decentralized nature. Unlike traditional currencies, which are controlled by central banks or governments, cryptocurrencies work independently, without the need for intermediaries (Trifunović et al., 2023). This decentralization ensures that transactions are secure, transparent and protected from unauthorized actions, making them an attractive option for those who wish to avoid government intervention or censorship (Gervais et al., 2016). Moreover, the use of advanced cryptography and blockchain technology ensures that cryptocurrency transactions are virtually unhackable. The decentralized nature of blockchain technology makes it impossible for a single entity to manipulate or change transactions, providing an additional level of security for investors.

Another significant advantage of cryptocurrencies is their limited supply. Unlike traditional currencies, which central banks can print or create at will, cryptocurrencies have a fixed supply (Milenković et al., 2023). This limited supply creates a sense of scarcity, which can increase demand and increase the value of the currency (Nakamoto, 2008). In addition, a fixed supply also makes it difficult for central banks or governments to manipulate the money supply, reducing the risk of inflation and devaluation. This predictability is especially attractive in times of economic uncertainty.

Cryptocurrencies often offer lower transaction fees compared to traditional payment methods. With traditional payment systems, transaction fees can range from 1-3% of the transaction value. In contrast, cryptocurrency transactions typically have fees ranging from 0.1% to 1% of the transaction value (Pastory & Lwanga 2024). This lower cost structure makes cryptocurrencies an attractive option for micropayments and everyday transactions, where traditional payment systems can be too expensive. For investors, lower transaction fees mean increased profits and lower costs.

Cryptocurrencies are not bound by geographical boundaries or restrictions. With an internet connection, anyone with a smartphone or computer can access and trade cryptocurrencies worldwide. This global availability allows individuals from all over the world to participate in the cryptocurrency market. In addition, cryptocurrencies provide an opportunity for unbanked or unbanked individuals to access financial services that may not be available through traditional means (Janković & Golubović, 2024).

Investing in cryptocurrencies can provide a unique diversification opportunity for investors. While traditional assets such as stocks and bonds are often correlated with each other, cryptocurrencies tend to move independently (Vukosavljević et al., 2023). This lack of correlation means that investors can potentially reduce their overall risk by including cryptocurrencies in their portfolio. Moreover, cryptocurrencies offer a new source of returns that is not tied to traditional assets. Cryptocurrencies offer a variety of investment opportunities beyond buying and holding individual coins.

For example (Kyoung et al., 2023):

- Mining: Investors can participate in mining operations to earn new coins as a reward for solving complex mathematical problems.
- Investing: Investors can earn passive income by investing their coins and validating transactions on blockchain networks.
- Lending: Investors can lend coins to borrowers at interest rates that are competitive with traditional lending options.

As the market continues to evolve, it is essential for investors to understand these advantages and how they can be incorporated into their investment strategies. Whether you are a seasoned investor or just starting out, investing in cryptocurrencies offers a new frontier for growth and opportunity.

Advantages of investing in cryptocurrencies

The world of finance has witnessed a significant change in recent years, with the emergence of cryptocurrencies as a popular investment option. From Bitcoin to Ethereum, Litecoin and more, cryptocurrencies have gained widespread recognition and attention. Bitcoin has the highest recognition among the public.

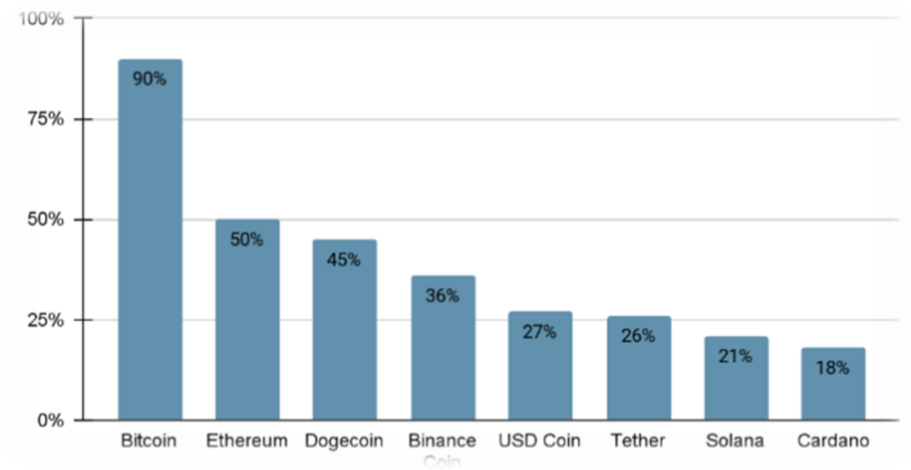

Figure 1: Recognition of cryptocurrencies in 2024

While some investors are skeptical about the potential of cryptocurrencies, many others have already reaped significant returns by investing in these digital assets. We can single out the advantages of investing in cryptocurrencies (Tomić et al., 2020):

Diversification and risk management,

potential for high yields,

security and transparency,

accessibility and liquidity,

tax advantages.

One of the primary benefits of investing in cryptocurrencies is the ability to diversify your investment portfolio. Traditional investments such as stocks, bonds and real estate can be subject to market fluctuations, economic downturns and changes in interest rates. By investing in cryptocurrencies, risk can be spread across different asset classes, reducing exposure to market volatility and increasing the potential for returns (Cheng, 2023).

Cryptocurrencies offer a unique way to diversify a portfolio because they are uncorrelated with traditional assets. This means that when one asset class performs poorly, cryptocurrencies can still provide protection against losses.

For example, during the 2008 financial crisis, gold prices soared as investors sought safe-haven assets. Similarly, cryptocurrencies such as Bitcoin and Ethereum rallied during the 2020 pandemic as investors sought alternative markets for value creation (Souza et al., 2024).

Cryptocurrencies have the potential to generate high returns due to their limited supply and increasing demand. The supply of most cryptocurrencies is limited, meaning that there is a limited amount available. As more people become aware of the benefits of investing in cryptocurrencies, demand increases, driving up prices. This scarcity-induced inflation can lead to significant price increases over time. In addition, the decentralized nature of cryptocurrencies means that they are not subject to government control or manipulation. This lack of centralization ensures that prices are governed by market forces and not by artificial incentives (Dašić et al., 2023). As a result, cryptocurrency prices can fluctuate rapidly and unpredictably, making it essential to stay informed about market trends and sentiment.

In 2014, the Financial Action Task Force (FATF) issued a report on virtual currencies, outlining guidelines for countries to combat money laundering and terrorist financing risks associated with cryptocurrencies. The report emphasized the need for countries to implement effective regulations to ensure the integrity of the financial system. The FATF guidelines have been adopted by many countries, including the European Union, which introduced the 5th Anti-Money Laundering Directive (5AMLD) which specifically targets virtual currencies (Goel & Mazhar, 2024).

Several countries have implemented or are in the process of implementing specific regulations for cryptocurrencies.

Some notable examples include:

– USA: The Commodity Futures Trading Commission (CFTC) has regulated certain types of cryptocurrency derivatives, while the Securities and Exchange Commission (SEC) has classified certain cryptocurrencies as securities.

- China: The People's Bank of China (PBOC) has banned initial coin offerings (ICOs) and implemented strict regulations on cryptocurrency exchanges.
- Japan: Japan has introduced a licensing system for cryptocurrency exchanges, requiring them to register with the Financial Services Agency (FSA).
- European Union: 5AMLD EU requires cryptocurrency exchanges and other financial institutions to implement anti-money laundering measures and know their customer.
- Singapore: Singapore has established a regulatory framework for digital payment tokens, including requirements for licensees to comply with anti-money laundering and anti-terrorist financing regulations.

Cryptocurrencies are based on blockchain technology, which provides an unparalleled level of security and transparency. The decentralized nature of the blockchain ensures that transactions are recorded on a public ledger, allowing all transactions to be tracked without a central authority. Each transaction is verified by nodes on the network through complex algorithms and cryptography, ensuring that each block is safe and secure. This decentralized approach eliminates the need for intermediaries such as banks or governments, reducing transaction fees and increasing efficiency (Ho, 2024).

Another advantage of investing in cryptocurrencies is their availability and liquidity. With the rise of online exchanges and trading platforms, it is now easier than ever to buy and sell cryptocurrencies (Digital Assets/Cryptocurrency, 2024). Many exchanges offer user-friendly interfaces, allowing beginners to start trading with minimal knowledge of the cryptocurrency market. In addition, the liquidity of the cryptocurrency market has improved significantly over the past few years. Many coins have established strong liquidity pools, making it easy to buy and sell assets quickly and efficiently.

Investing in cryptocurrencies can also offer tax benefits for some investors. In many countries, gains from cryptocurrencies are subject to capital gains tax rates rather than income tax rates. This means that investors who hold their property for a certain period can benefit from lower tax rates (Živanović & Vitomir, 2022). In addition, some countries offer special tax treatment for cryptocurrency investments, such as exemption from value added tax (VAT) or customs duties. Investors should consult a tax professional to understand their specific tax obligations and potential benefits. The use of cryptocurrencies should not present a major difficulty in principle for the basic structure of these taxes, since – bearing in mind the exchange transaction – they are usually formulated in terms of an offer not made for legal tender, but for "consideration", which is a broad term. enough to include crypto assets (Lekpek, 2022). (However, there may be practical difficulties in implementing this, some of which were touched on later, due to price volatility (which can put particular pressure on verification exactly when a transaction occurs), scope for fraud and embedding in cross-border rules). To ensure that the acquisition of cryptocurrency for fiat money is not itself subject to VAT, several countries (including Australia, Japan and South Africa) provide for an express exemption from VAT; in the EU, the Court of Justice decided in 2015 that VAT should not be applied to such transactions. The VAT treatment of fees and new cryptocurrencies received by miners also requires a clear policy stance. In principle, there seems to be no reason why - again except through the creation of a deliberate (dis)incentive - they should not be fully liable for VAT, with a corresponding right to a credit of VAT charged on input products. Although this is generally recognized as good practice, in practice many VATs exempt financial service charges. This will lead to over-taxation of business use of cryptocurrency (due to non-refundable input VAT of miners) and under-taxation of individual use (Manakhov, 2024).

Figure 2 shows the taxable events from the circulation of cryptocurrency according to the IMF methodology — taken here as Bitcoin (BTC) — highlighting their special tax policy and administrative challenges. The sender, through the miner, buys the service from the receiver using BTC, and the receiver has the option to dispose of the BTC or buy the service with BTC.

The symbol “?” indicates a particular need for policy/law clarity (Kelly et al., 2017).

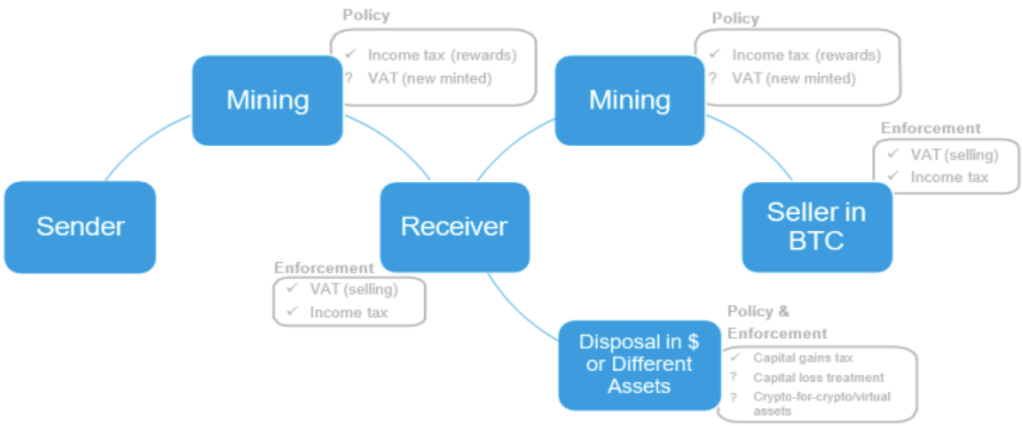

Figure 2: Taxable events in the circulation of cryptocurrencies

It is not explicitly shown here that these transactions can be peer-to-peer (P2P) or through a decentralized or centralized exchange, which does not affect the policy treatment, but affects the ability to enforce taxes (P2P is the most difficult, then decentralized and finally centralized.

Potential risks

The rapid growth of the cryptocurrency market has attracted significant attention and investment from around the world. However, with the potential for high returns comes a number of risks that investors should be aware of before investing in cryptocurrencies. We can mention the potential risks of investing in cryptocurrencies (Au et al., 2024):

- market volatility,
- lack of regulation,
- security risks,
- liquidity risks,
- counterparty risks,

- tax risks,
- reputational risks.

One of the most significant risks associated with investing in cryptocurrencies is market volatility. Cryptocurrency prices can fluctuate rapidly and unpredictably, making it difficult to determine their value. This volatility can result in significant losses if investors do not exit their positions in time. For example, Bitcoin, the most famous cryptocurrency, experienced a 70% drop in value between December 2017 and December 2018. Similarly, Ethereum, the second largest cryptocurrency by market capitalization, experienced a 90% drop in value during the same period.

Another significant risk associated with investing in cryptocurrencies is the lack of regulation. Cryptocurrencies are not subject to the same level of regulatory oversight as traditional financial instruments, such as stocks and bonds. This lack of regulation can make it difficult for investors to recover their losses if they are unable to access their accounts or fall victim to fraud. In addition, the lack of regulation can also lead to market manipulation and insider trading, which can result in significant losses for investors.

Cryptocurrencies are also subject to security risks, including hacking and theft. In 2014, Mt. Gok, one of the largest Bitcoin exchanges at the time, was hacked and lost approximately $450 million worth of Bitcoin. In addition to hacking, there is also the risk of internal theft by employees or administrators of cryptocurrency exchanges or wallets (Beavers & Godek, 2024).

Cryptocurrencies are also subject to liquidity risks, which can make it difficult for investors to sell their assets quickly or fairly. This can be particularly challenging for large investors who need to liquidate their assets quickly. For example, during times of high market volatility, investors may find it difficult to sell their cryptocurrencies at a fair price due to a lack of buyers. This can result in significant losses if investors are forced to sell their assets at a low price.

Cryptocurrencies also involve counterparty risks, which arise when one party defaults on its obligations to another party. For example, if an investor buys a cryptocurrency on a stock exchange that goes bankrupt, they may lose their investment. In addition, there is also the risk of cryptocurrency developers abandoning their projects or not fulfilling their promises, resulting in significant losses for investors.

Investing in cryptocurrencies can also involve tax risks, including uncertainty about taxation and potential penalties for non-compliance. For example, the Internal Revenue Service (IRS) considers Bitcoin and other cryptocurrencies to be property for tax purposes, meaning investors may be subject to capital gains tax on any profits they make. However, there are currently no clear guidelines on how cryptocurrencies should be taxed, which can make it difficult for investors to comply with tax laws.

