ORIGINALNI NAUČNI RAD

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Efekti poreskih oblika u BiH

Effects of tax forms in BiH

Rezime

Poreski sistem mora biti adekvatno dizajniran kako efekti poreskih oblika ne bi imali štetne implikacije na makroekonomski okvir određene zemlje. Rad analizira učešće direktnih poreza i indirektnih poreza u bruto domaćem proizvodu BiH i uključuje empirijsko istraživanje koje meri i ocenjuje agregatne efekte poreza na makroekonomski okvir BiH za vremenski period 2013–2018. godine. Makroekonomski okvir je analiziran sa aspekta kretanja bruto domaćeg proizvoda, inflacije, nezaposlenosti, ukupnih investicija, ukupne štednje i ukupnog duga. Rezultati korelacije ukazuju na značajnu povezanost direktnih poreza i posmatranih makroekonomskih pokazatelja, izuzev inflacije, dok su indirektni porezi značajno korelisani sa bruto domaćim proizvodom, nezaposlenošću i ukupnim dugom. Rezultati modela višestruke regresije prikazuju pozitivan uticaj direktnih poreza na bruto domaći proizvod i nezaposlenost, dok indirektni porezi negativno utiču na bruto domaći proizvod. Takođe, direktni porezi negativno utiču na ukupne investicije i ukupnu štednju, dok indirektni porezi imaju negativne implikacije na nivo ukupne štednje u BiH za posmatrani vremenski period.

Ključne reči: *direktni porezi, indirektni porezi, makroekonomski okvir, BiH.*

Abstract

Tax system must be adequately designed so effects of tax forms do not have damage implications for a country's macroeconomic framework. The paper analyzes the share of direct taxes and indirect taxes in the gross domestic product of BiH and includes empirical research that measures and evaluates aggregate tax effects on macroeconomic framework of BiH for the 2013-2018. The macroeconomic framework has been analyzed in terms of movmements in gross domestic product, inflation, unemploymnet, total investment, total savings and total debt. The results of correlation indicate a significant correlation between direct taxes and observed macroeconomic indicators with the exception of inflation, while indirect taxes are significantly correlated with gross domestic product, unemployment and total debt. The results of multiple regresson models show the positive impact of direct taxes on gross domestic product and unemployment, while indirect taxes have negative impact on gross domestic product. Also, direct taxes have a negative impact on total investment and total savings, while indirect taxes have negative implications for the level of total savings in BiH for analyzed period.

Keywords: *direct taxes, indirect taxes, macroeconomic framework, BiH.*

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UVOD

Svaka ekonomija mora profilisati fiskalnu politiku u pravcu pravičnog i efikasnog poreskog sistema koji će omogućiti ostvarivanje opštedruštvenih interesa (Kalaš, Mirović, 2018). Poreski oblici moraju imati značajno mesto u ekonomskoj politici svake zemlje, gde nivo i učešće poreza treba da bude adekvatno definisano kako bi porezi bili u funkciji rasta i optimalnog funkcionisanja ekonomije (Mirović et al., 2019). Potreba determinisanja optimalnog nivoa poreskih oblika predstavlja važan uslov prilikom merenja i ocenjivanja efekata na osnovne makroekonomske agregate (Kaplow, Priceton, 2011). To podrazumeva da poreski sistem mora biti u funkciji maksimiziranja društvenog blagostanja (Mankiw et al., 2009). Porezi predstavljaju jedan od najvažnijih instrumenata fiskalne politike i fundamentalni izvor redovnih prihoda svake ekonomije. To se naročito odnosi na zemlje u kojima značajni deo javnih prihoda proizlazi po osnovu oporezivanja. Svrha poreskih oblika manifestuje se u potrebi prikupljanja neophodnih sredstava, kako bi se kreirali uslovi za odgovarajuće finansiranje rashoda države. Vlada se oslanja na poreze kao glavni prihod kako bi obezbedila sredstva i finansirala javne usluge i dobra (Alizadeh, Motallabi, 2016). Pored fiskalnog karaktera, poreski oblici imaju i ekonomsku i socijalnu komponentu, gde se u današnjim uslovima ciljevi oporezivanja reflektuju u generisanju prihoda za finansiranje javnog sektora, izbegavanje prepreka ekonomskom rastu i smirivanje ciklične volatilnosti rasta, te adekvatniju redistribuciju dohotka (Brugelmann, 2012). Rad je strukturiran iz nekoliko delova, gde uvod i teorijsko određenje efekata poreskih oblika bliže determinišu ulogu i značaj poreza u ekonomskim tokovima. Sledi pregled literature koji obuhvata prethodna empirijska istraživanja fokusirana na odnos poreskih varijabli i makroekonomskih varijabli. Treći deo uključuje analizu makroekonomskih i poreskih trendova u BiH za vremenski period 2013–2018. godine, da bi u četvrtom delu bilo predstavljeno empirijsko istraživanje bazirano na deskriptivnoj statistici, korelaciji i modelima višestruke regresije.

1. TEORIJSKO ODREĐENJE EFEKATA PORESKIH OBLIKA

Porezi treba da budu predodređeni za ostvarivanje određenih efekata na makro i mikro nivou, gde se efekti reflektuju kroz makroekonomske učinke u vidu stabilizacije ili dohotka i likvidnosti, odnosno mikroekonomske učinke u formi alokacije i redistribucije. Efekti stabilizacije se realizuju delovanjem poreza na finalnu potrošnju i tražnju, gde se njihovom naplatom apsorbuje određeni deo kupovne snage ekonomskih subjekata i redukuje raspoloživi dohodak stanovništva i preduzeća. Efekti alokacije uključuju supstituciju i stimulaciju koje utiču na promenu privredne strukture, gde delovanje poreza ima određene implikacije na cene proizvodnih faktora. Kod efekata stimulacije primenjuju se diferencirane poreske stope kao instrument politike podsticanja privrednog razvoja. U slučaju propulzivnih privrednih grana, neophodno je determinisati niži stepen poreskog opterećenja koji bi olakšao funkcionisanje i intenzivirao rast i razvoj privrednih subjekata. U skladu s tim, Đurović Todorović (2010) navodi metod sektorske diferencijacije poreskog tereta i fiskalnih benefita na selektivnim osnovama koji podrazumeva stimulisanje onih privrednih grana koje su determinisane kao prioritetne za ekonomski razvoj određene zemlje.

U zavisnosti od kriterijuma podele poreza postoji veliki broj njihovih klasifikacija, pri čemu se naročito izdvaja podela na direktne i indirektne poreze. Da li su u pitanju neposredni ili posredni porezi zavisi od toga da li se zasnivaju na dohotku ili njegovoj potrošnji. Osnovni deo javnih prihoda kreira se direktnim porezima, slično kao i kod većine

razvijenih zemalja, dok se posrednim porezima uglavnom formiraju budžetska sredstva. Indirektni porezi zauzimaju značajno mesto u poreskim sistemima razvijenih zemalja EU (Đorđević et al., 2019). Kod indirektnih poreza izdvaja se porez na dodatu vrednost, koji predstavlja najizdašniji poreski oblik u razvijenim zemljama (Đurović Todorović et al., 2019), ali i u manje razvijenim ili zemljama u razvoju.

Karakteristike direktnih poreza ogledaju se u sledećem:

– relativna stabilnost se ogleda u prikupljanja javnih prihoda;

– pravednost se manifestuje sa aspekta naplate poreza od poreskog obveznika prema ekonomskoj snazi;

– neelastičnost se pojavljuje kao posledica nereagovanja na konjunkturna kretanja, što može biti i negativna karakteristika;

– ne postoji opšta obaveza plaćanja poreza za sve;

– troškovi ubiranja su relativno visoki i ugodnost plaćanja je mala zbog direktnog obračuna i plaćanja iz dohotka.

