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TRENDOWI U FINANSIRANJU POLJOPRIVREDE REPUBLIKE SRBIJE

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Rezime: Poslednjih godina se beleži porast agrarnog budžeta i subvencija u poljoprivredi, ali i kreditiranja poljoprivrednika od strane komercijalnih banaka. Cilj rada je rasvetljavanje trendova koji ukazuju na značaj finansiranja poljoprivrede u cilju privrednog razvoja Republike Srbije. Kruskal-Wallis test je korišćen da bi se uporedile subvencije u poljoprivredi u odnosu na druge privredne delatnosti, kao i da bi se uporedilo kreditiranje poljoprivrede između komercijalnih banaka, dok je Friedman test korišćen da bi se ispitalo kreditiranje posmatranih banaka. Rezultati su pokazali da su subvencije u poljoprivredi veće u odnosu na druge privredne delatnosti, i da rastu, kao i celokupni agrarni budžet, naročito poslednjih godina, kada dostižu rekordne iznose. Isti slučaj je zabeležen i kod kreditiranja poljoprivrednika od strane komercijalnih banaka. Porast finansiranja i kreditiranja poljoprivrede je bio praćen i porastom poljoprivredne proizvodnje i BDV poljoprivrede. Zaključuje se da se adekvatno finansiranje poljoprivrede pozitivno odražava kako na poljoprivredu, tako i celokupni privredni razvoj Republike Srbije.

Ključne reči: poljoprivreda, agrarni budžet, subvencije, kreditiranje, komercijalne banke, privredni razvoj, Republika Srbija.

JEL klasifikacija: Q14, G21, H81, O13

Uvod

Imajući u vidu značaj poljoprivrede za privredni razvoj Republike Srbije (RS), država sve veći akcenat stavlja na agrarni budžet i finansiranje ovog sektora. Jedan od glavnih razloga neadekvatnog razvoja agrarnog sektora je bio upravo neadekvatan sistem finansiranja i kreditiranja poljoprivredne proizvodnje.

RS ima značajan poljoprivredni sektor, čiji potencijali se zasnivaju uglavnom na visokokvalitetnim obradivim površinama, povoljnoj kontinentalnoj klimi i obilju radne snage. Da bi dostigla svoje pune potencijale, srpska poljoprivreda treba da prevaziđe ukupan nizak nivo produktivnosti. Iako je mali broj većih proizvođača sposoban da se takmiči i učestvuje na globalnim tržištima time što su investirali u tehnologiju, čime su dostigli visok nivo produktivnosti, većinu aktivnosti poljoprivrednih proizvođača karakteriše stara tehnologija i nedovoljno kapitalizovana proizvodnja niske dodate vrednosti. Zato je za dalji poljoprivredni razvoj i unapređenje produktivnosti bitno investiranje, adekvatno finansiranje i ulaganje duž čitavog agrobiznis lanca vrednosti (Atanasijević & Danon, 2014).

Poljoprivredi je zbog specifičnosti proizvodnje, sporijeg obrta kapitala, niske profitabilnosti i nepostojanja sopstvenih izvora finansiranja neophodna finansijska i kreditna podrška, koja treba da bude realizovana uz podršku države. Potreba za dominantnom ulogom države je uzrokovana i nerazvijenošću finansijskih tržišta i institucija. Finansijska podrška države trebalo bi da se manifestuje u većem izdavanju iz državnog budžeta za agrarni budžet, ali i kroz usmeravanje na korišćenje drugih finansijskih instrumenata, poput predpristupnih fondova EU (IPARD), hartija od vrednosti, finansijskih derivata, itd. (Radović, 2015).

Pristup finansijama za poljoprivrednike i celokupni agrobiznis je bio godinama loš zbog brojnih ograničenja koja su međusobno povezana i pod uticajem raznih pravnih, ekonomskih i institucionalnih faktora. Sva ta ograničenja mogu se u najširem smislu sumirati na sledeći način: nedosledna poljoprivredna politika; neefikasni programi subvencija; destimulacija regulacije ili nedostatak regulative; nekoliko alternativnih izvora finansiranja; znanje zajmodavaca i percepcija rizika u agrobiznisu; znanje i pristup informacijama; ne iskorišćavanje prednosti koje nudi koncept lanca vrednosti; visok rizik sektora itd. Zato se upućuju različite preporuke (Jolović i dr., 2014):

- Vladi: unapređenje formulisanja, blagovremenosti sprovođenja mera poljoprivredne politike RS; unapređenje pravnog okvira za kreditiranje agrobiznisa; i poboljšanje mehanizama podrške Vlade i institucionalnog okvira;
- Agrobiznis sektoru: ojačati kapacitete farmera i agrobiznisa za pristup formalnim finansijama, ojačati kapacitete poslovnih udruženja i klastera za poboljšanje pristupa finansijama za svoje članove, ojačati kapacitet poslovnih udruženja i klastera da se zalažu za reforme za poboljšanje pristupa finansijama za agrobiznis, izgradnja kapaciteta lanaca vrednosti, razviti portal za finansiranje agrobiznisa;
- Finansijskom sektoru: razviti osiguranje poljoprivrede, razviti specijalizovane kreditne veštine i politike, povećati finansiranje lanca vrednosti, itd.

Predmet rada je sagledavanje stanja poljoprivrede i agrarnog budžeta RS, kao dela agrarne politike, dok je cilj rada da se prikažu trendovi koji ukazuju na značaj javnog (državnog) finansiranja i privatnog (komercijalnog) kreditiranja za jačanje ovog sektora i privrednog razvoja zemlje. U skladu sa predmetom i ciljem istraživanja postavljena je sledeća hipoteza:

H1: Veći agrarni budžet i kreditiranje poljoprivrede vode većem privrednom razvoju RS.

Stanje i specifičnosti poljoprivrede Republike Srbije

Poljoprivreda je veoma značajan sektor srpske privrede imajući u vidu visoko učešće u BDP-u i ukupnoj zaposlenosti. Poljoprivrednu proizvodnju karakteriše bogatstvo prirodnim resursima i povoljni klimatski uslovi, dok sa druge strane se kao jedan od većih problema izdvaja velika usitnjenost parcela, gde u ukupnoj strukturi preovlađuju gazdinstva do 5ha (Stojanović, 2022).