Finally, investing in cryptocurrencies may involve reputational risks, including the risk that an investor's reputation may be damaged if they invest in a project that fails or is involved in a scandal. For example, if an investor invests in a cryptocurrency that is later found to be fraudulent or illegal, their reputation may be damaged as a result.

Future prospects

The cryptocurrency market has seen significant growth and development over the past decade, with many investors and institutions noticing its potential. While some have been skeptical about the long-term viability of cryptocurrencies, many others see huge potential for growth and adoption. Below we have discussed some future prospects for investing in cryptocurrencies, highlighting the opportunities and challenges that lie ahead, which we can single out as:

- increasing adoption and general recognition,
- improved regulation and infrastructure,
- increased institutional investments.

One of the most significant trends driving the growth of the cryptocurrency market is the increase in adoption and general recognition. More and more individuals, businesses and institutions are beginning to recognize the potential benefits of cryptocurrencies, leading to increased demand and investment. In 2020, the number of cryptocurrency users exceeded 100 million, and many more are expected to join in the coming years. The growing acceptance of cryptocurrencies as a legitimate form of payment has also led to increased acceptance among merchants and consumers (Bhattacharjee, 2023).

Another significant factor driving growth in the cryptocurrency market is improved regulation and infrastructure. Governments around the world are beginning to take a more nuanced approach to regulating cryptocurrencies, recognizing their potential benefits while acknowledging the need for oversight. Additionally, the development of robust infrastructure, such as exchanges, wallets, and payment processors, has made it easier for individuals to buy, sell, and use cryptocurrencies. This increased availability has attracted more investors and traders to the market.

The increased institutionalization of the cryptocurrency market is another significant trend that bodes well for its future prospects. Large financial institutions, such as hedge funds and family offices, are beginning to notice the potential returns offered by cryptocurrencies. In 2020, institutional investors accounted for over 50% of the total cryptocurrency trading volume, and many more are expected to follow in the coming years. This increased institutional investment is likely to increase prices and increase liquidity in the market (Lee & Baek, 2023; Oonagh, 2021).

New use cases and applications

Cryptocurrencies are also being explored for a wide range of new use cases and applications beyond just digital payments. For example:

- Decentralized Finance (DeFi) : Cryptocurrencies are used to create decentralized lending platforms, stablecoins and other financial instruments.
- Games: Cryptocurrencies are used to create new types of online games that offer unique rewards and experiences.

- Supply Chain Management: Cryptocurrencies are used to track inventory levels, monitor delivery times, and ensure authenticity in supply chain management.
- Artificial Intelligence (AI): Cryptocurrencies are used to power AI-powered applications that require secure and transparent transactions.

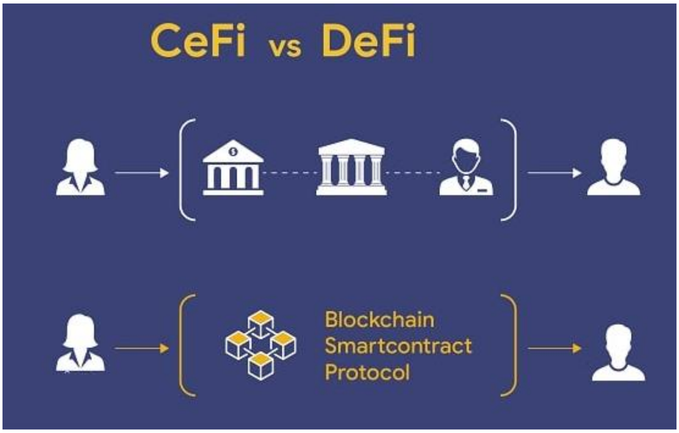

Figure 3: CeFi vs DeFi

These new use cases are likely to fuel further growth in the cryptocurrency market as more industries adopt blockchain technology.

Despite these positive trends, there are still several challenges that need to be addressed before cryptocurrencies can reach their full potential:

- Regulatory uncertainty: While some governments are beginning to regulate cryptocurrencies more strictly, others remain unclear about how they should be treated.
- Security risks: Cryptocurrencies remain vulnerable to hacking and other security risks that can lead to significant losses for investors.
- Volatility: Cryptocurrency prices can fluctuate rapidly and unpredictably, making it challenging for investors to predict their returns.

– Liquidity: Although liquidity has improved in recent years, it remains a challenge for some funds.

Conclusion

Investing in cryptocurrencies offers several advantages that make them an attractive option for savvy investors. From diversification and potential high returns to security and transparency, affordability and liquidity, and tax benefits, there are many compelling reasons to consider including cryptocurrencies in your investment portfolio. Although there are risks associated with investing in cryptocurrencies, it is important to remember that all investments carry a certain level of risk. By educating yourself on the pros and cons of investing in cryptocurrencies and staying informed about market trends and sentiment, you can make informed decisions that align with your financial goals.

As the cryptocurrency market continues to develop and mature, we are likely to see new investment opportunities. Whether you are an experienced investor or just starting out, now is an exciting time to explore the world of cryptocurrencies and discover their potential for yourself. Investing in cryptocurrencies carries a number of potential risks that investors should be aware of before investing. These risks include market volatility, lack of regulation, security risks, liquidity risks, counterparty risks, tax risks and reputational risks. While some investors may see these risks as acceptable in exchange for the potential returns offered by cryptocurrencies, others may find them too great to justify investing in these assets.

Finally, it is essential for investors to conduct thorough research and due diligence before investing in cryptocurrencies and to understand the potential risks. It is also important for investors to diversify their portfolios and not put all their eggs in one basket by investing only in cryptocurrencies. The future outlook for cryptocurrency investing is bright, with increasing adoption, improved regulation, increased institutional investment, new use cases and applications on the horizon. Although challenges remain, they can be resolved through continued innovation and collaboration between governments, institutions and individuals. For those willing to face these challenges, investing in cryptocurrencies can offer significant returns and a new frontier for growth. As with any investment opportunity, it is essential that you conduct thorough research, diversify your portfolio and consider seeking professional advice before making any investment decision.

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THE DETERMINANTION OF THE DEMAND FOR THE INTERNATIONAL RURAL DESTINATION - THE PLS MODEL

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Abstract

One of the biggest challenges facing agritourism destination managers is a clear understanding of the factors that motivate consumers to choose a particular agritourism destination, and be loyal to it, when they have countless other options. The research on the international agritourism destination, from a broader perspective, aims to analyze the market behavior of tourists and implies the necessary prior knowledge of tourists' decision-making. Therefore the subject of research is the analysis of the influence of the agritourism gastronomic experience, thorough the analysis of the influence of the factors of the agritourism gastronomic experience on the development of loyalty towards an agritourism destination. The survey analyzes international tourists' reactions to the atmosphere of catering establishments, gastronomy, services, quality and prices which affects the satisfaction and the loyalty to the agritourism destination, in our case the agritourism destinations in the Province of Vojovodina, close to the city of Novi Sad. The findings have shown that there is a statistically significant and positive association between atmosphere of agritourism catering establishments and gastronomy and satisfaction with the agritourism destination. The satisfaction with the agritourism destination has a positive relationship with the loyalty to the

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agritourism destination. The findings can help the stakeholders to improve the agritourism gastronomic experience as it covers an important role in the development of the gastronomic experience. The contribution of this paper is that it directly focuses on an aspect of the relationship between the elements of the agritourism gastronomic experience, satisfaction and loyalty that have not been previously directly addressed.

Keywords: *agritourism, international tourism, gastronomy, satisfaction, loyalty*

JEL: *F62; R15; C4*

Introduction

In the conditions of growing competition, the factors of tourist perception of a agritourism destination is an important issue. In practice, it is possible to see that some cities live and attract visitors, while some rural destinations simply die. Numerous authors indicate the connection between food and the tourist experience Forleo & Benedetto (2020), that is, they emphasize the role gastronomy in making a decision about a tourist destination Nicolett et al. (2019); Berbel-Pineda et al. (2019). Food is a factor in the development of a destination, complements the tourist offer and represents an important tourism resource Piramanayagam et al. (2020). So far, research on rural tourism in the Republic of Serbia have not paid enough attention to researching the relationship between the elements of the gastronomic experience and satisfaction with the agritourism destination, therefore this research shall fill the gap in the literature and enable the understanding of socio-economic, political, marketing and managerial factors involved in the process. The essential question that arises is to what extent the agritourism gastronomic experience and its factors (gastronomy and services, atmosphere, food quality and prices) influence international tourists to be loyal to the agritourism destinations in the Province of Vojovodina, close to the city of Novi Sad, how willing will they be to visit the agritourism destinations again.

In recent years, and especially in the period after the COVID 19 pandemic, there have been significant changes in the behavior of domestic and international tourists, which have not been sufficiently investigated. In fact, changes in the motives, preferences, and expectations of the tourists, which are important when creating an agritourism destination brand or rebranding an agritourism destination and developing loyalty, have not been sufficiently researched(Škrbić et al., 2023). The studies of the gastronomic experience in the Republic of Serbia have so far aimed to determine the potential of traditional culinary events for improving the overall tourist offer of destinations, examine the role of social networks in predicting the choice of restaurants and the gastronomic offer in Serbia, analyze the role of events and tourism in economic development (Kostić et al., 2018; Ćirić et al., 2020).

The accelerated development of the agritourism tourism has started since the nineties of the twentieght century, when realizing the importance of the agritourism tourism in the rural Europe and North America. Therefore also the countries of the Eastern Europe as well have started to develop their agritourism offer. Shapes and forms differ from country to country, depending on the type of agritourism accommodation capacities and natural-geographic features of the rural areas. The development of agritourism tourism in Serbia has been conducted spontaneously and has assumed different forms. Rural areas occupy more than 80% of the Republic and on these areas, according to the last Census, live 44% of total population. The development of agritourism tourism in the Republic of Serbia has so far gone through two phases in development - the phase of independent i.e. "spontaneous development" and the phase of "dedicated development" that began in 2008, when the Ministry of Agriculture, Forestry and Water Management decided in 2008 to invest additional funds for the development. Each region in Serbia strives to promote and develop its rural areas, i.e. it strives to promote its tourist attractions in order to initiate, among other things, the development of rural tourism.

Therefore, starting from the research of Folgado-Fernández et al. (2017), Berbel-Pineda et al. (2019) and other available knowledge, it is necessary to create a model for examining the connection between agritourism gastronomic experience and loyalty. Due to the fact that the agritourism destinations do not have a recognizable gastronomic offer that would generate a positive gastronomic experience, as well as the fact that there are no recognizable and differentiated parameters of the agritourism destinations tourist offer, we believe that there is a complete justification for the research. The rural destinations of Province of Vojvodina have not fully utilized its potential, as the studies of the gastronomic aspects of the agritourism are lacking, the gastronomic offer is undifferentiated and there are no recognizable factors that attract tourists to the agritourism destinations of Vojvodina.

The main goal of the research in the paper is to investigate the influence of the elements of the gastronomic experience in the development of loyalty towards the agritourism destinations of Vojvodina. By understanding the strength of the direct action of individual factors of the gastronomic experience, it is easier to create, on the one hand, the gastronomic offer, and on the other hand, development strategies, which should operate synergistically. The indirect effects of the research are reflected in the identification of agritourism areas that need to be developed, all with the aim of improving the socio-economic situation in the rural destinations of Vojvodina, the satisfaction of residents, tourists, etc. Because of the above, the subject of research in the paper is the analysis of the influence of the agritourism gastronomic experience, that is, the analysis of the influence of the factors of the gastronomic experience (atmosphere, gastronomy and service and quality and price) in the development of loyalty towards a certain agritourism tourism destination. After the introductory section, the authors present the theoretical and the methodological framework, which is followed by the research results, discussion and conclusions, stemming from the research.

Literature review

The gastronomic offer represents a specific segment of the culture of the tourist destination, it affects satisfaction and the intentions of tourists towards a certain destination (Berbel-Pineda et al., 2019). A positive or negative gastronomic experience in a certain tourist destination affects the development of loyalty Folgado-Fernández et al. (2017); Đurović et al. (2022) and repeated visits. Knowing the factors of the gastronomic experience, in the context of the overall picture of the agritourism destination, enables the perception of the tourist's satisfaction and the manner of the behavior. The satisfaction of the users is the starting point for improving the offer and creating strategies for the development and promotion of a certain destination (Josphine, 2021). The gastronomic experience affects the satisfaction, loyalty and future intentions of tourists towards a tourism destination (Berbel-Pineda et al., 2019; Stankov & Roganović, 2022; Kostić, 2023).

The gastronomic agritourism is becoming an area of intensive development and intensive study. Regardless of the aspect of study, gastronomic tourism is associated with food the offer of local (for example olives - Folgado-Fernández et al. 2019), traditional authentic food products, entertainment and gastronomic events (Vuković & Ružičić Mosurović, 2020; Paspalj et al., 2024; Gojković et al., 2023), tourist routes (Berbel-Pineda et al., 2019), gastronomic facilities, local culture, customs and traditions, heritage and natural resources. The green growth is related to economic policy and sustainable development policy, and can enhance also agritourism (Ignjatijević, et al. 2020).

The gastronomic experience affects the overall tourist experience, by presenting and consuming the specific food of a certain destination (Berbel-Pineda et al., 2019). Some authors point out that gastronomy is becoming a means of differentiating destinations (Santos et al., 2022), they indicate that food and wine (Vesci & Botti, 2019) can be means of self-expression and enjoyment, improving the general image of the destination or the entire region.

The gastronomy and gastronomic experience complete the image of a place, attract tourists (Ullah et al., 2022) and influence the attitude towards the destination (Berbel-Pineda et al., 2019; Piramanayagam et al., 2020). The authors explain the gastronomic experience as a positive feeling, a feeling of attraction (Babolian-Hendijani, 2016), which is influenced by several different parameters. The food is only one of the components of the gastronomic experience, and the atmosphere (Berbel-Pineda et al., 2019), communication and friendliness of the staff, events are important in the building (Japutra et al., 2022) and the like. The gastronomic experience depends on external factors and internal, that is, individual factors. The internal factors are the emotions, memory of past visits (Badu-Baiden et al., 2022), expectations and all together influence differences in tourist behavior (Şahin & Kılıçlar, 2023).

A positive gastronomic experience is directly related to the satisfaction with the tourist destination and loyalty (Folgado-Fernández et al., 2017). If the satisfaction with the tourist destination is achieved, tourists can promote those destinations, that is, satisfaction can influence various activities of tourists and prolong their stay (Ullah et al., 2022; Vladisavljević et al., 2023), increasing consumption (Đurkin Badurina et al., 2023), strengthening the emotional connection with the destination, revisits (Berbel-Pineda et al., 2019; Piramanayagam et al. et al., 2020), evoking memories (Badu-Baiden et al., 2022; Milanović, 2023) and recommendations (Ramón, 2020).