S druge strane, indirektni porezi su karakteristični po sledećem:

– velika elastičnost i sve više naglašena obaveznost plaćanja;

– dovoljnost i izdašnost, što doprinosi sigurnosti prilikom prikupljanja neophodnih sredstava za finansiranje opštih potreba;

– ugodnost plaćanja je prisutna, jer se efekti prelivaju kroz cene proizvoda i usluga;

– laka prevalivost i nisu socijalnog karaktera, što znači da ih plaćaju svi, bez obzira na visinu dohotka (Ristić et al., 2012).

2. PREGLED LITERATURE

Postoji mnogo studija koje su analizirale uticaj poreza na makroekonomske varijable, pri čemu se bruto domaći proizvod najčešće koristio kao determinanta ekonomskog rasta. Shodno tome, mnoga istraživanja su usmerena ka utvrđivanju odnosa poreskih oblika i ekonomskog rasta (Furceri, Karras, 2007; Arnold, 2008; Ferede, Dahlby, 2012; Grdinić et al., 2017; Andrašić et al., 2018; McNabb, 2018; Mirović et al., 2019). U analizi Furceri i Karras (2007), rezultati empirijskog istraživanja ukazuju na to da povećanje poreskog učešća u bruto domaćem proizvodu dovodi do pada bruto domaćeg proizvoda po glavi stanovnika u dvadeset šest zemalja OECD-a. Arnold (2008) potvrđuje negativan efekat poreza na ekonomski rast, što je slično rezultatima istraživanja Mačeka (2014), koji je ukazao na štetne implikacije poreskih oblika, i to poreza na dohodak građana, poreza na dobit preduzeća i doprinosa za socijalno osiguranje. Andrašić i saradnici (2018) potvrdili su da indirektni porezi imaju štetne efekte na ekonomski rast, gde njihovo povećanje od 1% doprinosi padu bruto domaćeg proizvoda za 0,60% u zemljama OECD-a. Mirović i saradnici (2019) utvrdili su signifikantan uticaj poreskih varijabli na bruto domaći proizvod u Španiji, dok su Kalaš i saradnici (2017) identifikovali pozitivnu vezu između rasta poreskih prihoda i bruto domaćeg proizvoda u SAD.

3. METODOLOŠKI OKVIR ISTRAŽIVANJA

Empirijska analiza obuhvata direktne i indirektne poreze, kao i ključne makroekonomske pokazatelje, kao što su bruto domaći proizvod, inflacija, nezaposlenost, ukupne investicije, ukupna štednja i ukupan dug u Bosni i Hercegovini za vremenski period 2013–2018. godine. Autori su koristili sekundarnu bazu podataka Međunarodnog monetarnog fonda za posmatrani vremenski horizont.

INTORDUCTION

Every economy must profile fiscal policy in the direction of a fair and efficient tax system that will enable the pursuit of general social interests (Kalash, Mirovic, 2018). Tax forms must have a significant place in the economic policy of each country, where the level and share of taxes need to be adequately defined so the taxes enable the growth and otpimal functioning of the economy (Mirovic et al. 2019). The need to determine the optimal level of tax forms is an important requirement when measuring and evaluating the effects on basic macroeconomic aggregates (Kaplow, Priceton, 2011). This implies that the tax system must function in a way to maximize social well-being (Mankiw et al. 2009). Taxes are one of the most important instruments of fiscal policy and a fundamental source of regular income for every economy. This is particularly the case in countries where a significant portion of public revenue comes from taxation. The purpose of tax forms is manifested in the need to raise the necessary funds, in order to create the conditions for adequate financing of government expenditures. The government relies on taxes as a major revenue stream to provide funds and finance public services and goods (Alizadeh, Motallabi, 2016). In addition to fiscal nature, tax forms also have an economic and social component, where, in today's environment, taxation goals are reflected in generating revenue for public sector financing, avoiding obstacles to economic growth, and mitigating cyclical volatility of growth through more adequate income redistribution (Brugelmann, 2012). The paper is structured in several parts, where the introduction and theoretical determination of the effects of tax forms more closely determine the role and importance of taxes in economic flows. The following is a literature review that includes previous empirical research focused on the relationship between tax variables and macroeconomic variables. The third part includes an analysis of macroeconomic and tax trends in BiH for the period 2013-2018 in the fourth part to present empirical research based on descriptive statistics, correlation and multiple regression models.

1. THEORETICAL DETERMINATION OF THE EFFECTS OF TAX FORMS

Taxes should be destined to exert certain effects at the macro and micro levels, where the effects are reflected through macroeconomic effects in the form of stabilization of income and liquidity, that is, microeconomic effects in the form of allocation and redistribution. The effects of stabilization are realized by the effect of taxes on final consumption and demand, where their collection absorbs a certain part of the purchasing power of economic entities and reduces the available income of the population and enterprises. Allocation effects include substitution and stimulation that affect a change in the economic structure, where tax action has some implications for the prices of production factors. Stimulation effects use differentiated tax rates as an instrument of policy to stimulate economic development. In the case of propulsive industries, it is necessary to determine a lower level of tax burden that would facilitate the functioning and intensify the growth and development of economic entities. Accordingly, Djurovic-Todorovic (2010) cites the method of sectoral differentiation of tax burden and fiscal benefits on a selective basis, which involves stimulating those industries that have been identified as priorities for the economic development of a country.

Depending on the criteria for the classification of taxes, there is a large number of their classifications, with particular emphasis on the classification of taxes as direct and indirect taxes. Whether they are direct or indirect taxes depends on whether they are based on income or its consumption. The main part of public revenue is generated by direct taxes, similar to most developed countries, while indirect taxes are mainly budgetary funds. Indirect taxes occupy a significant place in the tax systems of developed EU countries (Djordjevic et al. 2019). In the case of indirect taxes, value added tax stands out, which is the most profitable tax form in developed countries (Djurovic-Todorovic et al. 2019), but also in less developed or developing countries.

The characteristics of direct taxes are reflected in the following:

– relative stability is reflected in public revenue collection

– fairness is manifested through taxpayer taxation by economic strength

– inelasticity occurs as a consequence of unresponsiveness to economic developments, which can also be a negative characteristic

– there is no general obligation to pay taxes for everyone

– collection costs are relatively high and the convenience of payment is low due to direct calculation and payment from income.

On the other hand, indirect taxes are characterized by the following:

– High elasticity and an increasing emphasis on payment obligations

– sufficiency and generosity contributing to security when raising the necessary funds to finance general needs

– the convenience of payment is present because the effects are manifested through the prices of products and services

– easy prevalence and are not social in nature, which means that everyone pays them regardless of income level (Ristic et al. 2012).

2. LITERATURE REVIEW

There are many studies that have analyzed the impact of taxes on macroeconomic variables, with gross domestic product being the most commonly used as determinant of economic growth. Accordingly, many studies have focused on determining the relationship between tax forms and economic growth (Furceri and Karras, 2007; Arnold, 2008; Ferede, Dahlby, 2012; Grdinic et al. 2017; Andrasic, et al. 2018; McNabb, 2018; Mirovic 2019). In an analysis by Furceri and Karras (2007), the results of an empirical study indicate that an increase in tax participation in gross domestic product leads to a decline in GDP per capita in twenty-six OECD countries. Arnold (2008) confirms the negative effect of taxes on economic growth, which is similar to the results of a study by Macek (2014), which pointed to the harmful implications of tax forms, namely, personal income tax, corporate income tax and social security contributions. Andrasic et al. (2018) have confirmed that indirect taxes have detrimental effects on economic growth, where a 1% increase in indirect taxes contributes to a 0.60% decline in gross domestic product in OECD countries. Mirovic et al. (2019) found a significant effect of tax variables on the gross domestic product in Spain, while Kalas et al. (2017) identified a positive relationship between tax revenue growth and gross domestic product in US.

3. METHODOLOGICAL FRAMEWORK OF RESEARCH

The empirical analysis includes direct and indirect taxes, as well as key macroeconomic indicators such as gross domestic product, inflation, unemployment, total investment, total savings and total debt in Bosnia and Herzegovina for the 2013-2018 period. The authors used a secondary database of the International Monetary Fund for the observed time horizon.