Tabela 1: Poljoprivreda RS vs. EU

God.	Poljoprivreda, šumarstvo i ribarstvo, dodata vrednost, % BDP		Zaposlenost u poljoprivredi, % ukupne zaposlenosti		Poljoprivreda, šumarstvo i ribarstvo, dodata vrednost po radniku, US \$	
	RS	EU	RS	EU	RS	EU
2010.	6,60	1,65	22,34	5,80	4559,66	18929,83
2011.	7,45	1,72	21,22	5,59	5106,88	20251,12
2012.	6,43	1,70	20,96	5,57	4320,96	19426,30
2013.	7,41	1,74	21,29	5,42	4956,84	20690,29
2014.	7,07	1,71	19,86	5,28	5201,78	22181,60
2015.	6,71	1,64	19,41	5,06	5378,93	22725,84
2016.	6,81	1,59	18,61	4,79	5683,09	23318,84
2017.	6,01	1,70	17,22	4,67	5285,17	24006,40
2018.	6,34	1,62	15,93	4,50	6474,28	24500,88
2019.	5,95	1,59	15,61	4,35	6334,18	25475,68
2020.	6,34	1,64	14,56	4,34	/	/
2021.	6,29	1,63	13,92	4,13	/	/
2022.	6,75	1,73			/	/

Izvor: Svetska banka, 2023

Iz Tabele 1 se uočava visoko učešće poljoprivrede u BDP-u i zaposlenosti, koje je na dosta višem nivou u odnosu na EU. Sa druge strane, produktivnost poljoprivrede RS je na dosta niskom nivou. Ukoliko se posmatra dodata vrednost po radniku u poljoprivredi, kao mera produktivnosti rada, uočava se konstantno i visoko zaostajanje za EU, zbog čega je bitna adekvatna politika finansiranja i investiranja u poljoprivredu, a sve u cilju tehničko-tehnološkog napretka, inoviranja, sticanja novih znanja i povećanja produktivnosti srpske poljoprivrede.

Time bi moglo da se utiče i na opadanje učešća poljoprivrede u BDP-u i zaposlenosti, imajući u vidu da visoko učešće poljoprivrede u ovim indikatorima ima negativan uticaj na privredni razvoj. Sa druge strane, poljoprivredna proizvodnja RS, kao i izvoz, beleže visoku vrednost, naročito u odnosu na zemlje iz okruženja, što se pozitivno odražava i na privredni razvoj zemlje (Dimitrijević et al., 2023).

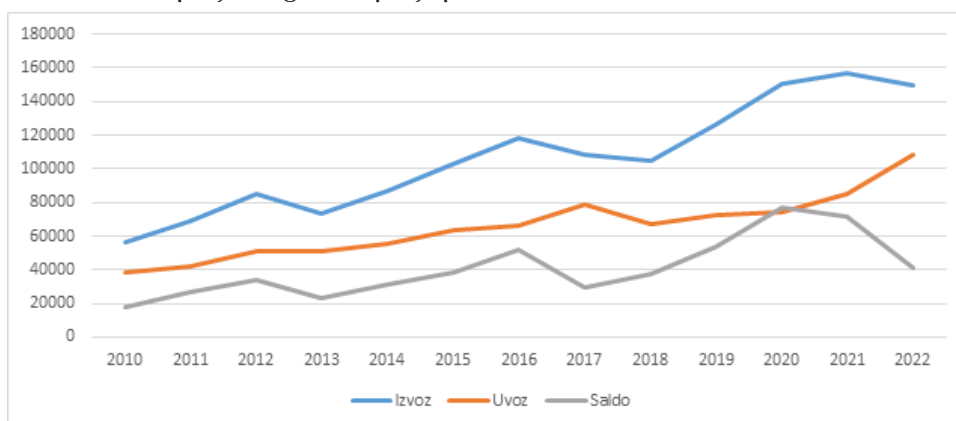
Tabela 2: Vrednost poljoprivredne proizvodnje RS, u tekućim cenama, u mil. RSD

Opis	2012.	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
Vrednost proizvodnje	542919	621215	635984	584834	643685	590706	640861	653183	700488	785422	918689
BDV	229404	265665	265818	240778	271831	254597	274792	275642	300569	347739	404654

Izvor: RZS, Ekonomski računi poljoprivrede, 2022. god.

Tabela 2 prikazuje rast vrednosti poljoprivredne proizvodnje i BDV, naročito poslednjih godina, što se pozitivno odražava na ukupnu spoljnu trgovinu i privredni razvoj RS.

Grafikon 1: Spoljna trgovina poljoprivrede, šumarstva i ribarstva RS, u mil. RSD



Izvor: RZS, Statistički godišnjak RS, 2010-2023.

Izvoz poljoprivrednih proizvoda je konstantno veći od uvoza, pa poljoprivredni sektor konstantno beleži spoljnotrgovinski suficit (Grafikon 1). Ohrabruje i to što izvoz beleži rast iz godine u godinu, sa blagim padom u 2022. godini, što se odražava i na ukupnu spoljnu trgovinu poljoprivrede RS, koja ima rastući trend.

Tabela 3: Izvoz i uvoz RS po sektorima i oblastima KD, 2022., u mlrd. RSD

	Izvoz	Uvoz	Saldo
Ukupno	3242,5	4582,4	-1339,9
Poljoprivreda, šumarstvo i ribarstvo	149,5	108,5	41
Rudarstvo	210,2	518,5	-308,3
Prerađivačka industrija	2749,2	3242,7	-493,5
Snabdevanje električnom energijom, gasom i parom	100,5	185	-84,5

Snabdevanje vodom i upravljanje otpadnim vodama	23,9	17,6	6,3
Informisanje i komunikacije	8,9	8,9	0
Stručne, naučne, inovacione i tehničke delatnosti	0	0	0
Umetnost, zabava i rekreacija	0,1	0,1	0
Ostale uslužne delatnosti	0	0	0
Neklasifikovano po KD	0,1	501	-500,9

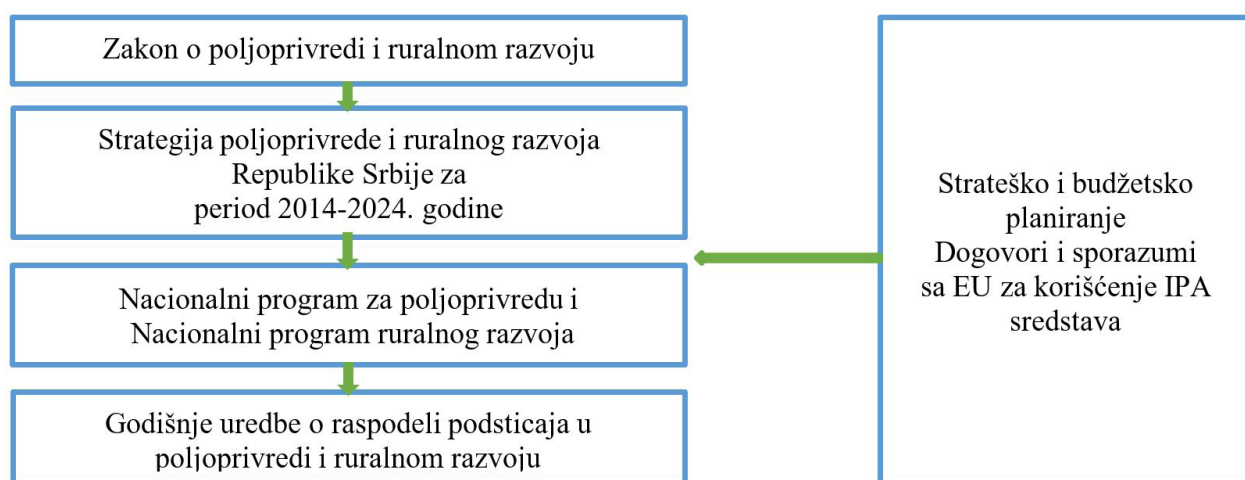
Izvor: RZS, Spoljnotrgovinski robni promet, 2022a.