In such a situation, tourists' perceptions influence the sustainable development of the chosen tourist destination. The previous analysis of the gastronomic offer of the agritourism destinations of Vojvodina, close to the city of Novi Sad are insufficient, especially if it is known that the Province of Vojvodina is extremely multicultural in all respects. In fact, we are of the opinion that the biggest lack in the literature is empirical and econometric studies of the combined influence of parameters on satisfaction with the agritourism destinations of Vojvodina - as a chosen agritourism destination. Based on the above, the following hypotheses were set:

H1. Gastronomy and services have a positive effect on satisfaction with the agritourism destination;

H2. The atmosphere has a positive effect on satisfaction with the agritourism destination;

H3. Quality and price have a positive effect on satisfaction with the agritourism destination.

The loyalty can be understood as a repeat visit or the existence of the intention to visit and recommend the tourist destination again, and the measurement of loyalty is of particular importance when creating development strategies of a certain destination (Pavlidis & Markantonatou, 2020). The loyalty in tourism is desirable and is an indicator of the success of a destination (Santos et al., 2022; Dašić et al, 2023), it is important to attract future tourists, ensure frequent visits and increase income. Folgado-Fernández et al. (2017) point to the relationship between destination image and gastronomy, and point out that the number of tourists looking for specific and pleasant experiences at destinations is increasing. The distinctiveness of the local cuisine and local manifestations, combined with other characteristics of the agritourism destination, can become a decisive factor in the success of the destination and as such enhance the experience and memory of a certain destination. Thus, experiences influence the level of tourist loyalty and determine subsequent actions (Stavrianea & Kamenidou, 2022). In order to promote the destination, it is necessary to know the factors of the gastronomic experience (Kovalenko et al., 2023) and the level of tourist satisfaction. The trust that a customer develops towards a product or service, which is greater in relation to a competing product or service, turns into loyalty and leads to the willingness to pay a higher price. In measuring loyalty, several approaches and methodologies have been developed, but there is no single definition of loyalty to a destination. The authors noted that loyalty is seen as a consequence of multidimensional cognitive attitudes. The results of earlier research are limited due to the fact that the choice of parameters that were investigated was modest or the multiple influence of variables was not examined, as well as due to the applied analysis methods. Authors in Serbia investigated the role of tourism in economic development (Janković et al., 2020; Kostić et al., 2018; Ćirić et al., 2020), manifestations and especially culinary manifestations in the context of improving the tourist offer (Zrnić et al., 2021; Milenković et al., 2023). The authors further investigated the role of social networks in gastronomic tourism, while there is a lack of improved studies of loyalty towards specific rural destinations, such as research by Miljanović (2016). Because of the above, the hypothesis was put forward:

H4: Satisfaction with the agritourism destination has a positive effect on the development of loyalty towards the agritourism destination.

Material and methods

The research analyzes tourists' reactions to the atmosphere of agritourism catering establishments, gastronomy, services, quality and prices, that is, the gastronomic experience, which further affects satisfaction and the creation of loyalty to the agritourism destination. In the research, there is a need to first define the terms gastronomic experience, and then carry out a quantitative assessment of the perception of tourists and establish the strength of the influence of variables on the development of loyalty to the agritourism destination(Milenković, 2023). In order to confirm the positive influence of the gastronomic experience, as pointed out by Folgado-Fernández et al. (2017), Berbel-Pineda et al. (2019), the research in the paper represents a comprehensive and improved approach in the analysis of loyalty towards the agritourism destination. The research has been conducted by surveying international tourists at agritourism locations in the period of May-October 2022. The surveys that have been collected in full have included 1591 international tourists based on convenience sampling at the various locations, restaurant and bar locations in the agritourism destination close to the City of Novi Sad. The survey has been created in such a way as to enable the presentation of the profile of the respondents, so it contains questions about the socio-demographic characteristics of the respondents. In addition, the survey has 45 statements (ATM (atmosphere) - 12, GAS (gastronomy and services) - 10 and QAP (quality and price) - 8 statements, LOY (loyalty) - 8 statements and SAT (satisfaction with the tourist destination) - 7 statements, which the respondents were to rate these claims from 1 to 5 (Likert scale).

Descriptive statistical analysis (mean value, standard deviation, variance, measures of asymmetry and flatness) have been employed in the analysis of the received answers. Then, the normality of the data distribution (Kolmogorov - Smirnov test) and the reliability of the variables (Cronbach's alpha) in representing the latent constructs of the model were examined. Data analysis has been conducted by SPSS software, ver. 26 and PLS Smart4. The PLS model (partial least squares method) is a linear regression method used to calculate the regression effect of independent variables, i.e. constructs (each construct is represented by a large number of elements), on the dependent variable (the dependent variable is also represented by several elements).

Results

The results of the descriptive statistics (Table 1) show that 58% of the sample were female and 42% male respondents. The majority of the respondents have over 41 years of age (70.08%) and have a high school diploma (37.96%).

Table 1. Gender, age and education of respondents

Gender		%	Age		%	Education		%
Male	668	41.99	Over 60	110	6.91	High school diploma	604	37.96

Female	923	58.01	51-60	637	40.04	Professional school diploma	413	25.96
			41-50	264	23.13	Higher educational diploma (BA)	429	26.96
			31-40	368	16.59	Other (master's degree. PhD)	145	9.11
			21-30	140	8.80			
			20	72	4.53			

Source: Author's calculation

The results show that the variables have a mean score of QAP - 4.718 (std.dev. 0.6); GAS – 4.036 (std.dev. 0.970) and ATM – 2.868 (std.dev. 1.519). The Skewness coefficient ranges from -2.119 to 0.039. The Skewness values show a negatively asymmetric distribution in QAP and GAS. The kurtosis coefficients range from -1.354 to 3.491 (Table 2).

Table 2. Descriptive values for the variables of gastronomic experience

	Operability Definition	Mean	Standard Deviation	Kurtosis	Skewness
Gastronomic experience	Position and appearance of the place	4.352	0.898	1.466	-1.366
	Lighting and decoration of the place	4.160	0.881	0.499	-0.896
	Visibility of the food preparation area	4.099	0.818	2.769	-1.555
	Availability of non-smoking areas	4.001	0.947	0.124	-0.719
	Type and volume of music, fun music	3.916	1.025	-0.222	-0.671
	Guest safety	3.972	1.113	0.202	-0.952
	Attractions and fun activities in the place	3.546	1.083	-0.416	-0.386
	Convenient location	4.095	0.935	0.202	-0.861
	A comfortable, relaxing place	4.100	0.938	0.732	-0.964
	Glamor and extravagance	3.780	0.934	0.346	-0.888
	Clarity of information in and around the place	4.119	1.019	0.522	-1.054
	Telecommunications, Wi-fi internet are good	3.972	1.019	0.275	-0.855
Gastronomy and service	Offer and tastings of food and drinks	3.991	0.977	0.023	-0.756
	The quality of the dishes	4.029	1.015	0.212	-0.890
	Professionalism and competence of the staff	3.644	1.089	-0.567	-0.377
	Hospitality and knowledge of foreign languages	3.616	1.107	-0.603	-0.378

	Helpful and attentive staff	3.525	1.168	-0.610	-0.397
	Efficient, fast service	3.531	1.181	-0.414	-0.527
	Good visual aspect of food	3.426	1.145	-0.507	-0.387
	Cleanliness in the facility and staff	4.026	1.014	0.334	-0.919
	Translated menu, interesting menu	3.938	0.991	0.028	-0.713
	A place frequented by local guests	3.100	1.319	-1.015	-0.194
Quality and price	Abundance of servings	3.072	1.313	-1.031	-0.187
	Good value of food for money	3.071	1.281	-0.937	-0.149
	Availability of traditional and domestic/local food	3.745	0.993	-0.006	-0.525
	Hygienic preparation of food	3.602	1.025	-0.286	-0.420
	Innovative, interesting and new dishes and tastes	3.708	0.970	-0.182	-0.408
	Variety of food and drinks	3.495	1.057	-0.396	-0.360
	Freshness, taste, smell and quality and healthy ingredients and dishes	3.743	0.935	0.078	-0.495
	Price of food and drinks	3.511	1.045	-0.158	-0.438
Satisfaction	This is an unforgettable gastronomic experience and tourist destination	3.530	1.054	-0.509	-0.305
	Expectations related to the destination have been met	3.593	1.033	-0.272	-0.446
	The gastronomic experience has enhanced the travel experience	3.593	1.059	-0.086	-0.555
	Traveling to a destination is worth the time and effort	3.622	1.042	-0.310	-0.442

	The gastronomic experience was very stimulating	3.288	1.585	-1.424	-0.350
	The local food products and the way they were prepared were exciting and interesting	3.160	1.511	-1.372	-0.255
	My level of satisfaction with the destination is high	2.467	1.506	-1.317	0.426
Loyality	**Operability Definition**	2.557	1.474	-1.304	0.336
Loyality	I tend to repeat a visit to a tourist destination if I fall in love with it	4.278	1.069	1.264	-1.443
	I will recommend this destination for its gastronomy and local products	4.082	1.170	1.280	-1.416
	After my experience, I think I will return to the destination to enjoy its gastronomy again	3.646	1.197	-0.397	-0.627
	I will recommend the destination because it enriched my culinary life	3.553	1.412	-1.048	-0.495
	I will recommend the destination because it enriched my lifestyle	2.730	1.258	-0.937	0.065
	I will recommend the destination because it enriched my social and intellectual life	4.421	0.895	3.982	-1.899
	I will share the experience with family and friends	4.765	0.520	3.736	-2.158
	I will recommend the destination because it took me away from my daily routine	4.780	0.565	4.573	-2.450

Source: Author's calculation

The assessment of the reflective measurement model began with the assessment of the reliability of the loading of variables - Construct reliability and validity. The variables whose factor loading is greater than 0.7 have been kept in the model (Table 3).

Table 3. Values of standardized factor loadings and the results of the analysis of the reflective measurement model

Variable	*path coefficients*	Construct reliability and validity	Variable	*path coefficients*	Construct reliability and validity
QAP1	0.799	Cronbach's alpha =0.821 CR (rho_a) = 0.871 CR (rho_c) = 0.891 AVE = 0.733	SAT1	0.911	Cronbach's alpha = 0.894 CR (rho_a) = 0.900 CR (rho_c) = 0.927 AVE = 0.760
			SAT2	0.899	
QAP 2	0.891		SAT3	0.801	
QAP 3	0.875		SAT4	0.872	
ATM1	0.898	Cronbach's alpha = 0.883 CR (rho_a) = 0.947 CR (rho_c) = 0.914 AVE = 0.726	LOY1	0.820	Cronbach's alpha = 0.834 CR (rho_a) = 0.836 CR (rho_c) = 0.889 AVE = 0.668
ATM2	0.821		LOY2	0.770	
ATM 3	0.807		LOY3	0.851	
ATM4	0.879		LOY4	0.827	
GAS1	0.821	Cronbach's alpha = 0.849 CR (rho_a) = 0.852 CR (rho_c) = 0.893 AVE = 0.625			
GAS2	0.709				
GAS3	0.765				
GAS4	0.813				
GAS5	0.844				

Source: Author's calculation

The result of the analysis of the reflective measurement model, which was carried out by the analysis of standardized factor loadings, shows that the model consists of variables with a loading greater than 0.7. The values of the Cronbach alpha coefficients range from 0.821 to 0.894 and indicate high reliability. The composite reliability score — CR has values from 0.836 to 0.947, and from 0.889 to 0.927 and indicate good reliability and existence of internal connection. The convergent validity score – AVE is in the range of 0.625 - 0.760, i.e. AVE > 0.5.

Discriminant validity analysis has been performed using HTMT values and Fornell Larcker criteria. The values of the cross-standardized factor loadings of the reflective measurement model are presented below in the Table 4.

Table 4. HTMT and Fornell Larcker criteria of the measurement model

HTMT					*Fornell-Larcker criterion*					
	ATM	GAS	LOY	QAP		ATM	GAS	LOY	QAP	SAT
ATM					ATM	.852				
GAS	.182				GAS	.157	.791			
LOY	.257	.439			LOY	.240	.370	.817		
QAP	.065	.068	.024		QAP	.057	.059	.019	.856	
SAT	.237	.579	.720	.058	SAT	.235	.511	.623	.053	.872

Source: Author's calculation

Analysis of the results of the structural ie internal model

As part of the analysis of the structural model, the relationship between the variables ATM, GAS and QAP and SAT) and SAT and LOY has been examined. In the analyzed model, the independent variables ATM and the dependent/independent variable SAT are endogenous, while the dependent variable business performance - LOY is exogenous.

Table 5. Inner VIF Values, R-square Values and f2

Inner VIF Values			R-square Values			f2		
	SAT	ATM	0.034		R2 adjusted		SAT	LOY
ATM	1.028	GAS	0.321		0.285	ATM	0.034	
GAS	1.028	QAP	0.000		0.388	GAS	0.321	

QAP	1.006	SAT		0.634		QAP	0.000	
SAT			SAT	LOY		SAT		0.634

Source: Author's calculation

The results in the Table 5 of the collinearity between latent constructs (VIF) ranges from 1.000-1.028, that is, the obtained values are less than 3, which means that there is no problem of collinearity in the model. The results of the correlation, i.e. the regression influence, indicate a correlation between the variables of gastronomic experience and satisfaction (0.286). The correlation between SAT and LOY is stronger (0.388). In the model, the value of the corrected coefficient of determination (eng. R2 adjusted) indicates the percentage in which the independent variables explain the dependent variable - SAT and LOY (there is a weak and moderate influence). Finally, the significance testing of the structural model and the confirmation of the hypotheses has been carried out (Table 6).

Table 6. Results of structural model analysis and path coefficients in the model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	2.5%	97.5%	
Total indirect effects								
ATM -> LOY	.098	.099	.013	7.646	.000	.075	.125	+
GAS -> LOY	.302	.303	.016	18.677	.000	.271	.335	+
QAP -> LOY	.009	.012	.012	.766	.444	-.012	.035	-
Total effects								
ATM -> SAT	.158	.159	.020	8.080	.000	.121	.197	+
GAS -> SAT	.486	.486	.021	23.606	.000	.444	.525	+
QAP -> SAT	.015	.019	.020	.766	.444	-.019	.057	-
SAT -> LOY	.623	.623	.019	33.676	.000	.586	.659	+
Specific indirect effects								
ATM -> SAT -> LOY	.098	.099	.013	7.646	.000	.075	.125	+
QAP -> SAT -> LOY	.009	.012	.012	.766	.444	-.012	.035	-
GAS -> SAT -> LOY	.302	.303	.016	18.677	.000	.271	.335	+

Source: Author's calculation

H1: There is a statistically significant and positive association between ATM and SAT, has been confirmed due to the empirical relationship ($\beta = 0.158$; $t = 8.080$) which is statistically significant at the $p < 0.000$ level. The population is with 97.5% probability in the confidence interval from 0.121 to 0.197.