Tabela 1. Prikaz eksplanatornih varijabli

| Varijable	Simbol	Kalkulacija
Direktni porezi	DT	% of GDP
Indirektni porezi	IT	% of GDP
Bruto domaći proizvod	BDP	godišnja stopa rasta
Inflacija	INF	godišnja stopa
Nezaposlenost	UNM	godišnja stopa
Ukupne investicije	TI	% of GDP
Ukupna štednja	TS	% of GDP
Ukupan dug	TD	% of GDP

Izvor: ilustracija autora

4. MAKROEKONOMSKI I PORESKI TRENDOVI U BOSNI I HERCEGOVINI

U ovom segmentu rada predstavljeni su trendovi ključnih makroekonomskih pokazatelja kao što su bruto domaći proizvod, inflacija, neza-poslenost, ukupne investicije, ukupna štednja i ukupan dug u Bosni i Hercegovini za vremenski period 2013–2018. godine. Pre same empirijske analize predstavljena je analiza navedenih varijabli uz istovremeni prikaz fiskalnih komponenti kao što su javni prihodi, poreski prihodi, direktni porezi i indirektni porezi putem grafičkih prikaza.

*Grafikon 1.* Ključni makroekonomski pokazatelji u BiH
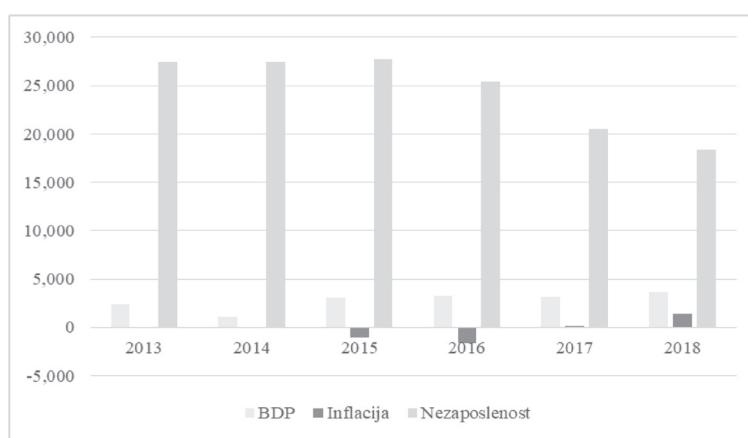
Izvor: autori, na osnovu www.imf.org

Grafikon 1. prikazuje kretanje osnovnih makroekonomskih pokazatelja u Bosni i Hercegovini za vremenski period 2013–2018. godine. Prosečna stopa rasta bruto domaćeg proizvoda iznosi 2,76%, pri čemu je maksimalni nivo rasta ostvaren u 2018. godini, kada je ekonomija BiH rasla po stopi od 3,62%. Posmatrajući kretanje cena na opštem nivou, primetna je negativna stopa inflacije, odnosno deflacija u periodu 2013–2016. godine, da bi u 2018. godini bila zabeležena najviša stopa inflacije od 1,42%. Rezultati kretanja ekonomskog rasta i stope inflacije ukazuju na njihovu pozitivnu korelisanost, odnosno impliciraju da rast cena na opštem nivou pozitivno utiče na kretanje ekonomije BiH. S druge strane, prosečna stopa nezaposlenosti iznosi 24,5% što je visoko u odnosu na region i ukazuje na to da skoro svaka četvrta osoba ima problem da se zaposli u BiH. Ohrabrujuća činjenica je da nezaposlenost ima silazni trend u poslednje tri godine, gde je sam pokazatelj umanjen za 9,3%. Jedan od razloga drastičnog smanjenja stope nezaposlenosti jeste i značajan odliv stanovništva, što je karakteristično za sve zemlje u regionu, tako da poboljšane ekonomske tendencije treba uzeti sa određenom dozom rezerve.

Grafikon 2. Ukupne investicije, ukupna štednja i ukupan dug u BiH (% BDP-a)
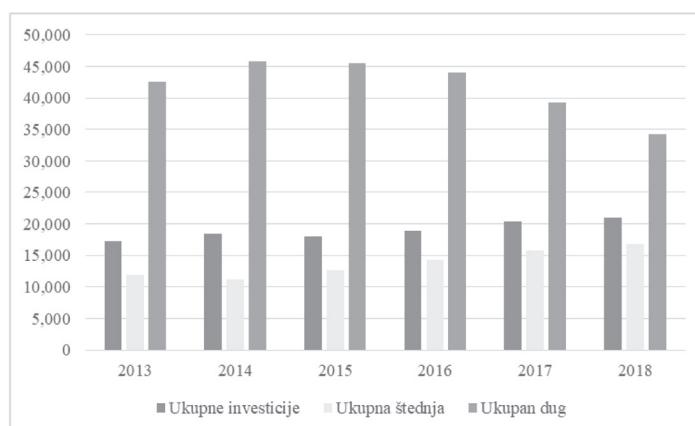
Izvor: autori, na osnovu www.imf.org

Table 1. *Overview of explanatory variables*

| Variables	Symbol	Calculation
Direct taxes	DT	% of GDP
Indirect taxes	IT	% of GDP
Gross domestic product	BDP	annual growth rate
Inflation	INF	annual rate
Unemployment	UNM	annual rate
Total investments	TI	% of GDP
Total savings	TS	% of GDP
Total debt	TD	% of GDP

Source: Author illustration

4. MACROECONOMIC AND TAX TRENDS IN BOSNIA AND HERZEGOVINA

This segment presents trends in key macroeconomic indicators such as gross domestic product, inflation, unemployment, total investment, total savings and total debt in Bosnia and Herzegovina for the 2013-2018 period. Prior to the empirical analysis, an analysis of the above variables was presented, while presenting fiscal components such as public revenues, tax revenues, direct taxes, indirect taxes via graphical representations.

**Chart 1.** *Key macroeconomic indicators in BiH*
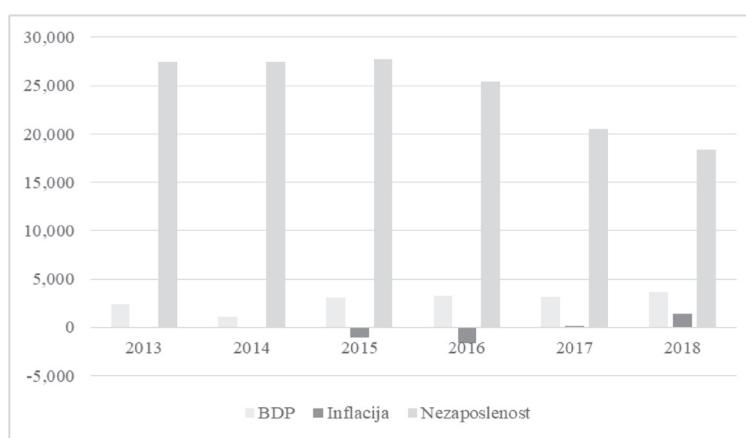
Source: Authors based on www. imf.org

Chart 1 shows the trends of basic macroeconomic indicators in Bosnia and Herzegovina for the period 2013-2018. The average growth rate of gross domestic product is 2.76%, with the maximum level of growth achieved in 2018 when the BiH economy grew at a rate of 3.62%. Looking at price developments at the general level, a negative inflation rate was observed, ie deflation in the period 2013-2016, to reach the highest inflation rate of 1.42% in 2018. The results of economic growth trends and inflation rates indicate their positive correlation, that is, implies that price growth at the general level has a positive effect on the economy of BiH. On the other hand, the average unemployment rate is 24.5%, which is significantly higher than in the region and indicates that almost every fourth person has a problem finding employment in BiH. The encouraging fact is that unemployment has been declining over the last three years, where the indicator itself has decreased by 9.3%. One of the reasons for the drastic decrease in the unemployment rate is the significant outflow of population, which is characteristic of all countries in the region, so improved economic tendencies should be taken with a certain dose of reserve.