Tabela 3 prikazuje izvoz, uvoz i ukupan saldo po sektorima. Zaključuje se da iako poljoprivreda ne ostvaruje najveći izvoz u odnosu na druge sektore, ona ipak ostvaruje najveći suficit, posmatrano u odnosu na sve druge sektore RS, što još jednom govori o njenom značaju za privredni razvoj zemlje.

Zakonska regulativa razvoja agrara

Poljoprivreda RS je regulisana zakonskim i pravnim regulativima, koji se odnose na funkcionisanje mera i instrumenata agrarne politike. Najvažniji je Zakon o poljoprivredi i ruralnom razvoju, na osnovu koga je doneta Strategija poljoprivrede i ruralnog razvoja RS za period 2014-2024. godine, Nacionalni program za poljoprivredu (NPP) za period 2018-220 i 2022-2024, Nacionalni program ruralnog razvoja i Godišnje uredbe o raspodeli podsticaja u poljoprivredi i ruralnom razvoju (Slika 1).

Slika 1: Regulativa razvoja poljoprivrede RS



Izvor: Strategija poljoprivrede i ruralnog razvoja Republike Srbije („Sl. glasnik RS”, br. 85/2014)

Zakonom o poljoprivredi i ruralnom razvoju uređuju se (Zakon o poljoprivredi i ruralnom razvoju): ciljevi poljoprivredne politike i politike ruralnog razvoja, kao i način njihovog ostvarivanja, Registar poljoprivrednih gazdinstava, evidentiranje i izveštavanje u poljoprivredi, kao i nadzor nad sprovođenjem ovog zakona. Ovim zakonom uređuju se i pravila posebnog postupka sprovođenja i kontrole IPARD programa. Njime se predviđa i poljoprivredna politika i politika ruralnog razvoja RS koja obuhvata mere i aktivnosti koje preduzimaju nadležni organi, u cilju:

- 1) rasta proizvodnje i stabilnosti dohotka proizvođača;
- 2) rasta konkurentnosti uz prilagođavanje zahtevima domaćeg i inostranog tržišta i tehničko-tehnološkog unapređenja sektora poljoprivrede;
- 3) održivog upravljanja resursima i zaštite životne sredine;
- 4) unapređenja kvaliteta života u ruralnim područjima i smanjenja siromaštva;
- 5) efikasnog upravljanja javnim politikama i unapređenja institucionalnog okvira razvoja poljoprivrede i ruralnih sredina.

Strategija poljoprivrede i ruralnog razvoja RS za period 2014-2024. godine („Sl. glasnik RS”, br. 85/2014), koja proističe iz Zakona o poljoprivredi i ruralnom razvoju, ima za cilj da definiše:

1. Pravce budućeg razvoja poljoprivrede i prehrambene industrije, zasnovane na konceptu održivog razvoja, koji afirmiše očuvanje životne sredine i održivo upravljanje prirodnim resursima;

2. Model podrške koji bi vodio ubrzavanju razvoja poljoprivredno-prehrambenog sektora, koji ima značajne potencijale za povećanje obima proizvodnje i dugoročno održiv rast konkurentnosti u okruženju širem od lokalno-regionalnog;

3. Pravce budućih reformi poljoprivredne politike i institucionalnog okvira, u tri najvažnija segmenta:

1) reforma poljoprivredne politike u smislu uvođenja instrumenata agrarne politike koji omogućavaju dinamično restrukturiranje sektora poljoprivrede, efikasno približavanje EU integracijama putem postepenog usklađivanja politike sa principima Zajedničke poljoprivredne politike i modernu ulogu države u upravljanju razvojem poljoprivrede i ruralnih sredina;

2) usvajanje i potpuna primena zakonodavnog okvira koji omogućuje pravnu osnovu, kako za primenu same Strategije, tako i za usklađivanje nacionalnog zakonodavstva sa EU regulativom;

3) institucionalne reforme koje bi reformom postojećih i izgradnjom nedostajućih delova institucionalnih struktura, omogućile ostvarivanje strateških ciljeva, efikasnu primenu odabrane politike i usklađivanje administrativnih struktura sa zahtevima EU.

Prema ovoj strategiji poljoprivreda u RS treba da bude sektor čiji će se razvoj zasnivati na znanju, savremenim tehnologijama i inovacijama. Nacionalni program za poljoprivredu (NPP) predstavlja dalju razradu Strategije poljoprivrede i ruralnog razvoja RS za period 2014-2024. NPP za period 2018-2020. godine („Sl. glasnik RS”, br. 120/17) predstavlja operativni program za sprovođenje poljoprivredne politike, koji sadrži mere klasifikovane kao mere direktnih plaćanja, mere za uređenje tržišta, kao i posebne podsticaje i kreditnu podršku u poljoprivredi. NPP takođe definiše: polazišta i opšte i specifične ciljeve poljoprivredne politike, vrste mera i dinamiku njihovog prilagođavanja konačnom obliku primene sa predviđenim finansijskim iznosima i osnovnim pravilima za implementaciju, kao i indikatore za merenje ostvarenja ciljeva sa baznom i ciljnom vrednošću.

Prema njemu glavni izvor finansiranja poljoprivredne politike jeste budžet RS. NPP 2022-2024 (Ministarstvo poljoprivrede, šumarstva i vodoprivrede, 2022) predstavlja nastavak NPP 2018-2020. Za razliku od starog NPP, čije su mere prvenstveno bile usmerene na podršku u okviru direktnih plaćanja i mera uređenja tržišta, novi NPP pored ovih aktivnosti uključuje i organsku proizvodnju i harmonizaciju sa Zajedničkom poljoprivrednom politikom EU za period 2021-2027.