H2: There is a statistically significant and positive association between GAS and SAT, has been confirmed. The empirical relationship is statistically significant and persistent ($\beta = 0.486$; $t = 23.606$). The population is with 97.5% probability in the confidence interval from 0.444 to 0.525.

H3: There is a statistically significant and positive association between QAP and SAT, has been rejected due to a exisitng empirical relationship ($\beta = 0.015$; $t = .766$; $p=0.444$) and statistical significance at the 97.55% probability in the confidence interval from -0.019 – 0.057.

H4: There is a statistically significant and positive relationship between SAT and LOY has been confirmed due to the consistent empirical relationship ($\beta = 0.623$; $t = 33.676$; $p=0.000$) and statistical significance at the 97.55% probability in the confidence interval from 0.586 – 0.659.

Discussion

Earlier studies of the gastronomic experience in the Republic of Serbia have pointed to the potential of traditional culinary events for improving the overall tourist offer of destinations (Zrnić et al., 2021), the choice of restaurants, etc. the overall economic development (Janković et al., 2020; Kostić et al., 2018; Ćirić et al., 2020B N). Therefore, the models developed by Berbel-Pineda et al. (2019) examined the partial dependence of gastronomic experience and loyalty (Berbel-Pineda et al., 2019). On the other hand, the research of Folgado-Fernández et al. (2019) states the structural element, as a variable that affects loyalty, which contains gastronomic offer and gastronomic experience as constituent elements. Dinis et al (2019) have developed an empirical model showing that intentions are important but insufficient to explain behaviour, and other factors such as lodgement location, business success, manager's residence, level of education, and past professional experience, are crucial to explain the adoption of local development practices by local hosts. The developed model represents the improvement of the mentioned models, by introducing the gastronomic experience as new variables in the research. The results of earlier research confirmed the positive influence of gastronomic experience on satisfaction with a particular destination, which results in the development of loyalty and the repeated visits (Danylyshyn et al., 2020).

The gastronomic experience, made up of determinants (gastronomy and food, atmosphere and quality and price), affects the tourist experience, which is in line with the previously conducted research (Forleo & Benedetto, 2020). The research findings have shown that the respondents have rated the Atmosphere of the hospitality facility with the highest rating (4.009; stand.dev 0.968), and the best rated were: Position and appearance of the facility; Visibility of food preparation areas, Availability of non-smoking areas and Clarity of information in and around the facility, which is consistent with the findings (Moral-Cuadra et al., 2020). The respondents in the agritoursim destinations prefer the traditional, ie. home made/local food, which is in line with the research of Henderson (2009). The food should preferably indicate history (Baldacchino, 2015), tradition, local culture, history and customs (Pavlidis & Markantonatou, 2020; Babolian-Hendijani et al., 2013); that it is innovative and interesting, i.e. or as the authors call it the specific food of a certain destination (Berbel-Pineda et al., 2019; Ji et al., 2016; Yılmaz & Özdemir, 2015). The above mentioned statements were evaluated by the respondents with 3.745 (stand.dev 0.993) and 3.708 (stand.dev. 0.970) respectively. It is especially important that the food is freshly prepared, tasty, high-quality and healthy in the agritourism destinations (3.743, stand.dev. 0.935), which is in accordance with the findings of Figueroa et al (2021).

The variable Gastronomy and service has been rated by respondents with 3,683 (stand.dev.1.101) and the best rated statements were: Hospitality and knowledge of foreign languages, Cleanliness of the facility and staff, and Offer and tasting of food and beverages (Hall et al., 2003; Josphine, 2021). The total gastronomic experience was rated 3,728 (stand.dev 1,048) and indicates the attitude of tourists that the mentioned factors are important for achieving a positive experience, as well as that it affects satisfaction and loyalty to the agritourism destinations. The gastronomic experience is created and developed, sought after (Pavlidis & Markantonatou, 2020) and becomes a factor of tourists' satisfaction with a agritourism destination.

In terms of agritourism destination satisfaction, the most significant variables for the model are: Expectations related to the destination are fulfilled and, as respondents state, it is worth the time and effort, which is in line with the conclusions of Yasami et al (2021). The attitude that the Gastronomic Experience has improved the travel experience has been rated with 3.593 (stand.dev.1.059), which is in line with the findings of Piramanayagam et al. (2020); Pavlidis & Markantonatou (2020).

Therefore, the gastronomic experience affects the overall agritourism experience, differentiates and improves the image of the destination (Manola & Koufadakis, 2020) and influences satisfaction towards the destination (Berbel-Pineda et al., 2019; Piramanayagam et al., 2020). The research confirms the influence of the gastronomic experience on satisfaction and loyalty towards the agritourism destination, for the variables atmosphere and gastronomy and service, which is in line with the conclusions of Vázquez-Martinez et al. (2019). The strongest total indirect effects and total effects on satisfaction and loyalty are present in Gastronomy and service, which is in accordance with the findings (Berbel-Pineda et al., 2019). The role of atmosphere on satisfaction and loyalty is significant, which is in accordance with the findings (Babolian-Hendijani, 2016).

Finally, it can be emphasized that hypothesis H4 was confirmed, i.e. total effects and specific indirect effects between satisfaction and loyalty were established, which is in line with the conclusions (Marinković et al., 2014). The satisfaction with the gastronomic service, affects the later behavior of tourists, and as research has shown, the satisfaction depends on the expectations, overall experiential contribution, stimulating and interesting travel, memories, which is in line with the findings.

The research findings have confirmed the high impact of satisfaction on loyalty, so tourists will be ready to repeat the visit to the agritourism destinations, which is in line with the findings (Berbel-Pineda et al., 2019; Folgado-Fernández et al., 2019). The loyal tourists will recommend the agritourism destination, share the experience or extend their stay, which is in line with the findings.

Conclusion

The tourism product represents a wide range of tangible and intangible benefits that the customer acquires by purchasing the product and services. Good agritourism destination implies the establishment of a product at the level of a specific rural tourism destination and stems from the needs, demands and wishes of consumers. The agritourism destination that satisfies the consumer directly depends on the availability of all elements of the rural tourism offer, and implies a combination of the elements, such as its natural, cultural and social attractiveness of the rural destination; conditions for the stay and services in the agritourism destination and accessibility of the agritourism destination in terms of costs, speed and comfort of reaching the rural destination. In conditions of rapid and turbulent changes in the environment, it is very important to monitor changes in the strategic position of the agritourism destination in the tourist market over time.

The tourist traffic in the agritourism destination, income from agritourism destination and additional research should serve as the primary basis for any attempt to improve the position of the chosen agritourism destination. Bearing in mind the constant changes in the wishes and demands of consumers/tourists, the agritourism destination that continuously offers the same products and promotion in perspective may worsen its current position in the market. Better positioning can be achieved by changes in the value of the offer, but also by changes in image. The agritourism destination positioning is closely related to its’ branding, since it represents the differentiation of the product in the consumer's mind compared to the competition based on the superior characteristics that the tourist product possesses. The specificity of the agritourism destination also stems from the peculiarity of including the gastronomic attractiveness of the rural destination in the tourist offer.

When taking into account the entire heritage of Vojvodina, cultural - historical and natural, it can be concluded without exaggeration that this part has a huge agritourism tourism potential. In order that a agritourism destination operates successfully and makes a profit, it is necessary to efficiently and rationally manage its business processes and existing resources. This means making a series of economic choices on the activation of available resources in the gastronomic experience, made up of determinants (gastronomy and food, atmosphere and quality and price), that affects the agritourism experience. The research findings have confirmed the high impact of satisfaction on loyalty, so international tourists will be ready to repeat the visit. The natural position of the agritourism destination can also be seen as the reason why the target segment of tourists is interested in choosing a specific destination. As the gastronomic experience influences the satisfaction and loyalty towards the agritourism destination the ultimate goal of the successful destination positioning is to achieve a sustainable competitive advantage, which can be maintained for a long period of time.

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ACHIEVED RESULTS AND PERSPECTIVES FOR FURTHER DEVELOPMENT OF SMALL AND MEDIUM-SIZED ENTERPRISES: STATISTICAL FINDINGS AND ANALYSIS

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Abstract

Small and medium-sized enterprises are a key part of every national economy and represent a factor of economic and social stability. In particular, entrepreneurial organizations are recognized as drivers of economic development, because they encourage the introduction of new technologies and have a direct impact on the level of investments and aggregate demand in terms of macroeconomic indicators. Also, this type of organizations contributes to solving the problem of unemployment and unequal distribution of wages. The need for strategic support and development of small and medium enterprises at the state level is permanent. In the past, these entities have been hit by the pandemic caused by the Covid-19 virus, inflation and digitization.

The subject of the paper is the results review of the small and medium-sized enterprises development in Serbia, as well as the perspective of their further growth. Taking into account the effect of quality standards on business results, the connection of small and medium-sized enterprises with scientific and research institutions, but also the connection between the same organizations on the market, the authors propose certain improvements for their development. The key elements are based on the adequate and correct diagnosis of the mentioned connections.

The research sample was purposive, which included companies in each of the 5 regions of the Republic of Serbia (n=112). The importance of quality standards and cooperation with faculties and scientific research institutions was established. It has been proven that the biggest obstacles in the development of the business of small and medium-sized enterprises are administrative procedures, as well as fiscal appropriation, and that the biggest impact on future business prospects is the adopted quality standard, investment in modern equipment, innovation, new knowledge and the introduction of new production lines.

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Introduction

Small and medium-sized enterprises play a key role in the world economy and have not been a novelty in the world for a long time. Immediately after economic sanctions were canceled in Serbia at the beginning of the 21st century, significant efforts were made to affirm the entrepreneurial sector. Since 2001, numerous systemic measures have been adopted to encourage development. Those measures were divided into three key segments: 1) formulation of development policy; 2) institutional support; 3) financial and non-financial support. In the further course of events in 2003, the Strategy for the Development of Small and Medium Enterprises and Entrepreneurship for the period from 2003 to 2008 was adopted. The main goal of the strategy is to make the sector of small and medium-sized enterprises in Serbia more competitive, based on planning support that is primarily aimed at creating a more favorable business environment. In the following period, two more strategies were adopted: 1) Strategy of competitiveness and innovation of small and medium-sized enterprises for the period from 2008 to 2013; 2) Strategy for supporting the development of small and medium-sized enterprises, entrepreneurship and competitiveness for the period from 2015 to 2020. All the donated strategies were aligned with the documents that represent the official policy framework for the development of the SME sector at the EU level. The modern development of the competitiveness of small and medium-sized enterprises is impossible without the introduction of new knowledge, skills and abilities at the organizational level. In addition, cooperation with external entities represents a key turning point in increasing the innovative and sustainable capacities of the organization, because small and medium-sized enterprises due to limited resources do not have enough capacity for long-term business sustainability, as well as for maintaining a competitive advantage. Close connection with scientific and research institutions should be one of the main tasks of the entrepreneurial sector in Serbia, in order to effectively absorb new knowledge and use research results that are close to their business strategies.

Given that innovation processes include different experimental phases, as well as risk tolerance, cooperation with scientific research subjects would enable organizations to access the most up-to-date proven results in order to strengthen the overall capabilities of small and medium-sized enterprises. And the main focus in this work is small and medium-sized enterprises, which form the basis of a healthy economy of every society. The importance of the cooperation of these organizations with external stakeholders is related to the limited resources that small and medium-sized enterprises have at their disposal. Without strengthening innovative potential, organizations will not be able to maintain a competitive advantage in the modern market, which can directly affect their survival in the long term. Therefore, this paper will examine the level of connection between small and medium-sized enterprises with scientific and research institutions in order to increase the general quality of organizational performance as well as their perspective for further development.

Factors of competitiveness in the entrepreneurial environment

According to Kanth (2015), competitiveness represents an economy that is recognized at multiple levels: national, industrial, and regional. The interpretation of competitiveness is introduced by comparing the performance of either the same industry or geographical area. When it comes to developing countries, competitiveness is viewed in a different way - a "temporary way" that is expected to achieve limited "internationalization effects". The most important component of the economic and management mechanism for creating a company's competitiveness is quality management. Also, one of the factors for sustainable business are intangible resources where the company's reputation stands out in creating a competitive advantage (Đervida et al., 2017). Building a reputation requires intensive and long-term investment.

Also, Boruke and Roper (2017) state that quality improvement and innovation are correlated within organizations, and while it seems that quality management most often benefits innovation; that relationship does not always have to be positive. In addition, different behavioral or organizational mechanisms may be used in terms of hard and/or soft elements of quality management practices. Quality standards encourage SMEs to innovate and research in order to meet or exceed set standards. SMEs that adhere to quality standards often attract greater investor confidence, while global markets also require compliance with certain standards in order to put a product or service on the market.

Globally oriented companies implement specific tools and methods to improve quality (Zhussipova et al., 2021). More attention is directed towards the market and customers, so the quality of the product in terms of requirements, reduction of costs, and time is a priority. Also, Maljugić et al. (2021) point out that the introduction of quality systems in small and medium-sized enterprises should not be seen as a cost but as an investment in improvements that bring better results in the long term. Often, small and medium-sized enterprises also need certain transformations that can be caused by long-term unresolved problems, new challenges coming from the market or new trends and changes in the external environment. Transformations can refer to: company strategies, company structure and business processes, and mostly lead to changes in the approach to business management, employee management, employee attitudes, company's innovative potential, etc. (Litvaj et al., 2023).

Miletić, Ćurčić (2021) point out that various factors have an impact on the productivity of the business of different companies - procurement of modern technological solutions and equipment, standardization of business quality, continuous improvement of employees' knowledge, investment in the development of domestic brands, etc. With the help of quality standards, it is possible to provide additional support. It is emphasized that with their help it is possible to predict potential errors, as well as that they are of great benefit in terms of the customer's wishes, i.e. discovering what is wanted on the market. Thanks to this, organizations can focus on safe and profitable decisions (Tadić et al., 2022).