Chart 2. *Total investments, total savings and total debt in BiH (% of GDP)*
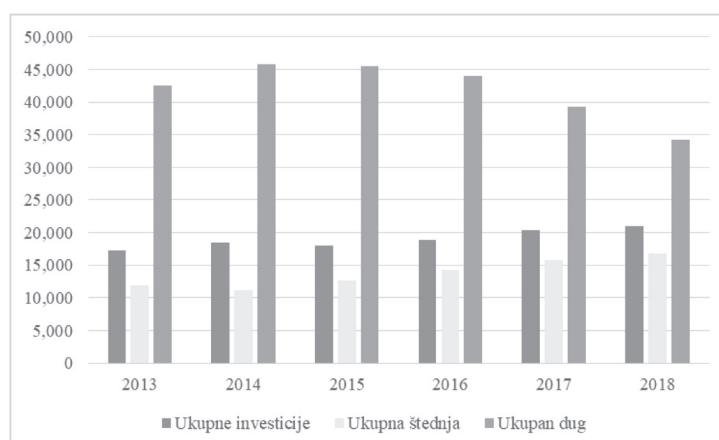

Source: Authors based on www. imf.org

Nakon predstavljanja tri ključna makroekonomska pokazatelja u BiH, sledi prikaz procentualnog učešća ukupnih investicija, štednje i duga u bruto domaćem proizvodu za vremenski period 2013–2018. godine. Rezultati analize ukazuju na to da prosečno učešće investicija iznosi 18,98% bruto domaćeg proizvoda, što je daleko niže u odnosu na optimalni nivo od 25% bruto domaćeg proizvoda, koji omogućava znatno brži ekonomski rast. S druge strane, prosečno učešće ukupne štednje iznosi 13,75%,

dok prosečan nivo ukupnog duga čini 41,91% bruto domaćeg proizvoda. Kada je reč o štednji, potrebno je da nivo štedne komponente bude usmeren u produktivne aktivnosti koje bi omogućile pozitivne implikacije na kretanje ekonomije u BiH. Sa aspekta održivosti ukupnog duga, BiH zadovoljava jedan od kriterijuma Ugovora iz Mastrihta, gde je propisano maksimalno učešće duga do 60% bruto domaćeg proizvoda.

Grafikon 3. *Javni prihodi u BiH (% BDP-a)*
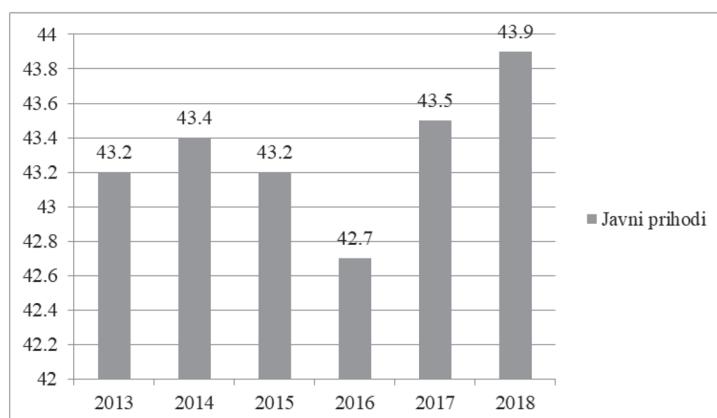
Izvor: autori, na osnovu www.imf.org

Na grafikonu 3. predstavljeno je kretanje javnih prihoda u BiH za vremenski period 2013–2018. godine. Kao što se može primetiti, učešće javnih prihoda u bruto domaćem proizvodu poraslo je za 0,7% za posmatrani vremenski horizont. Takođe, prosečno učešće javnih prihoda iznosi 43,32% bruto domaćeg proizvoda, pri čemu

je najviša vrednost zabeležena 2018. godine, i to 43,9%, što je i logično imajući u vidu da je ekonomija BiH tada rasla po najvišoj stopi (prikazano na grafikonu 1). S druge strane, najniži nivo javnih prihoda zabeležen je 2016. godine, kada su činili 42,7% bruto domaćeg proizvoda.

Grafikon 4. *Poreski prihodi u BiH (% BDP-a)*
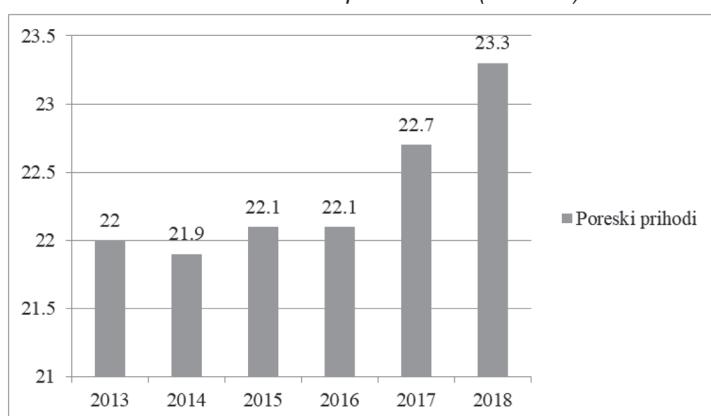
Izvor: autori, na osnovu www.imf.org

Kada se analiziraju samo poreski prihodi, njihovo prosečno učešće iznosi 22,35% bruto domaćeg proizvoda za vremenski period 2013–2018. godine. Analiza ukazuje na sličan trend kao kod javnih

prihoda sa aspekta najviše vrednosti, dok je najniže učešće zabeleženo u 2014. godini, kada su poreski prihodi činili 21,9% bruto domaćeg proizvoda.

Grafikon 5. *Direktni i indirektni porezi u BiH (% BDP-a)*
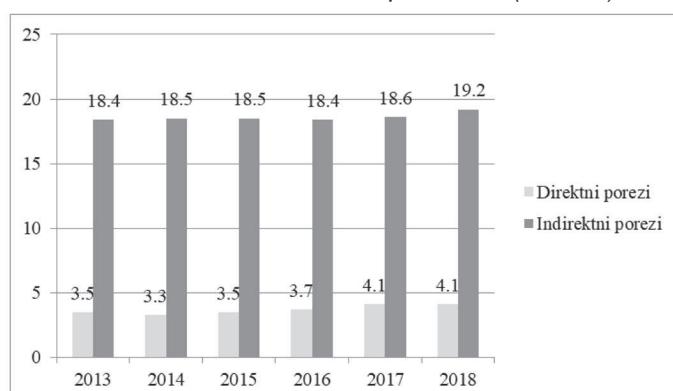
Izvor: autori, na osnovu www.imf.org

After presenting three key macroeconomic indicators in BiH, the following is a summary of the percentage share of total investments, savings and debt in gross domestic product for the period 2013-2018. The results of the analysis indicate that the average investment share is 18.98% of gross domestic product, which is far below the optimum level of 25% of gross domestic product, which enables significantly faster economic growth. On the other hand, the average share of total savings is 13.75%, while the average level of total debt is 41.91% of gross domestic product. When it comes to savings, the level of the savings component needs to be directed towards productive activities that would allow positive implications for the economy of BiH. In terms of sustainability of total debt, BiH fulfills one of the criteria of the Maastricht Treaty, which stipulates a maximum debt ratio of up to 60% of gross domestic product.

Chart 3. *Public Revenues in BiH (% of GDP)*
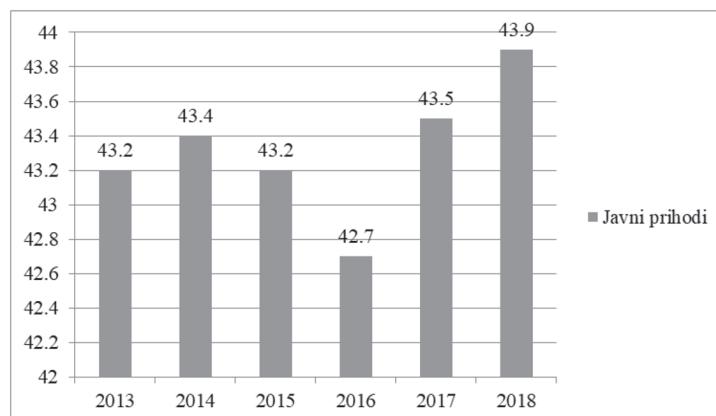
Source: Authors based on www. imf.org

Graph 3 shows the trends of public revenues in BiH for the period 2013-2018. As it can be observed, the share of public revenues in gross domestic product increased by 0.7% for the observed time horizon. Also, the average share of public revenues is 43.32% of gross domestic product, with the highest value recorded in 2018 of 43.9%, which is logical given that the BiH economy then grew at the highest rate (shown in Chart 1). On the other hand, the lowest level of public revenues was recorded in 2016, when they accounted for 42.7% of gross domestic product.