Metodologija i podaci

Istraživanje je sprovedeno kroz nekoliko celina, tj. ispitana su izdvojena sredstava za agrarni budžet, kao i državno finansiranje poljoprivrede, u vidu subvencija i drugih podsticaja, ali i kreditiranja poljoprivrede od strane komercijalnih banaka. Podaci za istraživanje su prikupljeni iz: Zakona o budžetu; Realizacije subvencija u poljoprivredi, odnosno Ministarstva poljoprivrede, šumarstva i vodoprivrede (MPŠV); i finansijskih izveštaja posmatranih komercijalnih banaka. Komercijalne banke koje su odabrane za posmatranje jesu one koje su sa MPŠV potpisale ugovor o subvencionisanim kreditima. Banke koje su poljoprivrednim proizvođačima odobravale beskamratne kredite jesu: NLB Komercijalna banka, ProKredit banka, Sberbank, Banca Intesa, OTP banka, Kredit Agricola, Halk Bank, UniCredit banka, Raiffeisen banka, i AIK banka (MPŠV, 2022). S obzirom da je Sberbank postala deo AIK banke, a Kredit Agricola deo Raiffeisen banke, poslovne banke odabrane za istraživanje, prema spisku banaka (NBS, 2023), jesu: NLB Komercijalna banka, ProCredit banka, Banca Intesa, OTP banka, Halk Bank, UniCredit banka, Raiffaizen banka, i AIK banka.

Primenjena metodologija istraživanja je bazirana na: deskriptivnoj analizi i komparativnoj metodi kako bi se napravila komparacija između izdvojenih subvencija u poljoprivredi i ostvarene poljoprivredne proizvodnje, tj. BDV u poljoprivredi; istorijskoj analizi koja je poslužila da se ispita hronologija kretanja subvencija u poljoprivredni i ukupnih izdvajanja za agrarni budžet. Korišćen je i Kruskal-Wallis test kako bi se uporedile subvencije u poljoprivredi u odnosu na subvencije date drugim privrednim delatnostima, kao i da bi se uporedilo kreditiranje poljoprivrede između komercijalnih banaka. Friedman test je korišćen da bi da bi se ispitalo kreditiranje svih ovih banaka kroz različiti vremenski period. Istraživanje je sprovedeno, u vremenskom periodu od 2010-2023. godine, u SPPS programu.

Rezultati istraživanja

U okviru istraživanja je prvo ispitan agrarni budžet, tj. izdvajanja za Ministarstvo poljoprivrede, šumarstva i vodoprivrede. Zatim su posmatrane subvencije u poljoprivredi i upoređene sa drugim datim subvencijama. Takođe, u okviru državnog finansiranja poljoprivrede, posmatralo se kretanje subvencija iz godine u godinu i kako se to odrazilo na BDV poljoprivrede. Na kraju je istraženo i kreditiranje poljoprivrede od strane poslovnih banaka.

Agrarni budžet

Agrarni budžet je ustanovljen Odlukom o formiranju agrarnog budžeta koja je doneta krajem 1995. godine, dok je sastavni deo budžeta od 1996. godine. Definiše se kao oblik državne podrške poljoprivredi, koja se sprovodi putem subvencionisanja poljoprivredne proizvodnje (Radović, 2015). Agrarni budžet se donosi na predlog MPŠV i sastavni je deo Zakona o budžetu, koga usvaja Vlada RS.

Ciljevi agrarnog budžeta su (Kuzman et al., 2017): rast proizvodnje, produktivnosti, izvoza i praćenje tehnoloških inovacija u poljoprivrednoj proizvodnji; poboljšanje kvaliteta proizvodnje i rast konkurentnosti poljoprivrede; rast životnog standarda i obezbeđivanje adekvatnih prihoda u poljoprivredi; zaštita životne sredine i održivost proizvodnje; razvoj ruralnih područja i zaustavljanje depopulacije.

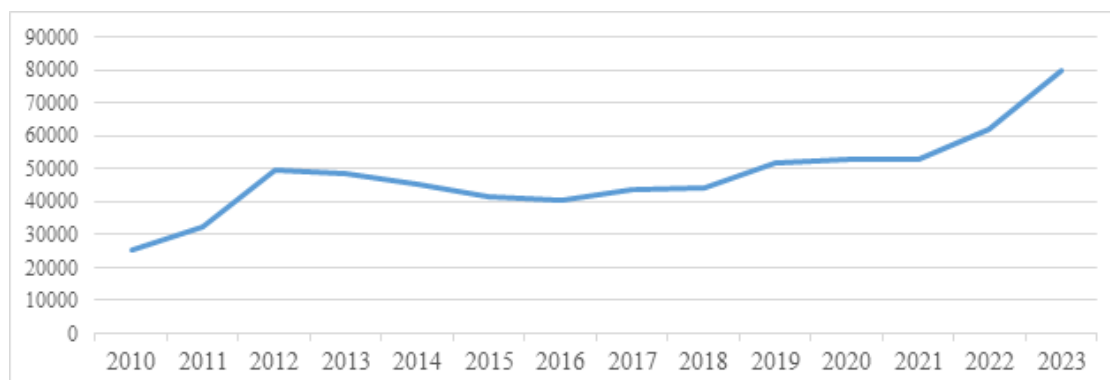
Tabela 4: Agrarni budžet RS

God.	Izdaci za MPŠV	Učešće agrarnog budžeta u ukupnom budžetu ¹
2010.	25621810000	4,20
2011.	32593228000	4,81
2012.	49485490000	7,30
2013.	48434882000	5,79
2014.	45394698000	5,66
2015.	41433438000	5,42
2016.	40465692000	4,88
2017.	43787556000	4,78
2018.	44109239000	4,46
2019.	51776908000	4,89
2020.	52713012000	4,66
2021.	52824876000	4,58
2022.	62074179000	4,71
2023.	79704221000	5,00

Izvor: Zakon o budžetu, 2010-2023. god.

Iz Tabele 4 se vidi da iako učešće agrarnog budžeta u ukupnom budžetu beleži oscilacije (treća kolona), gde su poreski prihodi, u skladu sa Zakonom o budžetskom sistemu, korišćeni kao osnovica, izdvajanja za MPŠV izražena u ukupnim apsolutnim iznosima (druga kolona) beleže rast, naročito izražen od 2016. godine, da bi se u 2023. godini ostvarila najveća izdvajanja.

Grafikon 2: Izdaci za MPŠV, u mil. RSD



Izvor: Zakon o budžetu, 2010-2023. god.

¹ Prilikom obračuna učešća budžetskih izdvajanja za poljoprivredu u ukupnom budžetu, kao osnovica su primenjeni poreski prihodi, u skladu sa članom 5. stav 4. Zakona o budžetskom sistemu.

Iako učešće agrarnog budžeta u ukupnom budžetu beleži oscilacije, izdvajanja za sektor poljoprivrede iz godine u godinu beleže rast, tako da su u 2023. godini ostvarena najveća izdvajanja (Grafikon 2). MPŠV je rebalansom budžeta za 2023. godinu dobilo istorijski iznos sredstava za poljoprivredu (MPŠV, 2023).