Therefore, when talking about the skills that employees in the entrepreneurial sector should have, their level plays a significant role in economic development and success. First of all, it affects the level of productivity and innovative power of the company. One of the key recommendations of international institutions on how to develop countries - and it is part of the Washington Consensus - is to increase spending on education and training. This recommendation implies higher state expenditures. However, a more equal distribution of income also allows the poorer sections of society to spend more money on education and training. Without denying the important role of education, it is necessary to emphasize that education alone is not enough to initiate development, but it is necessary to be incorporated into a package of strategies. Otherwise, unemployed academics will migrate to other countries (Solga, 2016). This means that the limitations faced by small and medium-sized enterprises in terms of performance are mainly the result of insufficient skills in management and leadership, but also in the perception of global tendencies in business (Umar et al., 2022). Based on this, it is possible to point out that insufficient productivity of employees in small and medium-sized enterprises requires thorough research, since it has been proven that this sector is the driver of the economy in developed countries as well as in growing economies such as Serbia.

Innovation and cooperation in the function of sustainable development of small and medium-sized enterprises

Diversified literature on innovation refers to a number of factors that potentially influence the general readiness of small and medium enterprises to recognize innovation as a trigger for increasing the overall performance of the organization (Bishop et al., 2011). It basically refers to creating an organizational culture that is passionate about innovation and creativity of internal stakeholders. A culture set in this way contributes to the mobilization of other factors that support the overall quality and perspective of the development of small and medium-sized enterprises. Although results can be found in the relevant literature that show a positive correlation between innovation and the development potential of small and medium-sized enterprises, there is an insufficient number of studies linking the influence of external factors on the innovative tendencies of these organizations. Emergency partners, such as scientific and research organizations, represent alternative sources for small and medium-sized enterprises for gathering information and modern knowledge in order to develop internal potentials and consider innovative ideas (Herzog, Leker, 2010). In order for organizations to move towards further incremental development, it is necessary that they are not isolated from the research process that they can obtain from external partners.

The model of open innovation and enterprise development perspective suggests that external sources are in a significant number of cases more relevant than internal sources of knowledge. It can be stated that in modern business trends, research organizations represent one of the most important sources of information and knowledge, due to large stores of competence and expertise, as well as the possibility of continuous research procedures. Scientific and research organizations provide companies with complementary knowledge, technologies and skills that facilitate complex and risky activities, as well as the possibility of further development of organizational content (Huizingh, 2011). The conclusion is that active cooperation with research organizations increases the adaptive capacity of small and medium-sized enterprises to find technological discoveries or innovative work methods, which exceeded the internal possibilities of development, precisely because of the limited resources that such organizations have at their disposal. Earlier studies indicate clear advantages of cooperation between scientific institutions and entrepreneurial organizations, especially in terms of technological innovation. Although previous research mostly focuses on the technological aspect of innovation, there are few who emphasize the importance of developing the overall innovative culture of the organization, which is established through such collaboration. This is justified by the fact that research organizations employ researchers with a high level of knowledge in their fields who, in addition, possess creativity, enthusiasm, communication skills, the ability to learn and take risks, etc. Therefore, it can be expected that the innovative culture of the organization, as well as the development potential, would be strengthened by its interaction with the wider scientific community.

It is a fact that organizations and research institutions work according to different systems. Research organizations rely on the principles of 'public science' and the free, rapid and objective dissemination of research results, while entrepreneurial organizations rely on the principles of 'private science' such as the appropriation and commercialization of secondary research outcomes (Lazzarotti, Manzini, 2009). Such divergent principles create differences in terms of goals, incentives, structures and resources. These differences can create misunderstandings and difficulties in the cooperation of the two parties, but they can also increase the chances of effective acquisition of new knowledge. Cooperation with research organizations primarily refers to research learning, which enables solving problems in real time, managing new knowledge and skills, supported by empirical facts and outcomes. The above attributes encourage the innovative envelope of organizations. The direct interaction of employees in organizations with relevant scientists increases the adaptive capacity of each individual in terms of innovation, creativity and acquisition of new knowledge, which is especially relevant for small and medium-sized enterprises that, due to scarce or limited resources, cannot realize this within themselves.

However, it is necessary to point out the most common barriers to the commercialization of scientific research. They represent: an overload of teaching and administrative tasks related to teaching, in the case of teaching staff, i.e. the absence of commercialization's impact on the academic career, both for researchers and teachers (Petrov, 2022). Academic engagement does not only depend on personal affinities and individual factors to influence scientists, but also depends on organizational and institutional factors. Therefore, they are not new: The entrepreneurial university model, which is expected to take an active role in the commercialization of knowledge through patenting and licensing, that is, the establishment of spin-off companies (Etzkowitz, Leydesdorff, 2000); and the Regional Innovation System Model, according to which universities represent important generators of knowledge that collaborate with regional actors, leading to systemic innovation (Isaksen et al., 2018).

In his study from 2017. Hansjörg and Zeyner pointed out that depending on the economic sector, SMEs require people with certain types of education. For example, it induces that tertiary education would be necessary for high-tech startups, while on the other hand, traditional SMEs need skilled workers who are continuously educated and trained throughout their professional life. However, in research "How to involve small and medium-sized enterprises in universities", Pereira and Franco (2023) came to clearer results in the domain of enterprises, but less clear in the region, which implies that cooperation between universities and small and medium-sized enterprises it still does not represent a clearly expressed benefit, and only under that precondition, companies would be more aware of the results.

In addition, it can be stated that small firms invest more in product innovation than in process innovation (Hasan, 2017). It is clear from this trend that the most frequent approach is to research the effect of product innovation on market opportunities. On the other hand, it is emphasized that it is necessary that companies should apply a culture of innovation in their practices, in order to enable them to succeed in terms of innovative products and services. Therefore, empirical evidence suggests that it is important to build, maintain and promote a culture of innovation, if companies want to remain successful and create new products, which, among other things, indicates the necessity of cooperation between small and medium-sized companies with scientific institutions. The ability to innovate is not only necessary for companies to continue to exist in today's economy, but is also a significant factor in growth, productivity and competitiveness (Miočević, 2022).

The basic assumption for the creation of knowledge transfer between scientific and research institutions and companies is interaction. Due to the lack of interaction, research results and the needs of knowledge users often cannot be combined in the intentions of fulfilling a certain goal. Interaction represents the flow of a certain amount of knowledge, with the exact volume and quality (Peranović, Ćirić, 2015). In their research, Adam & Alarifi (2021) provided empirical evidence on the importance of external support (whether governmental or non-governmental) for the survival of small and medium-sized enterprises in times of crisis. The research has important implications for governments and policy makers, who should develop policies to provide more incentive packages for SMEs that include financing, advisory services and training.

External support to SMEs can be direct or indirect. Direct external support usually takes the form of financial assistance used for the acquisition of basic assets, the purchase of technology, or the implementation of development plans in order to solve the problem of lack of funds. It is usually provided in accordance with specific government policies. According to Adžić et al. (2023) compliance with other "non-tax" instruments of local economic policy is required. Indirect external support usually takes the form of consultations, ideas and advice provided by experts, advisory offices or scientific-educational institutions in order to eliminate the lack of knowledge and increase the amount of available information. Despite the variety and importance of external support for small and medium-sized enterprises, it is noticeable that they benefit little from such support due to the lack of information and awareness about this form of support and the inability of the company's management to choose the appropriate type of incentive (Adam, Alarifi, 2021).

In the scientific literature, it is possible to find many authors who emphasize a significant positive relationship between innovation and the performance of small and medium enterprises (Kian, Li, 2003; Rosenbusch et al., 2011; Verhees, Meulenberg, 2004; Yıldız et al., 2014). Research has also indicated the positive impact of innovation capabilities on the performance of small and medium-sized enterprises (O'Cass, Sok, 2014; Oura et al., 2016; Zhang et al., 2018). Zulu-Chisanga et al. (2016) note that the efforts made to develop various innovations are the primary reason for improving the financial performance of SMEs.

Data and methodological approach

The primary analysis was created to look at certain aspects of the business of small and medium-sized enterprises, related to the achieved results, perspectives of further development and the creation of business strategies in order to improve business growth and development. Accordingly, the following research questions were defined:

Q1. How and to what extent does the existence of quality standards affect the results and perspectives of further development?

Q2. How and to what extent does cooperation with scientific research institutions affect the results and perspectives of further development?

Q3. How and to what extent does business connection affect the results and perspectives of further development?

The data were collected by direct survey method. Participation in the survey was on a voluntary basis and for the purposes of this work and cannot be used for other purposes. The research purposive sampling, and included companies in each of the 5 regions of the Republic of Serbia. The pilot survey included 20 companies. After the analysis of the pilot research (which involved checking the content validity of all aspects measured in this research, namely the evaluation of the achieved results, the quality standard and connectivity as a perspective for further investments), the final version of the survey was compiled and the research was conducted on a new group of 112 companies (n=112). Data collection was from March 2023 to May 2023.

The questionnaire consisted of three parts. The first part deals with general questions about the size of the company, competition and connection with scientific and research institutions. In the second part, the respondents assessed on a scale the previous period of business, the current state, but also the perspectives related to the future period (1-not at all, 5-significantly). The third part of the questionnaire was related to the assessment of obstacles in the development of the competitiveness of the company. In order to obtain answers to the research questions, descriptive measures, dispersion measures, symmetry measures and correlation analysis were calculated. Non-parametric and parametric techniques were used for hypothesis testing. Data were processed using the SPSS software package.

Empirical results and data analysis

In this survey participated, 50.8% (57) of companies with up to 50 employees, 35.7% (40) with up to 250 employees and 13.4% (15) with over 250 employees. The intensity of competition in the business the company is engaged in is high for 74.1% of companies (of these 74.1% have: 45.78% up to 50 employees, 39.76% up to 250 employees, and 14.46% over 250 employees). Medium for 24.1% and low for 1.8%. If we look at the assessment of the intensity of competition in relation to the size, then 33.93% give the assessment high and have up to 50 employees, 29.46% give the assessment high and have up to 250 employees, and 10.71% high and have over 250 employees. Cooperation has 60.7% (68)

companies with universities and/or scientific research institutions. The chi-square test of independence showed a significant relationship between cooperation with scientific research institutions and company size, $\chi2(2, n=112) =17.941$, $p<0.001$. The value of Cramer's V is 0.400, and it is stated that the influence is large (R-1/K-1 is 1 (two categories)), (Gravetter, Wallnau, 2012). The companies with up to 50 employees, 43.9% have cooperation with scientific and research institutions, 70.0% of companies with up to 250 employees and all companies with over 250 employees have cooperation with scientific and research institutions. The values in the Adjusted Residual cell (in the SPSS report) for companies with up to 50 employees and the answer No, as well as for companies with more than 250 employees and the answer Yes, are greater than 2 and amount to 3.7 and 2.3, respectively, which indicates that the number of cases is significantly higher than expected, while the values in the Adjusted Residual cells for companies with up to 50 employees and Yes, as well as for companies with over 250 employees and No are less than -2 and amount to -3.7 and -3.3, respectively, which indicates that the number of cases is significantly lower than expected.

80.4% of companies have business connection/cooperation with large companies. 71.9% of companies with up to 50 employees have a business connection with large companies, 85.0% with up to 250 employees, while all companies with over 250 employees have a business connection/cooperation with some other large company. The chi-square test of independence also showed a significant relationship between the existence of business connections with large companies and the size of the company, $\chi2(2, n=112) =6.778$, $p=0.034$. The value of Cramer's V is 0.246, so can be said that the impact is medium (R-1/K-1 is 1 (two categories)).

62.5% of companies have adopted the standard of civility. All companies with over 250 employees have an adopted quality standard, 49.1% of companies with up to 50 employees and 67.5% of companies with up to 250 employees. The chi-square test of independence showed a significant relationship between the existence of an adopted quality standard and the size of the company, $\chi2(2, n=112)=13.779$, $p=0.001$. The value of Cramer's V is 0.351, so we say that the influence is large (R-1/K-1 is 1 (two categories)).

Increase in productivity in the last three years, companies estimate with an average score of 3.10, Median and Mode are 3, the variable shows weak positive asymmetry (Skewness=0.181), and relatively weak variability (CV is 29.03%). One-factor ANOVA investigated the influence of company size on the assessment of productivity increase (group 1: up to 50 employees, group 2: up to 250 employees, group 3: over 250 employees). No statistically significant difference was observed ($p=0.345$). Subsequent comparisons using the Tukey HSD test revealed that the mean values do not differ between individual groups of companies.

Independent samples T Test compared the results of the assessment of productivity increase for companies that have an adopted quality standard (Yes) and those that do not (No). It was determined that there was a significant difference between Yes (Mean=3.24, SD=0.875) and No (Mean=2.86, SD=0.899); t(110)=2.235, p=0.027. The difference between the mean values of the characteristics by groups (Mean Difference=0.386, 95% CI: 0.044 to 0.728) was medium,

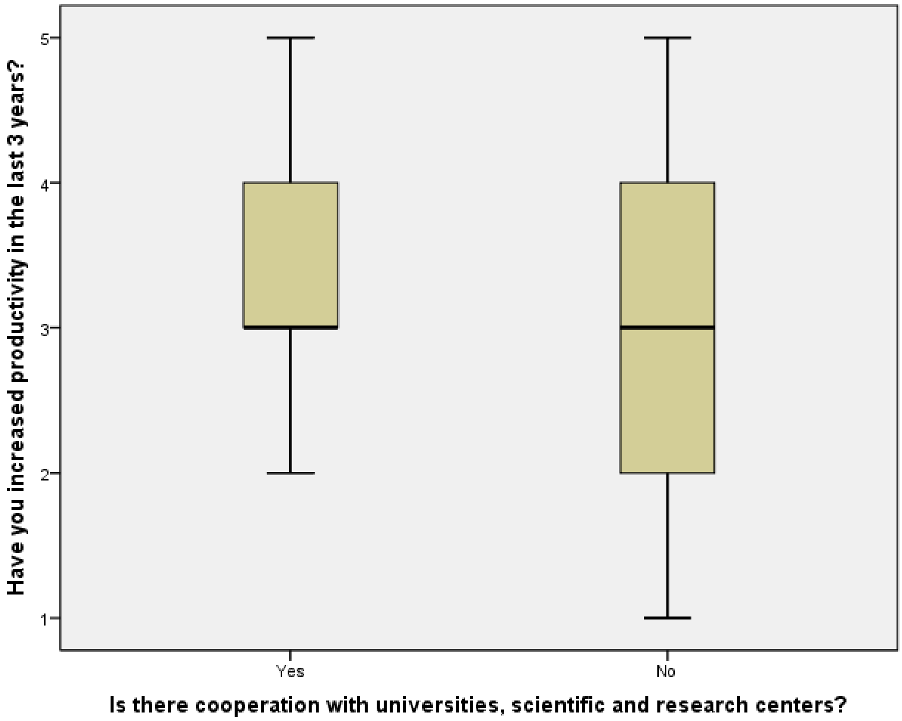
($\eta^2 = \frac{t^2}{t^2 + (N_1 + N_2 - 2)} = \frac{(2.235)^2}{(2.235)^2 + (70 + 42 - 2)} = 0.04$), Cohen (1988).