Chart 4. *Tax Revenues in BiH (% of GDP)*
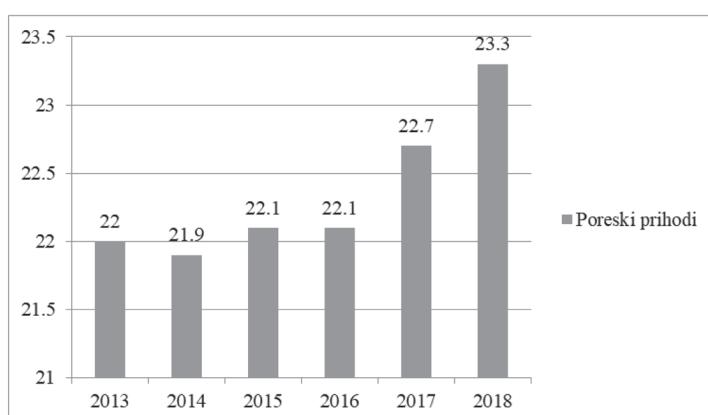
Source: Authors based on www. imf.org

When analyzing only tax revenues, their average share is 22.35% of gross domestic product for the period 2013-2018. The analysis points to a similar trend, the same as for public revenues from the point of view of the highest value, while the lowest share was recorded in 2014 when tax revenues accounted for 21.9% of gross domestic product.

Chart 5. *Direct and indirect taxes in BiH (% of GDP)*
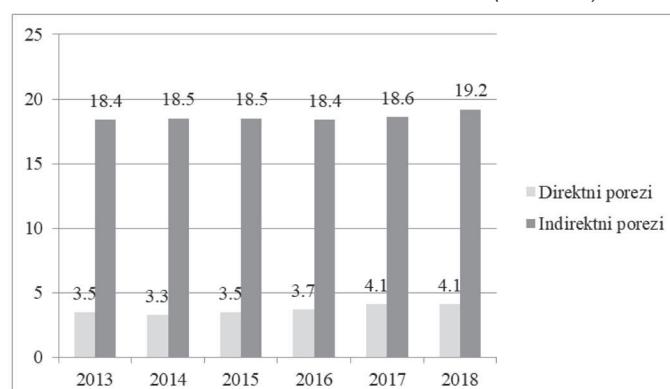
Source: Authors based on www. imf.org

U okviru poreskih prihoda u BiH, indirektni porezi čine 18,6% bruto domaćeg proizvoda na prosečnom nivou, dok je prosečno učešće direktnih poreza na znatno nižem nivou i iznosi 3,7% bruto domaćeg proizvoda za posmatrani vremenski period. Da bi se jasnije ukazalo na značaj indirektnih poreza u BiH, naredni grafikon prikazuje relativno učešće neposrednih i posrednih poreza u strukturi BiH.

*Grafikon 6. Direktni i indirektni porezi u BiH (% poreskih prihoda)*

Izvor: autori, na osnovu www.imf.org

Kao što se može primetiti, indirektni porezi čine najizdašnije poreze u BiH, što implicira da ova vrsta poreza generiše najviše prihoda po osnovu naplate poreza za posmatrani vremenski period. Prosečno učešće indirektnih poreza čini 83,43% ukupnih poreza, što je u skladu sa poreskim trendom koji je prisutan i u zemljama u regionu. U sklopu indirektnih poreza izdvajaju se porez na dodatu vrednost i akcize (Terzić, 2017). S druge strane, direktni porezi čine 16,57% ukupnih poreza na prosečnom nivou, što je daleko niže u odnosu na razvijenije zemlje. Naravno, stepen razvijenosti zemlje je pozitivno korelisan sa učešćem direktnih poreza, što podrazumeva da zemlje sa većim životnim standardom imaju i daleko veće neposredne poreze i obrnuto.

Grafikon 7. Doprinosi za socijalno osiguranje, subvencije i ostali prihodi (% BDP-a)
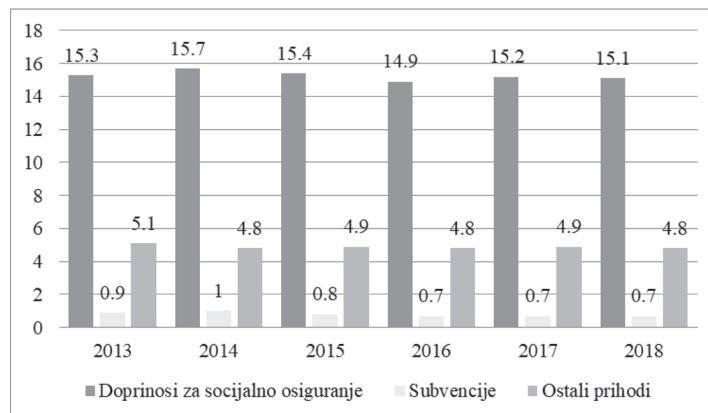
Izvor: autori, na osnovu www.imf.org

U okviru strukture javnih prihoda u BiH, neophodno je naglasiti i značajno učešće doprinosa za socijalno osiguranje, koji čine 15,27% bruto domaćeg proizvoda na prosečnom nivou. S druge strane, prosečno učešće subvencija iznosi 0,8% bruto domaćeg proizvoda, dok prosečno učešće ostalih prihoda ne prelazi 5% bruto domaćeg proizvoda.

5. EMPIRIJSKA ANALIZA I REZULTATI

Nakon predstavljanja trendova kretanja ključnih makroekonomskih pokazatelja i poreskih komponenti u Bosni i Hercegovini, sledi prikaz deskriptivne statistike, korelacije i modela višestruke regresije za navedene varijable u periodu 2013–2018. godine.

Tabela 2. Deskriptivna statistika

Varijable	Broj opservacija	Prosečna vrednost	Standardna devijacija	Minimalna vrednost	Maksimalna vrednost
DT	6	3,7	0,33	3,3	4,1
IT	6	18,6	0,30	18,4	19,2
GDP	6	2,75	0,89	1,15	3,62
INF	6	-0,23	1,16	-1,58	1,42
UNM	6	24,5	4,06	18,4	27,7
TI	6	18,98	1,44	17,23	20,94

Within tax revenues in BiH, indirect taxes account for 18.6% of gross domestic product at the average level, while the average share of direct taxes is much lower and amounts to 3.7% of gross domestic product for the observed period. In order to more clearly indicate the importance of indirect taxes in BiH, the following chart shows the relative share of direct and indirect taxes in the structure of BiH.

***Chart 6.*** *Direct and indirect taxes in BiH (% tax revenue)*
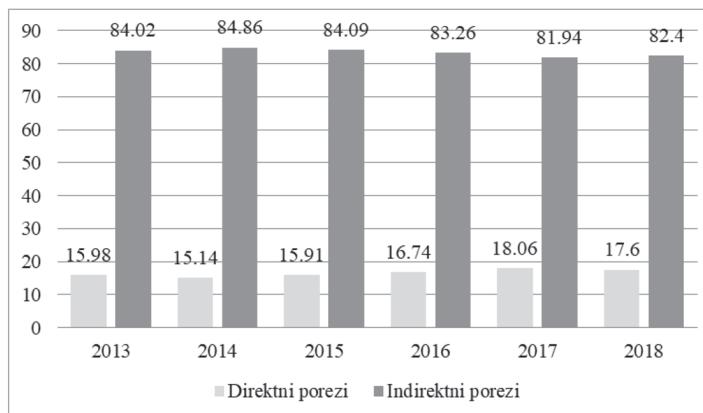
Source: Authors based on www. imf.org

As it can be observed, indirect taxes represent the most generous taxes in BiH, which implies that this type of tax generates the highest tax revenue for the observed period. The average share of indirect taxes is 83.43% of total taxes, which is in line with the tax trend that is present in the countries in the region. Within indirect taxes, value added tax and excise duties are distinguished (Terzic, 2017). On the other hand, direct taxes represent 16.57% of total taxes at the average level, which is far lower than in the more developed countries. Of course, the level of development of the country is positively correlated with the share of direct taxes, which implies that countries with higher living standards also have far higher direct taxes and vice versa.