Jedna od mera agrarne politike su podsticaji, koji obuhvataju podršku programima koji se odnose na ulaganja u poljoprivredu za unapređenje konkurentnosti i postizanje standarda kvaliteta, a to su programi podrške ulaganjima u primarnu biljnu i stočarsku proizvodnju. Podsticaji u poljoprivredi imaju za cilj stabilnost u snabdevanju domaćeg tržišta osnovnim životnim namirnicama, povećanje prodaje i izvoza i otvaranje novih radnih mesta (Kuzman et al., 2017).

Državno finansiranje poljoprivrede

Subvencije u poljoprivredi predstavljaju najznačajniji državni izvor finansiranja poljoprivrede, po čemu se ogleda i veoma značajna uloga države u finansiranju poljoprivrede. Uloga države u subvencionisanom finansiranju je izuzetno značajna, jer komercijalne banke imaju primarni interes u dobiti kada su u pitanju kreditni plasmani. Poljoprivrednici kao pojedinci najčešće stavljaju hipoteku na zemljište kada uzimaju kredite, što ih čini veoma atraktivnim za banke. Uticaj države je suštinski i neophodan, a finansijska sredstva kojima država raspolaže treba da budu u funkciji razvoja poljoprivredne proizvodnje, a politika njihovog trošenja treba da bude u kontekstu nacionalnog interesa (Zelenović et al., 2018).

Tabela 5: Subvencije u poljoprivredi RS

Subvencije	a. Mean Rank, 2010-2023. god.	b. % od ukupnih subvencija, 2023. god.	c. Učešće subvencija u poljoprivredi u ukupnim subvencijama, po godinama
Subvencije u oblasti nauke i obrazovanja	27,50	1,72	2010. 2,04%
Subvencije u oblasti energetike	66,50	17,92	2011. 36,29 %
Subvencije u oblasti zaštite životne sredine	32,00	2,26	2012. 31,99 %
Subvencije za vazdušni saobraćaj	12,00	0,31	2013. 44,77 %
Subvencije u privredi	62,82	13,11	2014. 43,18 %
Subvencije u poljoprivredi	94,71	35,62	2015. 34,84 %
Subvencije za železnički saobraćaj	69,29	13,01	2016. 32,51 %
Subvencije za drumski saobraćaj	53,00	10,22	2017. 37,44 %
Subvencije u oblasti turizma	13,36	0,54	2018. 38,41 %
Subvencije u oblasti kulture	21,27	0,93	2019. 41,46 %
Ostale subvencije	57,50	4,36	2020. 42,79 %

Ostale subvencije	57,50	4,36	2020. 42,79 %
Chi-Square	***79,097	/	2021. 34,89 %
Izvor: Istraživanje autora, na osnovu Zakona o budžetu, 2010-2023. Napomena: a. Kruskal Wallis Test; *** $p < 0.01$.			2022. 35,25 %
			2023. 35,62 %

Istraživanje u Tabeli 5 (a. kolona) je sprovedeno uz pomoć Kruskal Wallis testa i bazira se na izračunavanju prosečne vrednosti (Mean Rank) za istraživani vremenski period od 2010-2023. godine, za svaku datu subvenciju pojedinačno. Model je statistički značajan na nivou statističke značajnosti od 1% ($p < 0.01$). Druga kolona (b. kolona) se odnosi isključivo na 2023. godinu i predstavlja učešće svake od ovih subvencija u ukupnim subvencijama, dok se treća kolona (c. kolona) odnosi samo na poljoprivredu i predstavlja učešće subvencija u poljoprivredi u ukupnim subvencijama, za vremenski period od 2010-2023. godine.

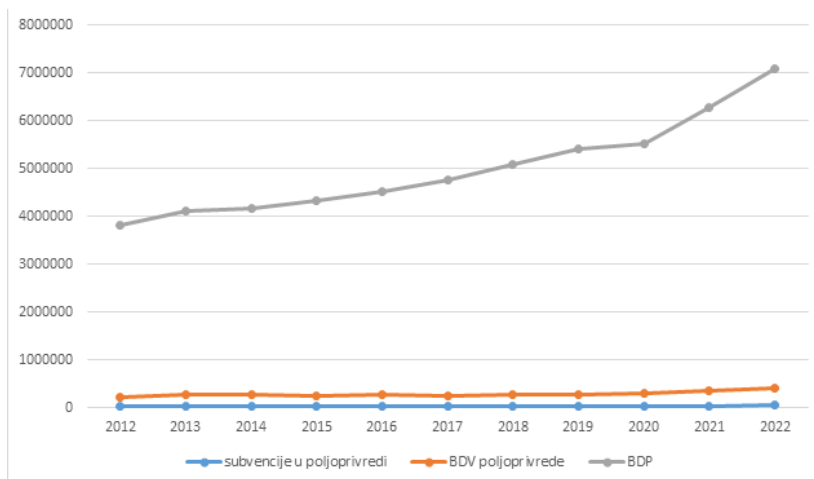
Rezultati Kruskal Wallis testa su prikazani u drugoj koloni (a. kolona) Tabele 5. Mean Rank, odnosno prosečna vrednost subvencija (izraženih u ukupnim apsolutnim iznosima) za vremenski period od 2010-2023. godine, je posebno izračunata za svaku vrstu subvencija. Ova vrednost je najveća za subvencije u poljoprivredi, što znači da je u posmatranom periodu poljoprivreda najviše subvencionisana, u odnosu na sve druge privredne delatnosti. Takođe, ukoliko se ove subvencije, izražene kao učešće u ukupnim subvencijama, međusobno uporede samo za 2023. godinu (treća, b. kolona) rezultati su isti, tj. i u ovoj godini su najveće bile subvencije date poljoprivredi. Četvrta (c. kolona) prikazuje samo učešće subvencija u poljoprivredi u ukupnim subvencijama za vremenski period od 2010-2023. godine. Prema tom indikatoru se beleže odstupanja od 31,99%, kao najniže zabeležene vrednosti 2012. godine, do 44,77%, kao najviše zabeležene vrednosti 2013. godine.

Iz Tabele 5 se uočava da su subvencije u poljoprivredi najveće u odnosu na sve druge subvencije, bilo da se posmatra celokupni period posmatranja, od 2010-2023. godine (a. kolona), ili samo 2023. godina (b. kolona). Ove subvencije su svake godine bile veće u odnosu na druge subvencije. Kada se posmatra učešće subvencija u poljoprivredi u ukupnim subvencijama beleže se oscilacije iz godine u godinu (c. kolona).

Stabilna praksa je da razvijene zemlje pomažu svojoj poljoprivredi subvencijama, premijama, poreskim olakšicama, pristupačnim kreditima, ali i da obezbeđuju jeftine inpute. Uz pomoć subvencija razvijene zemlje obezbeđuju dovoljno hrane za sopstvene potrebe, ali i za izvoz. Svrha podsticaja u poljoprivrednoj proizvodnji je stvaranje uslova za povećanje njenog obima, povećanje zaposlenosti i broja samoodrživih poljoprivrednih domaćinstava, osiguranje stabilnih poljoprivrednih prihoda i boljeg životnog standarda poljoprivrednika. Podsticaji treba da podstaknu održivost i profitabilnost tržišno orijentisanih poljoprivrednika i unaprede tehničko-tehnološke i organizacione aspekte (Kuzman et al., 2017).