Graph 1. Assessment of productivity increase in relation to the existence of the adopted quality standard

Source: Authors (2023), results of primary research

Independent samples T Test compared the results of the assessment of productivity increase for companies that have cooperation with universities or scientific research centers (Yes) and those that do not (No). It was determined that there was no significant difference between Yes (Mean=3.21, SD=0.890) and No (Mean=2.93, SD=0.900); t(110)=1.585, p=0.116. The IQR for the Yes option is (Q3-Q1=4-3) 1, while for the No option it is (Q3-Q1=4-2) 2.

Graph 2. Assessment of productivity increase in relation to cooperation with universities or scientific research institutions



Source: Authors (2023), results of primary research

The biggest obstacles in the development of companies' competitiveness are: lack of financial resources, administrative procedures and fiscal appropriations, insufficiently stimulating business environment, outdated equipment and technology. If we look at the obstacles in the development of competitiveness in relation to the size of the company, then the biggest obstacles are: (1) for up to 50 employees: administrative procedures and fiscal appropriations, lack of financial resources, insufficiently stimulating business environment, outdated equipment and technology; (2) for up to 250 employees: administrative procedures and fiscal appropriations, lack of financial resources, insufficiently stimulating business environment, outdated equipment and technology; and (3) for over 250 employees: lack of finance, insufficiently stimulating business environment, outdated equipment and technology.

In Table 1, it can be seen that among the variables: Have you increased productivity in the last 3 years and has the company invested in new equipment in the last 3 years; Have you increased productivity in the last 3 years and how do you evaluate the success of your business; have you launched a new product in the last 3 years and how do you rate the success of your business; Whether the company has invested in new equipment in the last 3 years and how you rate the success of your business, there are significant linear relationships. While among the variables: Have you increased productivity in the last 3 years and have you had a new product launch in the last 3 years; whether you had a new product launch in the last 3 years and whether the company invested in new equipment in the last 3 years there are strong linear associations. This practically means that companies that invested in new equipment and introduced new products achieved improvements in business.

Table 1. Correlations

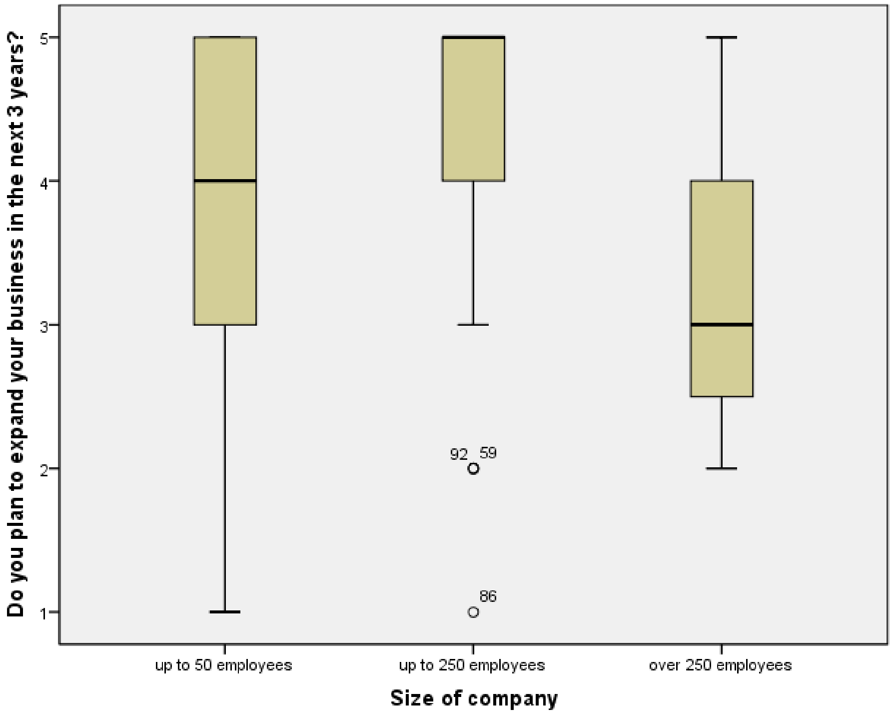
	1	2	3	4
1.Have you increased productivity in the last 3 years?	-			
2.Have you had a new product launch in the last 3 years?	,703**	-		
3.Has the company invested in new equipment in the last 3 years?	,661**	,748**	-	
4.How do you rate the success of your business	,658**	,611**	,648**	-

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

Source: Authors (2023), results of primary research

When looking at the assessment of business expansion in the next three years, the highest average score is for companies with up to 250 employees, for which the 1.5IQR interval ranges from 3 to 5, and the median is 5.

Graph 3. Expansion of activity in relation to company size



Source: Authors (2023), results of primary research

Conclusion

The results of this research show that there is a significant relationship between cooperation with scientific research institutions and company size. Companies with up to 50 employees have less business connection with large companies and that they are more oriented towards cooperation with companies of the same size. A little more than half of the observed companies have the adopted quality standard. Administrative procedures and fiscal appropriation are cited as the biggest obstacle to the development of competitiveness for companies with up to 50 employees, while for other companies it is the lack of financial resources. Businesses that invested in new equipment and introduced a new product increased productivity and improved operations.

The conclusion is that the existence of quality standards has a significant impact on the results and perspectives of the further development of SMEs. The contribution of quality standards can be seen through the following performances: increasing competitive advantage, access to global markets, more efficient processes, increasing investor confidence, and innovation and research.

Serbia, as a country striving for economic growth and innovation, is increasingly recognizing the importance of connecting small and medium-sized enterprises

(SMEs) with scientific institutions. This synergy not only fosters innovation, but also provides a sustainable basis for economic progress.

One of the key aspects of this connection is knowledge transfer. Scientific institutions are the source of new ideas, research and technological innovation. Through the establishment of cooperation with SMEs, this knowledge can be directly translated into practical application, thus boosting the competitive advantage of the company. This connectivity enables SMEs to remain agile and adaptable in a dynamic business environment. Scientific institutions often have resources and knowledge that can support SMEs in carrying out research projects. Through joint efforts, SMEs can access the latest technological trends and innovations, thereby achieving a competitive advantage in the market.

In addition, affiliation with scientific institutions provides SMEs with the opportunity to participate in training and education programs. Such initiatives encourage the development of employee skills, improving the company's workforce. Also, joint programs can contribute to the creation of an innovative work environment, which attracts talent and encourages creativity.

However, in order for this connection to be effective, it is necessary to create a favorable environment and mechanisms for cooperation. This includes facilitating access to finance for research projects, creating platforms for the exchange of information between SMEs and scientific institutions, as well as supporting government policies that encourage innovation. Also, it should be emphasized that not all organizations benefit equally from cooperation with research institutions. Companies that are more intensive in research and development directions will benefit more from cooperation with research institutions. Studies that use absorptive capacity as their main theoretical framework consider research and development as a necessary condition to fully utilize the knowledge possessed by research organizations. The relevance of innovative perspectives in small and medium-sized enterprises can be a significant incentive for cooperation with a research organization. As a conclusion, the view is taken that the implementation of an innovation-oriented strategy supports the development perspectives of organizations and enables them to further increase their market value.

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PRAVNI ASPEKTI BANKARSKE GARANCIJE KAO FINANSIJSKOG SREDSTVA OBEZBEĐENJA

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Apstrakt

Bankarska garancija predstavlja ključni instrument u obezbeđivanju finansijskih obaveza u pravnim transakcijama, omogućavajući sigurnost i poverenje među ugovornim stranama. Ovaj rad analizira pravne aspekte bankarske garancije kao sredstva obezbeđenja, uključujući pravnu prirodu, vrste garancija, kao i prava i obaveze ugovornih strana. Poseban fokus stavljen je na analizu domaćeg zakonodavstva u Republici Srbiji i uporedno-pravnu praksu, čime se ističu sličnosti i razlike u pristupima drugih jurisdikcija. Rad takođe razmatra ulogu bankarske garancije u međunarodnim transakcijama, sa osvrtom na relevantne međunarodne konvencije i propise, posebno u kontekstu globalizacije tržišta. Cilj rada je pružiti sveobuhvatan pregled pravnog okvira koji reguliše izdavanje i sprovođenje bankarskih garancija, kao i identificirati izazove i prilike za unapređenje ovog finansijskog instrumenta u praksi. Na osnovu analize, predlažu se preporuke za pravne subjekte u cilju optimizacije korišćenja bankarskih garancija u poslovanju.

Ključne reči: *bankarska garancija, pravni aspekti, finansijsko obezbeđenje, međunarodne transakcije, zakonodavstvo Srbije, pravni okvir, pravna sigurnost, uporedno pravo.*

Uvod

Bankarska garancija je finansijski instrument koji igra ključnu ulogu u savremenom poslovanju, pružajući dodatni sloj sigurnosti u ugovornim odnosima između poslovnih subjekata(Jović Bogdanović et al., 2024). Ona omogućava da se smanji rizik neizvršenja obaveza u pravnim transakcijama, posebno u kontekstu složenih i visokovrednih ugovora, kao što su oni u građevinskoj industriji, međunarodnoj trgovini, i finansijskom sektoru. Bankarska garancija osigurava poverenje između ugovornih strana, omogućavajući da se poslovne transakcije odvijaju nesmetano, čak i kada postoji visok nivo neizvesnosti ili rizika.

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Korišćenje bankarskih garancija posebno dolazi do izražaja u međunarodnim poslovnim aranžmanima, gde pravne i kulturološke razlike među državama mogu predstavljati značajan izazov za ostvarivanje ugovornih prava(Srbulović et al., 2024). U takvim situacijama, bankarska garancija služi kao univerzalno sredstvo obezbeđenja, priznato i prihvaćeno u različitim pravnim sistemima. Ova vrsta garancije omogućava stranama u ugovoru da imaju poverenja u ispunjenje ugovornih obaveza, čak i kada se radi o poslovanju sa partnerima iz različitih jurisdikcija.

Cilj ovog rada je da pruži detaljnu analizu pravnih aspekata bankarske garancije kao sredstva obezbeđenja, s posebnim osvrtom na zakonodavstvo Republike Srbije. Prilikom analize biće razmotreni i uporedni pravni aspekti kroz analizu rešenja u drugim pravnim sistemima, kako bi se sagledale sličnosti i razlike u regulisanju ovog finansijskog instrumenta. Rad će takođe obuhvatiti i analizu međunarodnih standarda i konvencija koje regulišu izdavanje i primenu bankarskih garancija, što je od izuzetne važnosti za globalizovano tržište.

Metodologija ovog rada uključuje analizu relevantnih pravnih izvora, uključujući zakone, podzakonske akte, međunarodne konvencije, kao i stručnu literaturu. Kroz uporedno-pravnu analizu biće razmotrena rešenja iz drugih jurisdikcija, kako bi se identifikovale najbolje prakse koje bi mogle biti primenjene u Srbiji. Poseban fokus biće stavljen na identifikaciju izazova u primeni bankarskih garancija u Srbiji i predlaganje rešenja za unapređenje pravnog okvira.

Uvodno razmatranje postavlja temelje za dublje istraživanje pravne prirode bankarskih garancija, njihovih vrsta, pravnog okvira u Srbiji, kao i uporedno-pravnih aspekata. Na kraju, ovaj rad će ponuditi preporuke za pravne subjekte u Srbiji kako bi efikasnije koristili ovaj instrument u poslovanju, sa ciljem povećanja pravne sigurnosti i smanjenja rizika u transakcijama.

Pravna priroda bankarske garancije

Bankarska garancija je pravni instrument kojim banka preuzima obavezu da, na zahtev korisnika, isplati određeni iznos novca ukoliko dužnik ne ispuni svoje obaveze prema ugovoru. Bankarska garancija se smatra jednim od najpouzdanijih instrumenata obezbeđenja jer omogućava korisniku garancije da naplati svoja potraživanja bez obzira na eventualne sporove sa dužnikom (Jovanović, 2017; Janošik et al., 2023).

Autonomija bankarske garancije je osnovna karakteristika koja je razlikuje od drugih instrumenata obezbeđenja. Naime, garancija je nezavisna od osnovnog ugovora između dužnika i korisnika, što znači da korisnik može ostvariti svoje pravo na isplatu bez obzira na osnovni pravni odnos (Stojanović, 2015). Ovaj princip je ključan za pravnu sigurnost korisnika, ali takođe zahteva pažljivu formulaciju ugovornih odredbi.

Za razliku od hipoteke i zaloga, koji se vezuju za određenu stvar, bankarska garancija je lična sigurnost koja ne zahteva posedovanje ili kontrolu nad imovinom.

Takođe, za razliku od jemstva, bankarska garancija je potpuno nezavisna od dužnika, što je čini efikasnijim sredstvom obezbeđenja u međunarodnim transakcijama (Knežević & Lukić, 2016; Petrović, 2019).

Vrste bankarskih garancija

Bankarske garancije mogu biti revokabilne, koje banka može povući u bilo kom trenutku, i nerazvokabilne, koje su obavezujuće do isteka roka važenja ili realizacije isplate. Nerazvokabilne garancije su mnogo češće u praksi zbog veće pravne sigurnosti koju pružaju korisnicima (Petrović, 2019).

Prema nameni, bankarske garancije se dele na garancije plaćanja, garancije dobrog izvršenja, tenderske garancije i garancije za povraćaj avansa. Svaka od ovih vrsta ima specifičnu ulogu u obezbeđivanju različitih aspekata ugovornih obaveza, što ih čini prilagodljivim različitim poslovnim situacijama (Jovanović, 2017; Knežević & Lukić, 2016).

Bankarske garancije mogu biti uslovne, gde korisnik mora dokazati neispunjenje obaveza pre isplate, i bezuslovne, gde banka isplaćuje na prvi zahtev bez obzira na osnovanost zahteva. Bezuslovne garancije pružaju najviši nivo zaštite korisniku, ali nose veći rizik za banku (Stojanović, 2015).

Pravni okvir u Republici Srbiji

Zakonodavni okvir Republike Srbije, koji obuhvata Zakon o obligacionim odnosima, Zakon o bankama i Zakon o javnim nabavkama, pruža solidnu osnovu za regulisanje bankarskih garancija. Ovi zakoni definišu prava i obaveze svih uključenih strana i postavljaju jasne standarde za izdavanje i primenu bankarskih garancija (Knežević & Lukić, 2016; Marković, 2018).

Zakon o obligacionim odnosima definiše bankarsku garanciju kao jednostrani pravni posao, gde banka preuzima obavezu prema korisniku garancije. Princip autonomije bankarske garancije, propisan ovim zakonom, osigurava nezavisnost bankarske garancije od osnovnog ugovora, pružajući veću pravnu sigurnost korisniku (Petrović, 2019; Gojković et al.,2023).