Chart 7. *Social security contributions, subsidies and other revenues (% of GDP)*
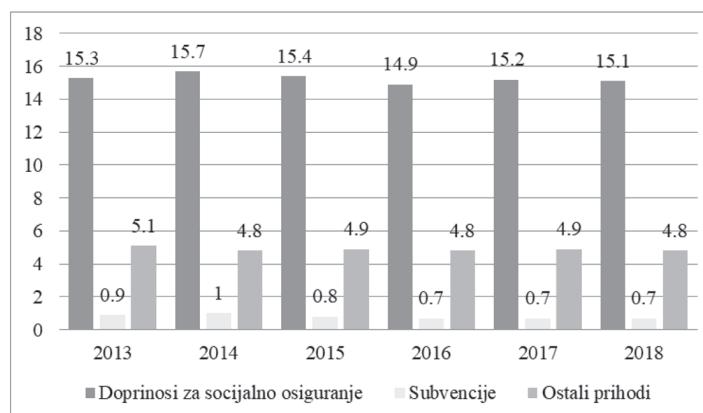
Source: Authors based on www. imf.org

Within the structure of public revenues in BiH, it is necessary to emphasize the significant share of social security contributions, which amount to 5.27% of gross domestic product at the average level. On the other hand, the average share of subsidies is 0.8% of gross domestic product, while the average share of other revenues does not exceed 5% of gross domestic product.

5. EMPIRICAL ANALYSIS AND RESULTS

After presenting trends in key macroeconomic indicators and tax components in Bosnia and Herzegovina, the presentation of descriptive statistics, correlations and multiple regression models for these variables in the period 2013-2018 is presented.

Table 2. *Descriptive statistics*

Variables	Number of observations	Average value	Standard deviation	The minimum value	The maximum value
DT	6	3.7	0.33	3.3	4.1
IT	6	18.6	0.30	18.4	19.2
GDP	6	2.75	0.89	1.15	3.62
INF	6	-0.23	1.16	-1.58	1.42
UNM	6	24.5	4.06	18.4	27.7
TI	6	18.98	1.44	17.23	20.94

| TS | 6 | 13,75 | 2,25 | 11,10 | 16,84 |
| TD | 6 | 41,91 | 4,46 | 34,25 | 45,86 |

DT – direktni porezi; IT – indirektni porezi; GDP – bruto domaći proizvod; INF – inflacija; UNM – nezaposlenost; TI – ukupne investicije; TS – ukupna štednja; TD – ukupan dug.

Izvor: kalkulacija autora

Deskriptivna analiza uključuje prosečnu vrednost, standardnu devijaciju, minimalnu i maksimalnu vrednost posmatranih varijabli i rezultati ukazuju na to da sve varijable beleže pozitivne prosečne vrednosti osim inflacije. Analizirajući standardno odstupanje, može se uočiti da je ono najveće kod varijabli nezaposlenosti i ukupnog duga, a najmanje kod direktnih i indirektnih poreza, što je i logično, imajući u vidu da je analizirano njihovo procentualno učešće u bruto domaćem proizvodu.

Tabela 3. Korelaciona analiza

Korelacija		DT	IT	BDP	INF	UNM	TI	TS	TD
DT	Pearson Correlation	1	0,670	**-0,775***	0,447	**-0,955***	**-0,885****	**0,975****	**0,878***
	Sig. (2-tailed)		0,145	0,040	0,374	0,003	0,019	0,001	0,022
	N	6	6	6	6	6	6	6	6
IT	Pearson Correlation	0,670	1	**-0,475***	0,811	**-0,823***	0,777	0,731	**-0,872***
	Sig. (2-tailed)	0,145		0,041	0,050	0,044	0,069	0,099	0,023
	N	6	6	6	6	6	6	6	6
GDP	Pearson Correlation	**-0,755***	**-0,475***	1	0,039	-0,630	0,535	**0,829***	-0,608
	Sig. (2-tailed)	0,040	0,041		0,942	0,180	0,274	0,041	0,200
	N	6	6	6	6	6	6	6	6
INF	Pearson Correlation	0,447	0,811	0,039	1	-0,638	0,532	0,404	-0,782
	Sig. (2-tailed)	0,374	0,050	0,942		0,173	0,278	0,427	0,066
	N	6	6	6	6	6	6	6	6
UNM	Pearson Correlation	**-0,955****	**-0,823***	-0,630	-0,638	1	**-0,957****	**-0,948****	**0,934****
	Sig. (2-tailed)	0,003	0,044	0,180	0,173		0,003	0,004	0,006
	N	6	6	6	6	6	6	6	6
TI	Pearson Correlation	**0,855***	0,777	0,535	0,532	**-0,957****	1	**0,904***	-0,805
	Sig. (2-tailed)	0,019	0,069	0,274	0,278	0,003		0,013	0,053
	N	6	6	6	6	6	6	6	6
TS	Pearson Correlation	**0,975****	0,731	**0,829***	0,404	**-0,948***	**0,904***	1	**-0,863***
	Sig. (2-tailed)	0,001	0,099	0,041	0,427	0,004	0,013		0,027
	N	6	6	6	6	6	6	6	6
TD	Pearson Correlation	**-0,878***	**-0,872***	-0,608	-0,782	**0,934****	-0,805	**-0,863***	1
	Sig. (2-tailed)	0,022	0,023	0,200	0,066	0,006	0,053	0,027	
	N	6	6	6	6	6	6	6	6

** *Korelacija je značajna pri nivou 0,01.*

* *Korelacija je značajna pri nivou 0,05.*

Izvor: kalkulacija autora

| TS | 6 | 13.75 | 2.25 | 11.10 | 16.84 |
| TD | 6 | 41.91 | 4.46 | 34.25 | 45.86 |

DT – direct taxes; IT – indirect taxes; GDP – gross domestic product; INF - inflation; UNM - unemployment; TI – total investments; TS – total savings; TD – total debt.

Source: Author calculation

Descriptive analysis includes the average value, standard deviation, minimum and maximum values of the observed variables and the results indicate that all variables record positive average values except inflation. Analyzing the standard deviation, it can be observed that it is the highest in the variables of unemployment and total debt, and the lowest in direct and indirect taxes, which is logical given that their percentage share in gross domestic product is analyzed.

Table 3. *Correlation analysis*

Correlation		DT	IT	BDP	INF	UNM	TI	TS	TD
DT	Pearson Correlation	1	0.670	**-0.775***	0.447	**-0.955***	**-0.885****	**0.975****	**0.878***
	Sig. (2-tailed)		0.145	0.040	0.374	0.003	0.019	0.001	0.022
	N	6	6	6	6	6	6	6	6
IT	Pearson Correlation	0.670	1	**-0.475***	0.811	**-0.823***	0.777	0.731	**-0.872***
	Sig. (2-tailed)	0.145		0.041	0.050	0.044	0.069	0.099	0.023
	N	6	6	6	6	6	6	6	6
GDP	Pearson Correlation	**-0.755***	**-0.475***	1	0.039	-0.630	0.535	**0.829***	-0.608
	Sig. (2-tailed)	0.040	0.041		0.942	0.180	0.274	0.041	0.200
	N	6	6	6	6	6	6	6	6
INF	Pearson Correlation	0.447	0.811	0.039	1	-0.638	0.532	0.404	-0.782
	Sig. (2-tailed)	0.374	0.050	0.942		0.173	0.278	0.427	0.066
	N	6	6	6	6	6	6	6	6
UNM	Pearson Correlation	**-0.955****	**-0.823***	-0.630	-0.638	1	**-0.957****	**-0.948****	**0.934****
	Sig. (2-tailed)	0.003	0.044	0.180	0.173		0.003	0.004	0.006
	N	6	6	6	6	6	6	6	6
TI	Pearson Correlation	**0.855***	0.777	0.535	0.532	**-0.957****	1	**0.904***	-0.805
	Sig. (2-tailed)	0.019	0.069	0.274	0.278	0.003		0.013	0.053
	N	6	6	6	6	6	6	6	6
TS	Pearson Correlation	**0.975****	0.731	**0.829***	0.404	**-0.948***	**0.904***	1	**-0.863***
	Sig. (2-tailed)	0.001	0.099	0.041	0.427	0.004	0.013		0.027
	N	6	6	6	6	6	6	6	6
TD	Pearson Correlation	**-0.878***	**-0.872***	-0.608	-0.782	**0.934****	-0.805	**-0.863***	1
	Sig. (2-tailed)	0.022	0.023	0.200	0.066	0.006	0.053	0.027	
	N	6	6	6	6	6	6	6	6

** The correlation is significant at the level 0.01.

* The correlation is significant at the level 0.05.