Što se tiče RS potrebno je najpre rešavanje strukturnih problema u agraru da bi date subvencije mogle da se koriste na najbolji način, shodno datoj nameni, i da dovedu do prethodno spomenutih ciljeva. RS se suočava sa veoma lošom starosnom i obrazovnom strukturom poljoprivrednog stanovništva, usitnjenim zemljištem, neadekvatnim i niskim prerađivačkim kapacitetima, kao i tehnološkom opremljenošću, što sve dovodi do niskog životnog standarda celokupnog ruralnog stanovništva, ali i neodrživosti takvih poljoprivrednih domaćinstava. Da bi date subvencije bile samoodržive RS usklađuje svoju agrarnu politiku sa Zajedničkom agrarnom politikom EU i u svoje razvojne dokumente ugrađuje ciljeve kompatibilne sa EU, čime teži da obezbedi dugoročnu perspektivu za srpske poljoprivrednike. Kroz korišćenje IPARD fondova treba da se podstakne razvoj prerađivačkih kapaciteta, opremljenost, diverzifikacija i dalji razvoj poljoprivrednih gazdinstava. Međutim, veliki problem može da izazove ukidanje pojedinih podsticaja, kako u EU, tako i u RS, zbog čega projektovanju subvencija i agrarnoj politici treba posvetiti posebnu pažnju.

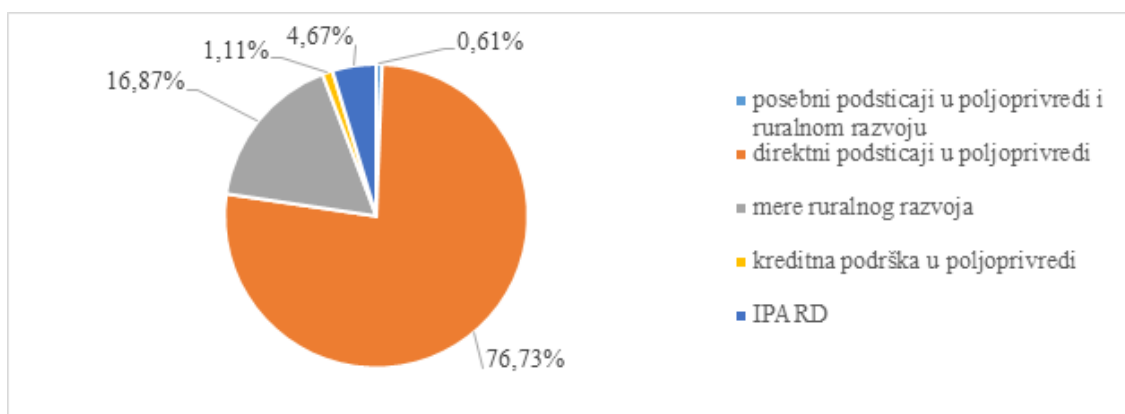
Grafikon 3: Subvencije & BDV u poljoprivredi vs. BDP, po godinama, u mil. RSD



Izvor: Zakon o budžetu, Ekonomski računi poljoprivrede, Godišnji nacionalni računi, za posmatrane godine.

Uočava se porast subvencija, u apsolutnim iznosima, iz godine u godinu. Porast subvencija prati i porast BDV poljoprivrede (Grafikon 3). Ovo znači da se većim izdvajanjima za poljoprivredu utiče i na porast poljoprivredne proizvodnje i ukupne BDV.

Grafikon 4: Vrste podsticaja u poljoprivredi i ruralnom razvoju RS, 2021. god.



Izvor: MPŠV, Realizacija budžeta, 2021.

Najviše podsticaja se izdvađa za direktne podsticaje u poljoprivredi, zatim za mere ruralnog razvoja, IPARD, kreditnu podršku i na kraju za posebne podsticaje (Grafikon 4). U okviru direktnih plaćanja spadaju: premije, podsticaji za proizvodnju, osnovni podsticaji za biljnu proizvodnju, podsticaji u stočarstvu, regres, regres za đubrivo i sl., regres za troškove skladištenja u javnim skladištima; u okviru podsticaja za mere ruralnog razvoja spadaju: podsticaji za unapređenje konkurentnosti, podsticaji za očuvanje i unapređenje životne sredine i prirodnih resursa, podsticaji za diverzifikaciju dohotka i unapređenje kvaliteta života u ruralnim područjima, podsticaji za pripremu i sprovođenje lokalnih strategija ruralnog razvoja, podsticaji za unapređenje sistema kreiranja i prenosa znanja; u okviru posebnih podsticaja spadaju: podsticaji za sprovođenje odgajivačkih programa, radi ostvarivanja odgajivačkih ciljeva u stočarstvu – mere selekcije, podsticaji za promotivne

aktivnosti u poljoprivredi i ruralnom razvoju (mere i akcije u poljoprivredi), podsticaji za proizvodnju sadnog materijala, sertifikaciju i klonsku selekciju; IPARD obuhvata: mera 1, 3 i 7; i u okviru kreditne podrške spadaju: subvencionisanje dela kamatne stope i premija osiguranja (MPŠV, 2020).

Kreditiranje poljoprivrede od strane poslovnih banaka

U ovom delu će biti posmatrane komercijalne banke koje su poljoprivrednim proizvođačima odobravale beskamratne kredite, odnosno, koje sa MPŠV imaju potpisan ugovor o subvencionisanim kreditima. Biće posmatrani odobreni poljoprivredni krediti od strane ovih banaka u vremenskom periodu od 2010-2022. godine. Ukupni poljoprivredni krediti koji se spominju u daljoj analizi se odnose na ukupno odobrene kredite poljoprivredi od strane svih banaka, dok se kreditni portfolio banke odnosi na sve vrste odobrenih kredita od strane date banke.

Pored značajne uloge države u finansiranju poljoprivrede putem subvencija i drugih podsticaja, značajna je uloga i kreditiranja poljoprivrede od strane komercijalnih banaka. Država je prepoznala značajnu ulogu poslovnih banaka u kreditiranju poljoprivrede, sa kojima radi na ugovaranju subvencionisanih i beskamratnih kredita za poljoprivrednike.

Subvencionisani krediti Ministarstva poljoprivrede, šumarstva i vodoprivrede namenjeni su poljoprivrednicima u saradnji sa poslovnim bankama koje odobravaju kredite, dok Ministarstvo poljoprivrede subvencionise kamatu na ove kredite. Državna kreditna podrška je svojevrsni podsticaj za olakšavanje pristupa kreditima poljoprivrednim gazdinstvima (Zelenović et al., 2018).