Prava korisnika uključuju pravo na isplatu sume navedene u garanciji, dok obaveze banke obuhvataju obavezu plaćanja u skladu sa uslovima garancije. Dužnik, kao strana koja zahteva izdavanje garancije, obavezan je da banci nadoknadi troškove povezane sa izdavanjem i eventualnom isplatom garancije (Jovanović, 2017; Pan et al., 2019).

Uporedno-pravna analiza

U međunarodnim transakcijama, bankarske garancije predstavljaju sredstvo obezbeđenja koje osigurava ispunjenje ugovornih obaveza u različitim pravnim i kulturnim okruženjima. Međunarodne organizacije, poput Međunarodne trgovinske komore (ICC), postavile su standarde za izdavanje i izvršenje bankarskih garancija koji su prihvaćeni u velikom broju jurisdikcija (ICC, 2010).

Nemačka: Bankarske garancije su autonomne i bezuslovne, pružajući visok nivo sigurnosti korisnicima. Banke moraju pažljivo proceniti rizike pre izdavanja garancije (Schmidt, 2017).

Sjedinjene Američke Države: Uniform Commercial Code (UCC) reguliše standby letters of credit, slične bankarskim garancijama. Banke su dužne da izvrše isplatu na prvi zahtev, ali američki sudovi mogu odbiti isplatu u slučaju zloupotrebe (Petrović, 2019).

Ujedinjeno Kraljevstvo: Bankarske garancije su obavezujući i nezavisni ugovori. Britanski sudovi strogo tumače uslove garancije, što pruža visok nivo zaštite za banke (Jovanović, 2017).

Konvencija Ujedinjenih nacija o nezavisnim garancijama i akreditivima postavlja osnovna pravila za izdavanje i izvršenje bankarskih garancija u međunarodnim transakcijama, sa ciljem da obezbedi pravnu sigurnost i predvidljivost (UNCITRAL, 1995). URDG pravila pružaju detaljna pravila i smernice za izdavanje i izvršenje garancija u međunarodnim transakcijama (ICC, 2010).

Izazovi i rizici u primeni bankarskih garancija

Primena bankarskih garancija nosi sa sobom niz pravnih i finansijskih rizika koji mogu značajno uticati na strane u ugovoru. Jedna od najčešćih pravnih opasnosti je zloupotreba prava korisnika garancije, posebno u slučaju bezuslovnih garancija. U ovim situacijama, korisnik može zahtevati isplatu od banke bez obzira na stvarno ispunjenje obaveza od strane dužnika, što može dovesti do nepravednog obogaćivanja korisnika na štetu dužnika i banke (Jovanović, 2017; Petrović, 2019).

Finansijske opasnosti takođe predstavljaju značajan rizik u primeni bankarskih garancija. Banke koje izdaju garancije preuzimaju na sebe obavezu isplate, što može značiti značajan finansijski teret u slučaju da se garancija aktivira. Zbog toga, banke moraju pažljivo proceniti kreditni rizik dužnika i osigurati adekvatne kolaterale ili rezerve pre izdavanja garancije. U suprotnom, postoji rizik da banka neće biti u mogućnosti da izvrši isplatu, što može dovesti do ozbiljnih posledica po njenu likvidnost i reputaciju (Knežević & Lukić, 2016).

Validnost bankarske garancije zavisi od niza faktora koji moraju biti pažljivo razmotreni prilikom njenog izdavanja. Prvo, garancija mora biti izdata u skladu sa zakonom i mora ispunjavati sve formalne zahteve propisane ugovorom i relevantnim zakonodavstvom. Ovo uključuje preciznu formulaciju uslova pod kojima će se izvršiti isplata, rok važenja garancije, kao i identifikaciju svih strana u ugovoru (Nikolić, 2016; Paspalj et al., 2024).

Drugi ključni faktor koji utiče na validnost garancije je jasnost i preciznost ugovornih odredbi. Nedovoljno jasni ili nedorečeni uslovi mogu dovesti do nejasnoća u pogledu prava korisnika i obaveza banke, što može rezultirati pravnim sporovima i osporavanjem garancije. Pored toga, nejasno definisani uslovi mogu dovesti do situacija gde banka odbija isplatu, čak i kada su ispunjeni svi materijalni uslovi, zbog tehničkih ili formalnih nedostataka (Petrović, 2019; Salum et al., 2019).

Treći faktor je poštovanje procedure za aktiviranje garancije. Korisnik mora podneti zahtev za isplatu u skladu sa procedurama i rokovima navedenim u ugovoru. Ako korisnik ne poštuje ove procedure, banka može odbiti isplatu, što može dovesti do gubitka prava na naplatu garancije. Ove procedure obično uključuju podnošenje dokaza o neispunjenju obaveza dužnika, kao i poštovanje svih relevantnih pravnih rokova (Stojanović, 2015; Dašić et al., 2023).

Pravni sporovi u vezi sa bankarskim garancijama često se odnose na pitanje da li su ispunjeni uslovi za naplatu garancije i da li korisnik postupa u dobroj veri prilikom podnošenja zahteva za isplatu. U praksi, sudovi u Republici Srbiji, ali i u mnogim drugim jurisdikcijama, najčešće presuđuju u korist korisnika, pod uslovom da su formalni uslovi za isplatu ispunjeni. Ovo potvrđuje važnost jasne formulacije ugovornih odredbi i pažljivog razmatranja svih aspekata garancije pre njenog izdavanja (Đorđević, 2020).

Međutim, sudska praksa takođe pokazuje da sudovi ponekad odbijaju zahteve za isplatu garancije u situacijama gde postoji očigledna zloupotreba prava ili gde su uslovi za isplatu nejasni ili nepotpuni. Ovi slučajevi naglašavaju potrebu za dodatnom pažnjom prilikom sastavljanja ugovora i izdavanja garancije, kako bi se izbegli pravni sporovi i osigurala pravna sigurnost za sve strane (Marković, 2018; Krstić & Brajković, 2022).

Pored toga, sudovi često razmatraju i pitanje proporcionalnosti u slučajevima gde se osporava pravo na isplatu garancije. Na primer, u situacijama gde se traži isplata celokupnog iznosa garancije za relativno manji prekršaj dužnika, sudovi mogu odlučiti da smanje iznos isplate ili odbiju zahtev u celosti. Ovakvi slučajevi pokazuju da sudovi pokušavaju da balansiraju interese svih stranaka i osiguraju pravedan ishod (Jovanović, 2017; Vladisavljević et al., 2023).

Izazovi i rizici u primeni bankarskih garancija su brojni i zahtevaju pažljivo pravno i finansijsko planiranje. Pravne opasnosti, poput zloupotrebe prava korisnika, kao i finansijski rizici povezani sa isplatom garancije, zahtevaju od banaka i drugih učesnika u transakciji da preduzmu adekvatne mere zaštite.

Validnost i izvršenje garancije zavise od jasnoće i preciznosti ugovornih odredbi, kao i od poštovanja svih relevantnih procedura i rokova. Praksa sudova pokazuje da su formalni i materijalni uslovi od presudnog značaja za ostvarivanje prava na isplatu, dok sudovi nastoje da osiguraju pravedan ishod za sve strane u sporu.

Osim pravnih i finansijskih rizika, primena bankarskih garancija u Srbiji suočava se i sa značajnim regulatornim izazovima, posebno u kontekstu usklađivanja sa međunarodnim standardima. Na primer, Basel III regulative, koje uključuju zahteve za kapitalnu adekvatnost i leverage ratio, imaju direktan uticaj na sposobnost banaka da izdaju garancije, jer utiču na nivo kapitala koji banke moraju zadržati za pokriće potencijalnih gubitaka (Basel Committee on Banking Supervision, 2013). Nadalje, pravni okviri kao što su Direktiva o kapitalnim zahtevima (CRD IV) u Evropskoj uniji, postavljaju dodatne zahteve za upravljanje rizicima, što može dovesti do povećanja troškova za banke u Srbiji koje posluju sa inostranim partnerima (European Banking Authority, 2014).

U pogledu usklađivanja sa međunarodnim standardima, posebno je važna Konvencija Ujedinjenih nacija o nezavisnim garancijama i akreditivima koja se plaćaju na prvi zahtev, koja pruža okvir za pravnu zaštitu korisnika garancija u međunarodnim transakcijama (UNCITRAL, 1995). Takođe, ekonomska istraživanja su pokazala da zemlje sa stabilnim regulatornim okvirima i jasnim pravnim normama imaju značajno manji rizik od zloupotrebe garancija i veću pravnu sigurnost, što doprinosi većoj efikasnosti i atraktivnosti poslovnog okruženja (Mülbert, 2015).

Preporuke za unapređenje pravnog okvira i prakse u Srbiji

Bankarske garancije su ključan alat u obezbeđivanju ispunjenja ugovornih obaveza, ali pravni okvir u Srbiji zahteva određene izmene i unapređenja kako bi se osigurala veća pravna sigurnost i efikasnost. Jedan od glavnih aspekata koji bi mogao biti unapređen je preciznije definisanje uslova za izdavanje i aktiviranje bankarskih garancija, čime bi se smanjili pravni sporovi između banaka, dužnika i korisnika garancije (Knežević & Lukić, 2016; Milanović, 2023). Takođe, zakonodavstvo bi moglo uvesti jasnije smernice za tretiranje različitih vrsta garancija, uključujući bezuslovne i uslovne garancije, kako bi se omogućilo strankama da bolje razumeju svoja prava i obaveze (Petrović, 2019).

Uvođenje standardizovanih ugovornih odredbi u vezi sa bankarskim garancijama moglo bi znatno smanjiti broj nesporazuma i pravnih sporova. Standardizacija bi obuhvatila definicije ključnih pojmova, procedure za aktiviranje garancije, kao i jasne smernice za rešavanje sporova. Time bi se osiguralo da sve strane imaju jasno razumevanje ugovornih uslova i da mogu efikasno upravljati rizicima (Marković, 2018).

Sudska praksa igra ključnu ulogu u primeni i tumačenju pravnih normi koje se odnose na bankarske garancije. Jedna od preporuka je da se sudovi u Srbiji fokusiraju na dosledno primenjivanje principa autonomije bankarske garancije, što bi dodatno osnažilo pravnu sigurnost korisnika (Jovanović, 2017; Li, 2020). Takođe, sudovi bi mogli razviti specifičnije kriterijume za procenu slučajeva zloupotrebe prava prilikom aktiviranja garancije, čime bi se sprečile neosnovane isplate i zaštitili interesi svih strana u sporu.

Povećanje transparentnosti u procesu izdavanja i aktiviranja bankarskih garancija moglo bi dodatno ojačati poverenje u ovaj pravni institut. Preporuka je da se uvedu mehanizmi za javnu objavu osnovnih informacija o izdatim garancijama, uključujući njihove uslove i trajanje. Ovi podaci bi bili dostupni svim zainteresovanim stranama, čime bi se smanjio rizik od nepoštenog ponašanja i povećala pravna sigurnost (Nikolić, 2016; Penjišević et al., 2023).

Jedan od važnih aspekata za unapređenje prakse u vezi sa bankarskim garancijama je kontinuirana edukacija i obuka svih učesnika u procesu, uključujući pravnike, bankare i sudije. Edukacija bi mogla uključivati specijalizovane seminare i radionice o novim zakonodavnim rešenjima, najboljim praksama u pisanju ugovornih odredbi, kao i sudskoj praksi u vezi sa bankarskim garancijama (ICC, 2010).

Unapređenje pravnog okvira i prakse u vezi sa bankarskim garancijama u Srbiji zahteva multidisciplinarni pristup, uključujući zakonodavne izmene, standardizaciju ugovornih odredbi, doslednu sudsku praksu, povećanje transparentnosti i kontinuiranu edukaciju svih učesnika. Ove mere bi značajno doprinele jačanju pravne sigurnosti i efikasnosti ovog važnog pravnog instituta, što bi na kraju rezultiralo boljom zaštitom prava i interesa svih strana uključenih u poslovne transakcije.

Zaključak

Bankarska garancija predstavlja ključan instrument u obezbeđivanju finansijskih obaveza u pravnim transakcijama, pružajući sigurnost i poverenje između ugovornih strana. Njena pravna priroda, zasnovana na principu autonomije, omogućava korisnicima da se zaštite od rizika neispunjenja obaveza, dok bankama nameće obavezu isplate pod određenim uslovima. U Srbiji, pravni okvir koji reguliše bankarske garancije zasniva se na zakonodavstvu koje obuhvata Zakon o obligacionim odnosima, Zakon o bankama, i Zakon o javnim nabavkama, pružajući solidnu osnovu za njihovu primenu.

Uporedno-pravna analiza pokazuje da različite jurisdikcije imaju različite pristupe regulisanju bankarskih garancija, ali svi se slažu oko ključnih principa kao što su autonomija garancije i obaveza bezuslovne isplate. Međunarodne konvencije i standardi, poput URDG pravila, omogućavaju harmonizaciju ovih instrumenata na globalnom nivou, smanjujući pravne rizike u međunarodnim transakcijama.

Iako je bankarska garancija efikasan i siguran instrument, njena primena nosi sa sobom niz izazova i rizika. Prava korisnika moraju biti zaštićena, ali istovremeno, banke moraju preduzeti odgovarajuće mere kako bi se zaštitile od zloupotrebe prava i finansijskih gubitaka. Sudska praksa pokazuje da su jasnoća ugovornih odredbi i pažljivo planiranje ključni za uspešnu primenu ovog instrumenta.

Za budućnost, preporučuje se dalji razvoj pravnog okvira u Srbiji kako bi se dodatno unapredila pravna sigurnost i efikasnost bankarskih garancija. Takođe, praksa banaka i drugih finansijskih institucija treba da se unapredi kako bi se smanjili rizici i povećala zaštita svih strana u pravnim transakcijama.

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LEGAL ASPECTS OF A BANK GUARANTEE AS A FINANCIAL SECURITY INSTRUMENT

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Abstract

A bank guarantee is an important instrument for securing financial obligations in legal transactions, creating security and trust between the contracting parties. This paper analyzes the legal aspects of a bank guarantee as a security interest, including its legal nature, types of guarantees, as well as the rights and obligations of the contracting parties. Special focus is placed on the analysis of domestic legislation in the Republic of Serbia and comparative legal practice, highlighting the similarities and differences of approaches across different jurisdictions. The paper also examines the role of bank guarantees in international transactions with reference to relevant international conventions and regulations, especially in the context of globalization of markets. The aim of the paper is to provide a comprehensive overview of the legal framework that governs the issuance and enforcement of bank guarantees and to identify challenges and opportunities for improving this financial instrument in practice. Based on the analysis, recommendations are made for legal entities to optimize the use of bank guarantees in business transactions.