Source: Author calculation

Tabela 3. prikazuje stepen povezanosti između direktnih i indirektnih poreza s jedne strane i ključnih makroekonomskih pokazatelja s druge strane u BiH za vremenski period 2013–2018. godine. Rezultati korelacione matrice ukazuju na statistički značajnu povezanost direktnih poreza i posmatranih makroekonomskih pokazatelja osim inflacije. Vrednosti koeficijenta korelacije prikazuju da su direktni porezi negativno korelisani sa bruto domaćim proizvodom, nezaposlenošću i ukupnim investicijama, dok istovremeno postoji pozitivna korelacija između ove vrste poreza i ukupne štednje i ukupnog duga. S druge strane, indirektni porezi su značajno korelisani sa bruto domaćim proizvodom, nezaposlenošću i ukupnim dugom, dok povezanost sa ostalim varijablama nije statistički značajna. Rezultati su slični kao kod direktnih poreza, gde je prisutna negativna povezanost sa bruto domaćim proizvodom i nezaposlenošću. Posmatrajući povezanost između makroekonomskih pokazatelja, primetna je pozitivna korelisanost između bruto domaćeg proizvoda i ukupne štednje, nezaposlenosti i ukupnog duga, kao i negativna korelisanost između ukupnih investicija i nezaposlenosti.

Tabela 4. Modeli višestruke regresije

Model	I	II	III	IV	V	VI
Variable	GDP	INF	UNM	TI	TS	TD
DT	2,1965 (0,009)	1,4726 (0,382)	6,8760 (0,011)	-2,8441 (0,020)	-5,9206 (0,010)	-7,0914 (0,098)
IT	-0,2347 (0,002)	1,9063 (0,317)	-4,4394 (0,083)	-1,5891 (0,125)	-1,0478 (0,008)	-7,5942 (0,104)
C	-1,0052 (0,969)	-1,1352 (37,24)	13,9149 (0,016)	-21,0927 (0,446)	-27,6491 (0,232)	29,4002 (0,031)
N	6	6	6	6	6	6
R-sq	0,6037	0,7135	0,9723	0,8444	0,9624	0,9172
Adj R-sq	0,5339	0,5226	0,9538	0,7406	0,9373	0,8620
RMSE	0,7212	0,8010	0,8717	0,7338	0,5634	1,6578
BP test	0,4299	0,4622	0,2448	0,2229	0,8987	0,2531
BG test	0,2270	0,3369	0,1018	0,1094	0,3041	0,7575
DW test	2,657485	1,7787	3,1334	2,6785	2,0328	1,1563

Izvor: kalkulacija autora

Primenom modela višestruke regresije izvršeno je merenje efekata direktnih i indirektnih poreza na ključne makroekonomske pokazatelje u BiH za vremenski period 2013–2018. godine. Rezultati primenjenih modela ukazuju na značajan uticaj direktnih poreza na bruto domaći proizvod, nezaposlenost i ukupnu štednju, dok indirektni porezi signifikantno utiču na bruto domaći proizvod, ukupne investicije i ukupnu štednju. Rezultati prvog modela prikazuju pozitivan uticaj direktnih poreza na bruto domaći proizvod, gde njihova promena od 1% dovodi do povećanja bruto domaćeg proizvoda za 2,19%. S druge strane, indirektni porezi negativno utiču na bruto domaći proizvod, gde njihovo povećanje od 1% rezultira smanjenjem ekonomskog rasta za 0,23%. Rezultati drugog i šestog modela ukazuju na to da direktni i indirektni porezi nemaju statistički signifikantan efekat na kretanje cena na opštem nivou i nivo ukupnog duga u BiH za posmatrani vremenski period. Rezultati trećeg modela prikazuju značajan uticaj direktnih poreza na nezaposlenost, gde njihovo povećanje od 1% rezultira porastom nezaposlenosti od 6,88%. Kod četvrtog modela primetan je značajan uticaj direktnih poreza, gde njihova promena od 1% dovodi do smanjenja nivoa ukupnih investicija od 2,84%. Rezultati petog modela prikazuju značajan efekat direktnih i indirektnih poreza na nivo ukupne štednje, pri čemu obe vrste poreza negativno utiču na ovu varijablu. Takođe, efekti direktnih poreza su naglašeniji u odnosu na indirektne poreze, što podrazumeva da njihovo povećanje od 1% rezultira smanjenjem ukupne štednje za 5,92%, što je više u odnosu na 1,05% u slučaju promene indirektnih poreza.

ZAKLJUČAK

Rad uključuje empirijsku analizu usmerenu na merenje i ocenjivanje efekata poreskih oblika sa stanovišta agregatnih vrednosti direktnih poreza i indirektnih poreza na makroekonomski okvir u BiH. Makroekonomski okvir BiH je analiziran putem ključnih pokazatelja kao što su bruto domaći proizvod, inflacija, nezaposlenost, ukupne investicije, ukupna štednja i ukupan dug. Ako posmatramo trendove kretanja u ekonomiji BiH, analiza je pokazala da prosečna stopa rasta bruto domaćeg proizvoda iznosi 2,76%, pri čemu je maksimalni nivo rasta ostvaren u 2018. godini, kada je ekonomija BiH rasla po stopi od 3,62%. Rezultati kretanja ekonomskog rasta i stope inflacije ukazuju na njihovu pozitivnu korelisanost, odnosno impliciraju da rast cena na opštem nivou pozitivno utiče na kretanje ekonomije BiH. S druge strane, najveći problem ekonomije BiH jeste visoka prosečna stopa nezaposlenosti od 24,5% koja navodi na zaključak da skoro svaka četvrta osoba ima problem da se zaposli u BiH. Rezultati analize ukazuju na prosečno učešće investicija od 18,98% bruto domaćeg proizvoda, što je daleko niže u odnosu na optimalni nivo od 25% bruto domaćeg proizvoda koji doprinosi intenzivnom ekonomskom rastu. Takođe, prosečno učešće ukupne štednje iznosi 13,75%, dok prosečan nivo ukupnog duga čini 41,91% bruto domaćeg proizvoda. Kada je reč o fiskalnim komponentama, prosečno učešće javnih prihoda iznosi 43,32% bruto domaćeg proizvoda, pri čemu je najviša vrednost zabeležena 2018. godine, i to 43,9%, što je i logično, imajući u vidu da je ekonomija BiH tada rasla po najvišoj stopi. Kada se analizi-

Table 3 shows the degree of correlation between direct and indirect taxes on the one hand and key macroeconomic indicators on the other hand in BiH for the 2013-2018 period. The results of the correlation matrix indicate a statistically significant correlation between direct taxes and observed macroeconomic indicators other than inflation. The values of the correlation coefficients show that direct taxes are negatively correlated with gross domestic product, unemployment and total investment, while at the same time there is a positive correlation between this type of tax and total savings and total debt. On the other hand, indirect taxes are si-gnificantly correlated with gross domestic product, unemployment and total debt, while the correlation with other variables is not statistically significant. The results are similar to those for direct taxes, where there is a negative correlation with gross domestic product and unemployment. Looking at the correlation between macroeconomic indicators, there is a positive correlation between gross domestic product and total savings, unemployment and total debt, as well as a negative correlation between total investment and unemployment.