Banke su dominantno orijentisane na veće proizvođače i poljoprivredna preduzeća, dok su manji poljoprivredni proizvođači istisnuti sa tržišta. Takođe, bankarski krediti se odlikuju visokim kamatnim stopama, visokim zalogom i nedovoljno dugim rokovima (Popović et al., 2018).

Najznačajniji poljoprivredni kreditor u RS je ProCredit banka koja je u 2016. godini odobrila skoro 45% ukupnih poljoprivrednih kredita. Pošto ti krediti čine nešto više od trećine kreditnog portfolija banke, moglo bi se reći da je ova banka specijalizovana za finansiranje poljoprivrednog sektora. Na drugom mestu je Banca Intesa sa skoro četvrtinom ukupne sume odobrenih poljoprivrednih kredita. Međutim, ti krediti čine samo 5% kreditnog portfolija banke. Komercijalna banka je na trećem mestu po učešću u ukupnim poljoprivrednim kreditima, koji čine 13% kreditnog portfolija banke. Samo tri banke imaju udeo poljoprivrednih kredita veći od 10%, što dokazuje da banke nisu voljne da prodru na ovo tržište. Banke poljoprivredne kredite doživljavaju kao rizičnije od kredita drugim industrijskim sektorima (Popović et al., 2018).

Tabela 6: Krediti odobreni poljoprivredi

Banke	a. Mean Rank, 2010-2022.	God.	a. Mean Rank
NLB Komercijalna banka	64,92	2010.	4,00
ProCredit banka	93,85	2011.	3,63
Banca Intesa	87,00	2012.	4,50
OTP banka	51,08	2013.	4,50
Halk Bank	19,85	2014.	6,00
UniCredit banka	48,38	2015.	5,88
Raiffeisen banka	38,85	2016.	6,38
AIK banka	16,08	2017.	7,00
Chi-Square	***80,748	2018.	7,50
Izvor: Istraživanje autora, na osnovu finansijskih izveštaja posmatranih banaka, 2010-2022. ² Napomena: a. Kruskal Wallis Test; b. Friedman Test; ***p<0.01.		2019.	11,13
		2020.	10,00
		2021.	10,50
		2022.	10,00
		Chi-Square	***43,813

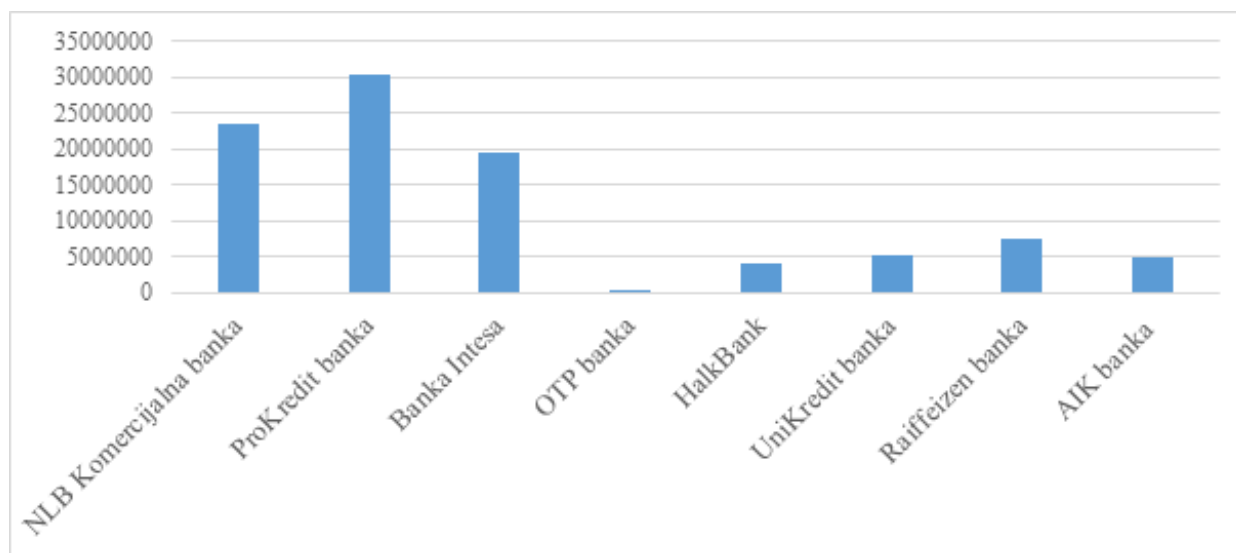
Istraživanje u Tabeli 6 (a. kolona) je sprovedeno uz pomoć Kruskal Wallis testa i bazira se na izračunavanju prosečne vrednosti (Mean Rank) poljoprivrednih kredita, za istraživani vremenski period od 2010-2022. godine, za svaku posmatranu banku pojedinačno, u cilju poređenja poljoprivrednih kredita među bankama. Friedman test (b. kolona) je korišćen da bi se izračunale prosečne vrednosti (Mean Rank) svih banaka za svaku godinu pojedinačno, od 2010-2022. godine, u cilju posmatranja trenda odobrenih poljoprivrednih kredita od strane ovih komercijalnih banaka. Oba modela su statistički značajna na nivou statističke značajnosti od 1% ($p < 0.01$).

Druga kolona (a. kolona) Tabele 6 prikazuje rezultate Kruskal Wallis testa. Mean Rank, odnosno, prosečne vrednosti odobrenih poljoprivrednih kredita (izraženih u ukupnim apsolutnim iznosima) za ukupni vremenski period od 2010-2022. godine, su prikazane za svaku pojedinačno posmatranu banku. Te vrednosti su bile najveće za ProCredit banku, Banca Intesa i NLB Komercijalnu banku. Rezultati Friedman testa su prikazani u četvrtoj koloni (b. kolona). Oni prikazuju Mean Rank, odnosno prosečne vrednosti poljoprivrednih kredita (izraženih u ukupnim apsolutnim iznosima) za sve posmatrane banke, ali za svaku pojedinačnu godinu od 2010-2022. godine, kako bi se ustanovio trend kretanja odobrenih kredita poljoprivredi od strane posmatranih komercijalnih banaka. Od 2010-2015. godine se beleže oscilacije, dok se posle tog perioda beleži konstantan rast komercijalnih kredita odobrenih poljoprivredi, do 2019. godine, sa blagim padom posle toga.

Od posmatranih banaka, u posmatranom periodu od 2010-2022. godine, najviše kredita poljoprivredi odobrava (a. kolona): ProCredit banka, Banca Intesa i NLB Komercijalna banka (Tabela 6). Takođe, iz iste tabele (b. kolona) se uočava značajan rast, naročito izražen od 2019. godine, ukupno odobrenih kredita poljoprivredi, od strane posmatranih banaka.