Keywords: *bank guarantee, legal aspects, financial security, international transactions, Serbian legislation, legal framework, legal certainty, comparative law.*

Introduction

A bank guarantee is a financial instrument that plays a crucial role in modern business, offering an additional layer of security in contractual relations between business entities(Jović Bogdanović et al., 2024). It helps mitigate the risk of default in legal transactions, particularly in the context of complex and high-value contracts, such as those in the construction industry, international trade, and the financial sector. A bank guarantee fosters trust between parties, enabling business transactions to proceed smoothly even in environments with significant uncertainty or risk.

The use of bank guarantees is especially prominent in international business arrangements, where legal and cultural differences between countries can significantly challenge the enforcement of contractual rights(Srbulović et al., 2024). In these situations, a bank guarantee serves as a universally recognized and accepted security instrument across various legal systems. This type of guarantee

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provides the contracting parties with confidence in the fulfillment of contractual obligations, even when dealing with partners from different jurisdictions.

The aim of this paper is to provide a detailed analysis of the legal aspects of bank guarantees as a means of security, with a particular focus on the legislation of the Republic of Serbia. The analysis will also consider comparative legal perspectives by examining how other legal systems address this financial instrument, highlighting both similarities and differences in regulation. Additionally, the paper will explore international standards and conventions governing the issuance and implementation of bank guarantees, which is crucial in today’s globalized market.

The methodology of this paper involves an analysis of relevant legal sources, including laws, bylaws, international conventions, and professional literature. By comparing Serbian practices with those of other jurisdictions, the study aims to identify best practices and potential solutions for addressing challenges in the implementation of bank guarantees within the Serbian legal framework.

This paper provides a comprehensive overview of bank guarantees, including their legal nature, types, Serbian legal framework, and international comparisons. Ultimately, it aims to offer practical guidance for Serbian legal entities on effectively utilizing bank guarantees to enhance legal certainty and mitigate transaction risks.

Legal Nature of a Bank Guarantee

A bank guarantee is a legal instrument through which a bank undertakes the obligation to pay a specific amount of money to the beneficiary, upon the beneficiary's request, if the debtor fails to fulfill its obligations under the contract. A bank guarantee is considered one of the most reliable security instruments because it allows the beneficiary to collect its claims regardless of any potential disputes with the debtor (Jovanović, 2017; Janošik et al., 2023).

The autonomy of a bank guarantee is a key distinguishing feature. Unlike other security instruments, it is independent of the underlying contract between the debtor and the beneficiary. This means the beneficiary can claim payment regardless of disputes or issues with the original contract (Stojanović, 2015). This principle is essential for legal certainty but requires careful drafting of contractual terms.

Unlike mortgages and pledges, which are tied to specific assets, bank guarantees are personal securities that do not require possession or control of property.

Additionally, unlike warranties, bank guarantees are completely independent of the debtor, making them more effective collateral for international transactions (Knežević & Lukić, 2016; Petrović, 2019).

Types of Bank Guarantees

Bank guarantees can be either revocable, which means the bank can withdraw them at any time, or irrevocable, which means they are binding until the expiry date or the payment date. Irrevocable guarantees are much more common in practice due to the higher level of legal certainty they provide to beneficiaries (Petrović, 2019).

Based on their purpose, bank guarantees can be classified into payment guarantees, performance bonds, bid bonds, and advance payment guarantees. Each of these guarantee types has a specific role in securing different aspects of contractual obligations, making them adaptable to various business situations (Jovanović, 2017; Knežević & Lukić, 2016).

Bank guarantees can be conditional, where the beneficiary must prove the non-performance of the obligation before payment, or unconditional, where the bank pays upon the first demand regardless of the validity of the claim. Unconditional guarantees provide the highest level of protection for the beneficiary but carry a higher risk for the bank (Stojanović, 2015).

Legal framework in the Republic of Serbia

The legislative framework of Serbia, including the Law of Contract and Torts, the Law on Banks, and the Law on Public Procurement, provides a robust foundation for regulating bank guarantees. These laws clearly outline the rights and obligations of all parties involved, establishing standards for the issuance and implementation of bank guarantees (Knezevic & Lukic, 2016; Marković, 2018).

The Law of Contract and Torts defines a bank guarantee as a unilateral legal transaction, where the bank assumes an obligation to the beneficiary of the guarantee. The principle of autonomy of the bank guarantee, prescribed by this law, ensures the independence of the bank guarantee from the underlying contract, providing greater legal certainty to the beneficiary (Petrović, 2019; Gojković et al.,2023).

The beneficiary has the right to claim the specified amount under the guarantee, while the bank is obliged to pay according to the guarantee's terms. The debtor, who requested the guarantee, is responsible for reimbursing the bank for issuance and payment costs (Jovanović, 2017; Pan et al., 2019).

Comparative Legal Analysis

In international transactions, bank guarantees serve as a security instrument that ensures the fulfillment of contractual obligations across various legal and cultural environments. International organizations, such as the International Chamber of Commerce (ICC), have established standards for issuing and executing bank guarantees, which are widely accepted in numerous jurisdictions (ICC, 2010).

Germany: Bank guarantees are autonomous and unconditional, providing a high level of security for beneficiaries. Banks must carefully assess risks before issuing a guarantee (Schmidt, 2017).

United States: The Uniform Commercial Code (UCC) governs standby letters of credit, similar to bank guarantees. Banks are obliged to make payment upon first demand, but US courts may refuse payment in cases of fraud (Petrović, 2019).

United Kingdom: Bank guarantees are binding and independent contracts. British courts interpret the terms of the guarantee strictly, providing a high level of protection for banks (Jovanović, 2017).

The United Nations Convention on Independent Guarantees and Stand-by Letters of Credit sets out basic rules for issuing and executing bank guarantees in international transactions, aiming to ensure legal certainty and predictability (UNCITRAL, 1995). URDG Rules provide detailed rules and guidelines for issuing and executing guarantees in international transactions (ICC, 2010).

Challenges and Risks in the Application of Bank Guarantees

The application of bank guarantees carries a number of legal and financial risks that can significantly impact the parties to a contract. One of the most common legal risks is the abuse of rights by the beneficiary of the guarantee, especially in the case of unconditional guarantees. In these situations, the beneficiary may claim payment from the bank regardless of the actual fulfillment of obligations by the debtor, which can lead to the unjust enrichment of the beneficiary at the expense of the debtor and the bank (Jovanović, 2017; Petrović, 2019).

Financial risks are a major concern in using bank guarantees. Banks issuing guarantees assume the obligation to pay, which can be financially burdensome if the guarantee is triggered. Therefore, banks must carefully assess the borrower's creditworthiness and require adequate collateral or reserves before issuing a guarantee. Failing to do so could jeopardize the bank's liquidity and reputation if it cannot fulfill its payment obligations (Knežević & Lukić, 2016).

The validity of a bank guarantee depends on several factors that must be carefully considered during its issuance. First, the guarantee must be issued in accordance with the law and meet all formal requirements prescribed by the contract and relevant legislation. This includes the precise formulation of the terms under which payment will be made, the validity period of the guarantee, and the identification of all parties to the contract (Nikolić, 2016; Paspalj et al., 2024).

Another key factor that affects the validity of a guarantee is the clarity and precision of the contractual provisions. Insufficiently clear or vague terms and conditions may lead to ambiguity regarding the rights of the beneficiary and the obligations of the bank, which may result in legal disputes and challenge the guarantee. In addition, vaguely defined conditions can lead to situations where the bank refuses to pay, even when all material conditions are met, due to technical or formal deficiencies (Petrović, 2019; Salum et al., 2019).

The third factor is compliance with the procedure for activating the guarantee. The beneficiary must submit a request for payment in accordance with the procedures and deadlines specified in the contract. Failure to comply with these procedures may result in the bank refusing to pay, potentially leading to the loss of the right to collect on the guarantee. These procedures typically include the submission of evidence of the debtor's default, as well as adherence to all relevant legal deadlines. (Stojanović, 2015; Dašić et al., 2023).

Legal disputes involving bank guarantees often center on whether the payment conditions are met and if the beneficiary acts in good faith. Serbian courts, like many others, frequently rule in favor of the beneficiary if the formal payment requirements are fulfilled. This underscores the importance of carefully drafting contractual provisions and considering all aspects of the guarantee before issuance (Đorđević, 2020).

However, case law also demonstrates that courts may reject payment claims if there is clear evidence of abuse or if the payment conditions are unclear or incomplete. These cases emphasize the importance of carefully drafting contracts and issuing guarantees to avoid legal disputes and ensure legal certainty for all parties (Marković, 2018; Krstić & Brajković, 2022).

In addition, courts often consider the issue of proportionality in cases where the right to payment of a guarantee is contested. For example, when payment of the full guarantee amount is demanded for a relatively minor breach by the debtor, courts may choose to reduce the payment or reject the claim entirely. Such cases demonstrate the courts' efforts to balance the interests of all parties and ensure a fair outcome (Jovanović, 2017; Vladisavljević et al., 2023).

The challenges and risks associated with the implementation of bank guarantees are numerous and necessitate careful legal and financial planning. Legal risks, such as the potential abuse of beneficiaries' rights, as well as financial risks related to the payment of the guarantee, require banks and other transaction participants to implement adequate protection measures. The validity and effectiveness of the guarantee depend on the clarity and precision of the contractual provisions, as well as on adherence to all relevant procedures and deadlines. Judicial practice demonstrates that both formal and substantive conditions are critical for the enforcement of the right to payment, with courts striving to ensure a fair outcome for all parties involved.

In addition to legal and financial risks, the implementation of bank guarantees in Serbia also faces significant regulatory challenges, particularly in the context of harmonization with international standards. For instance, Basel III regulation, which includes capital adequacy requirements and leverage ratios, directly impact banks' ability to issue guarantees by influencing the level of capital that must be retained to cover potential losses (Basel Committee on Banking Supervision, 2013). Moreover, legal frameworks such as the Capital Requirements Directive (CRD IV) in the European Union impose additional risk management requirements, which can lead to increased costs for banks in Serbia that conduct business with foreign partners (European Banking Authority, 2014).

Regarding alignment with international standards, the United Nations Convention on Independent Guarantees and Stand-by Letters of Credit is particularly important. It provides a framework for the legal protection of beneficiaries of guarantees in international transactions (UNCITRAL, 1995). Moreover, economic research has shown that countries with stable regulatory frameworks and clear legal norms have significantly lower risks of guarantee abuse and greater legal certainty, contributing to a more efficient and attractive business environment (Mülbert, 2015).

Recommendations for Improving the Legal Framework and Practice in Serbia

Bank guarantees are a crucial tool for ensuring the fulfillment of contractual obligations, but the legal framework in Serbia requires certain amendments and improvements to ensure greater legal certainty and efficiency. One of the main aspects that could be improved is a more precise definition of the conditions for issuing and activating bank guarantees, which would reduce legal disputes between banks, debtors, and beneficiaries of the guarantee (Knežević & Lukić, 2016; Milanović, 2023). Additionally, the legislation could introduce clearer guidelines for treating different types of guarantees, including unconditional and conditional guarantees, to enable parties to better understand their rights and obligations (Petrović, 2019).

Standardized contractual provisions for bank guarantees could significantly reduce misunderstandings and legal disputes. Standardization would include defining key terms, outlining activation procedures, and providing clear guidelines for dispute resolution. This would ensure all parties have a shared understanding of the contractual terms and conditions, effectively managing risks (Marković, 2018).

Case law plays a crucial role in interpreting and applying legal norms related to bank guarantees. Serbian courts should consistently apply the principle of guarantee autonomy to enhance legal certainty for beneficiaries (Jovanović, 2017; Li, 2020). Additionally, courts could develop more specific criteria for assessing claims of abuse to prevent unjustified payments and protect the interests of all parties involved.

Greater transparency in issuing and activating bank guarantees can enhance trust in this legal instrument. Public disclosure of basic information about issued guarantees, including terms and conditions, is recommended. This would increase transparency, reduce the risk of misconduct, and promote legal certainty (Nikolić, 2016; Penjišević et al., 2023)."

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One important aspect of improving the practice of bank guarantees is the continuous education and training of all participants in the process, including lawyers, bankers, and judges. Education could involve specialized seminars and workshops on new legislative developments, best practices for drafting contract terms, and relevant case law concerning bank guarantees (ICC, 2010).

Improving the legal framework and practice regarding bank guarantees in Serbia requires a multidisciplinary approach. This includes legislative changes, standardization of contractual provisions, consistent case law, increased transparency, and ongoing education for all participants. Implementing these measures would significantly enhance legal certainty and the efficiency of this important legal instrument, ultimately leading to better protection of the rights and interests of all parties involved in business transactions.

Conclusion

A bank guarantee is an important instrument for securing financial obligations in legal transactions, creating security and trust between the contracting parties. Its legal nature, based on the principle of autonomy, enables users to protect themselves against the risk of default while imposing an obligation on banks to make payments under specified conditions. In Serbia, the legal framework for bank guarantees is created by laws, including the Law of Contract and Torts the Law on Banks, and the Law on Public Procurement, which collectively provide a solid foundation for their implementation.

A comparative legal analysis shows that different jurisdictions have different approaches to regulating bank guarantees, but all agree on central principles such as the autonomy of the guarantee and the obligation to pay unconditionally. International conventions and standards, such as the URDG rules, make it possible to harmonize these instruments at a global level and reduce the legal risks involved in international transactions.

Although a bank guarantee is an effective and secure instrument, its implementation presents several challenges and risks. While it is crucial to protect the rights of beneficiaries, banks must also take appropriate measures to safeguard themselves against potential abuses and financial losses. Case law indicates that the clarity of contractual provisions and careful planning are vital for the successful implementation of this instrument.

Looking ahead, it is recommended to further develop the legal framework in Serbia to enhance the legal certainty and efficiency of bank guarantees. Additionally, the practices of banks and other financial institutions should be improved to reduce risks and increase the protection of all parties involved in legal transactions.

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Nikola Nikolić[11], Petar Petrović[12], Marko Marković[13]

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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)

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Literatura

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

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Abstract

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Key words: *note, maximally, five, key, words.*

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Nik Holmes[14], John Peters[15]

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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;

Graphs, diagrams, schemes and pictures should be entered within the text of article (do not use option Float over text) and numerated according to order of their appearance. Their titles have to be positioned immediately above the graph, diagram, scheme or picture to which they relate. Please, have in mind that all titles, sources and notes have to be written by identical style which was used for tables formatting. During the article writing please mark in the main text all calls to a certain graph, diagram, scheme or picture (*Graph 2.*). All graphs, diagrams, schemes and pictures within the paper have to fit the specified format of the page, as well as they have been centrally positioned.

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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.