Table 4. Multiple regression models

Model	I	II	III	IV	V	VI
Variable	GDP	INF	UNM	TI	TS	TD
DT	2.1965 (0.009)	1.4726 (0.382)	6.8760 (0.011)	-2.8441 (0.020)	-5.9206 (0.010)	-7.0914 (0.098)
IT	-0.2347 (0.002)	1.9063 (0.317)	-4.4394 (0.083)	-1.5891 (0.125)	-1.0478 (0.008)	-7.5942 (0.104)
C	-1.0052 (0.969)	-1.1352 (37.24)	13.9149 (0.016)	-21.0927 (0.446)	-27.6491 (0.232)	29.4002 (0.031)
N	6	6	6	6	6	6
R-sq	0.6037	0.7135	0.9723	0.8444	0.9624	0.9172
Adj R-sq	0.5339	0.5226	0.9538	0.7406	0.9373	0.8620
RMSE	0.7212	0.8010	0.8717	0.7338	0.5634	1.6578
BP test	0.4299	0.4622	0.2448	0.2229	0.8987	0,2531
BG test	0.2270	0.3369	0.1018	0.1094	0.3041	0.7575
DW test	2.657485	1.7787	3.1334	2.6785	2.0328	1.1563

Source: Author calculation

Using the multiple regression model, the effects of direct and indirect taxes on key macroeconomic indicators in BiH for the period 2013-2018 were measured. The results of the models applied indicate a significant impact of direct taxes on gross domestic product, unemployment and total savings, while indirect taxes significantly affect gross domestic product, total investment and total savings. The results of the first model show the positive impact of direct taxes on gross domestic product, where a change of 1% leads to an increase in gross domestic product by 2.19%. On the other hand, indirect taxes adversely affect gross domestic product, where a 1% increase results in a 0.23% decrease in economic growth. The results of the second and sixth models indicate that direct and indirect taxes do not have a statistically significant effect on price movements at the general level and the level of total debt in BiH for the observed period. The results of the third model show the significant impact of direct taxes to unemployment, where an increase of 1% results in a 6.88% increase in unemployment. The fourth model shows a significant impact of direct taxes, where a change of 1% leads to a decrease in the level of total investment by 2.84%. The results of the fifth model show a significant effect of direct and indirect taxes on the level of total savings, with both types of taxes adversely affecting this variable. Also, the effects of direct taxes are greater than indirect taxes, which means that their increase of 1% results in a decrease in total savings of 5.92%, which is more than 1.05% in case of change of indirect taxes.

CONCLUSION

The paper includes an empirical analysis focused on measuring and evaluating the effects of tax forms, from the point of view of aggregate values of direct taxes and indirect taxes on the macroeconomic framework in BiH. The macroeconomic framework in BiH has been analyzed through key indicators such as gross domestic product, inflation, unemployment, total investment, total savings and total debt. Looking at trends in the BiH economy, the analysis showed that the average growth rate of gross domestic product is 2.76%, with the maximum growth rate achieved in 2018 when the BiH economy grew at a rate of 3.62%. The results of economic growth trends and inflation rates indicate their positive correlation, that is, implies that price growth at the general level has a positive effect on the economy of BiH. On the other hand, the biggest problem of the BiH economy is the high average unemployment rate of 24.5%, which leads to the conclusion that almost every fourth person has a problem finding a job in BiH. The results of the analysis indicate an average investment share of 18.98% of gross domestic product, which is far below the optimum level of 25% of gross domestic product contributing to intense economic growth. Also, the average share of total savings is 13.75%, while the average level of total debt is 41.91% of gross domestic product. In terms of fiscal components, the average share of public revenues is 43.32% of gross domestic product, with the highest value recorded in 2018 of 43.9%, which is logical given that the BiH economy then grew at the highest rate. When analyzing only tax revenues,

raju samo poreski prihodi, njihovo prosečno učešće iznosi 22,35% bruto domaćeg proizvoda, pri čemu analiza ukazuje na sličan trend kao kod javnih prihoda sa aspekta najviše vrednosti, dok je najniže učešće zabeleženo u 2014. godini, kada su poreski prihodi činili 21,9% bruto domaćeg proizvoda. Posmatrajući poreske trendove u BiH, deskriptivna i empirijska analiza je pokazala da indirektni porezi generišu najviše prihoda po osnovu naplate poreza u BiH za vremenski period 2013–2018. godine. Prosečno učešće indirektnih poreza čini 83,43% ukupnih poreza, što je daleko više u odnosu na direktne poreze, koji čine 16,57% ukupnih poreza na prosečnom nivou. U okviru poreskih prihoda u BiH, indirektni porezi čine 18,6% bruto domaćeg proizvoda na prosečnom nivou, dok je prosečno učešće direktnih poreza na znatno nižem nivou i iznosi 3,7% bruto domaćeg proizvoda za posmatrani vremenski period. Rezultati prvog modela ističu pozitivan efekat direktnih poreza na bruto domaći proizvod, gde njihova promena od 1% dovodi do povećanja bruto domaćeg proizvoda za 2,19%. Suprotno, indirektni porezi negativno utiču na bruto domaći proizvod, gde njihovo povećanje od 1% rezultira smanjenjem ekonomskog rasta za 0,23%. Rezultati drugog i šestog modela ukazuju na to da direktni i indirektni porezi nemaju statistički značajan uticaj na inflaciju i ukupan dug u BiH za posmatrani vremenski period. Rezultati trećeg modela prikazuju signifikantan efekat direktnih poreza na nezaposlenost, gde njihovo povećanje od 1% rezultira porastom nezaposlenosti od 6,88%. Kod četvrtog modela primetan je značajan uticaj direktnih poreza, gde njihova promena od 1% dovodi do smanjenja nivoa ukupnih investicija od 2,84%. Rezultati petog modela prikazuju signifikantan negativan efekat direktnih i indirektnih poreza na nivo ukupne štednje.

Važno je naglasiti da su efekti direktnih poreza veći u odnosu na indirektne poreze, što podrazumeva da njihovo povećanje od 1% rezultira smanjenjem ukupne štednje za 5,92%, što je više u odnosu na 1,05% u slučaju promene indirektnih poreza.

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their average share is 22.35% of gross domestic product, with the analysis indicating a similar trend, as in public revenues, from the highest value point of view, while the lowest share was recorded in 2014 when tax revenues were 21.9 % of gross domestic product. Looking at the tax trends in BiH, descriptive and empirical analysis has shown that indirect taxes generate the most revenue from tax collection in BiH for the 2013-2018 period. The average share of indirect taxes is 83.43% of total taxes, which is far higher than direct taxes which amount to 16.57% of total taxes at the average level. Within tax revenues in BiH, indirect taxes amount to 18.6% of gross domestic product at the average level, while the average share of direct taxes is much lower and amounts to 3.7% of gross domestic product over the observed period. The results of the first model highlight the positive effect of direct taxes on gross domestic product where a change of 1% leads to an increase in gross domestic product by 2.19%. On the contrary, indirect taxes adversely affect gross domestic product, where a 1% increase results in a 0.23% decrease in economic growth. The results of the second and sixth models indicate that direct and indirect taxes do not have a statistically significant effect on inflation and total debt in BiH over the observed period. The results of the third model show a significant impact of direct taxes on unemployment where a 1% increase in direct taxes results in a 6.88% increase in unemployment. The fourth model shows a significant impact of direct taxes, where a change of 1% leads to a decrease in the level of total investment by 2.84%. The results of the fifth model show a signicant negative effect of direct and indirect taxes on the level of total savings.

It is important to emphasize that the effects of direct taxes are greater than indirect taxes, which means that their increase of 1% results in a decrease in total savings of 5.92%, which is more than 1.05% in case of change of indirect taxes.

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