² U bankama kod kojih nisu iskazani krediti odobreni poljoprivredi je korišćen podatak o kreditnim rizicima u poljoprivredi.

Grafikon 5: Odobreni krediti u 2022. godini, u hiljadama RSD



Izvor: Finansijski izveštaji posmatranih banaka, 2022. god.

Iz Grafikona 5 se uočava da je i u 2022. godini ista situacija kao i prethodnih godina, tj. najviše kredita poljoprivrednicima je odobrila ProCredit banka, a zatim slede NLB Komercijalna banka i Banca Intesa.

MPŠV je bilo spona između poljoprivrednog i bankarskog sektora, što je doprinelo da poslovne banke razviju portfolio za poljoprivredu. Podsticaj u vidu kreditne podrške poljoprivrednim gazdinstvima omogućava povoljnije kamatne stope za kreditiranje: kupovine životinja, razvoj biljne proizvodnje, kupovine mehanizacije i opreme, kupovine hrane za životinje, kupovine đubriva i sl. (Grujić Vučkovski, 2022).

Izazovi u praksi

Glavni izazovi sa kojima se suočava agrar RS i što finansiranjem ovog sektora treba da bude prevaziđeno jeste stvaranje konkurentnih i održivih poljoprivrednih gazdinstava i preduzeća putem investiranja u predaivačke kapacitete, kao i proizvodnja finalnog proizvoda sa većom dodatom vrednošću (Dimitrijević et al., 2023a, Dimitrijević et al., 2023b). Finansiranje poljoprivrede treba da se kreće ka razvijanju inovacija, modernizaciji i digitalizaciji (Dimitrijević et al., 2022, Dimitrijević, 2023).

Da bi se stvorili preduslovi za ovako nešto subvencijama treba uticati na zamenu dotrajale poljoprivredne mehanizacije, koja je uglavnom starija od 10 godina i što predstavlja veliko ograničenje agrotehničke opremljenosti RS. Takođe, bitno je i subvencionisanje inputa, s obzirom da se, prema Strategiji poljoprivrede i ruralnog razvoja Republike Srbije za period 2014-2024. godine, RS nalazi na veoma niskom nivou po korišćenju mineralnog đubriva, herbicida, pesticida, navodnjavanju zemljišta i sl. („Sl. glasnik”, br. 85/2014). U tom kontekstu značajnu ulogu imaju regresi za đubrivo, gorivo i druge repromaterijale i inpute. Razvijenost stočarske proizvodnje je veoma na niskom nivou, kao i konzerativne poljoprivrede koja je u skladu sa održivim razvojem. Organska poljoprivreda tek počinje da se razvija (Dimitrijević, 2023a). U tom kontekstu veliki značaj imaju direktni podsticaji za ugrožene grane poljoprivredne proizvodnje.

Iako mnogi strateški dokumenti ukazuju na veliki značaj poljoprivredne proizvodnje RS još uvek nije stvoreno adekvatno podsticajno okruženje za agrarni razvoj (Aničić & Paraušić, 2020), imajući u vidu neuređeno tržište poljoprivrednih proizvoda i neizvestan plasman, nepovoljnu starosnu i obrazovnu strukturu seoskog stanovništva, nerazvijenu ruralnu infrastrukturu, nedovoljne melioracije, disparitet cena itd (Kuzman et al., 2017). Zato dalji razvoj poljoprivrede treba bazirati na uklanjanju ovih strukturnih problema, itd., na primeni znanja, novih tehnologija i inovacija. Treba obezbediti adekvatnu podršku mladim poljoprivrednicima i diverzifikovati delatnosti u ruralnim sredinama u pravcu razvijanja i nepoljoprivrednih delatnosti (Dimitrijević et al., 2022a).

Sredstva poljoprivrednog budžeta i dalje nisu dovoljna za dinamičniji razvoj poljoprivrede RS (Dimitrijević, 2023a). Intenzivniji razvoj podrazumeva dalje povećanje poljoprivrednog budžeta i veće investicije u programe ruralnog razvoja. Udeo poljoprivrednog budžeta treba uskladiti sa učešćem poljoprivrede u privrednom razvoju (BDP), uz veću podršku biljnoj i stočarskoj proizvodnji i stvaranju izvoznog, kvalitetnog i visoko finalizovanog proizvoda. Subvencije treba da budu usmerene u tom pravcu i povećanju prinosa. Zato je potrebno adekvatno finansiranje i projektovanje poljoprivrednog budžeta, kao i subvencionisanje i podsticaji poljoprivredne proizvodnje, rad savetodavne službe i veće investicije, a sve u cilju održivog razvoja poljoprivrede, a samim tim i privrednog razvoja RS. Najbolji primer za to su privredno razvijene zemlje, naročito EU (Ristić et al., 2022), sa kojom mi uskladjujemo svoju agrarnu politiku (Dimitrijević & Ristić, 2022), što ujedno može da bude i predmet budućih istraživanja, u smislu komparacije kako agrarne politike, tako i subvencija, sa tim zemljama, odnosno sa zajedničkom agrarnom politikom EU (CAP – Common Agriculture Policy).

Zaključak

Poslednjih godina, tj. od 2019-2023. godine, u odnosu na ranije posmatrane godine, tj. od 2010-2019. godine, uočava se značajno veće izdvajanje i finansiranje poljoprivrede, kako od strane države, tako i od strane komercijalnih banaka. Takođe, agrarni budžet i subvencije su rasle iz godine u godinu, da bi u 2023. godini zabeležile rekordne istorijske iznose.

To se u značajnoj meri odrazilo i na porast poljoprivredne proizvodnje i BDV (Tabela 2), koja takođe od 2019. godine beleži veće vrednosti u odnosu na ranije posmatrane godine od 2010-2019. godine, a što se odrazilo i na značajniji rast BDP-a u tom periodu (Grafikon 3), čime se potvrđuje postavljena hipoteza da se većim izdvajanjem sredstava za poljoprivredu u značajnoj meri može uticati na BDV poljoprivrede, a samim tim i na privredni razvoj RS.

Država treba da razvija nove oblike finansiranja poljoprivrede, poput vertikalnog i horizontalnog udruživanja duž čitavog agrobiznis lanca vrednosti i uvođenja hartija od vrednosti i finansijskih derivata kako bi se dodatno poboljšalo finansiranje poljoprivrede i finansijsko tržište, a sve u cilju izvozno orijentisane proizvodnje, prerade i stvaranja proizvoda sa većom dodatnom vrednošću.

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TRENDS IN THE FINANCING OF AGRICULTURE IN THE REPUBLIC OF SERBIA

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Summary: In recent years, there has been an increase in the agrarian budget and subsidies in agriculture, as well as lending to farmers by commercial banks. The goal of the work is to shed light on trends that indicate importance of financing agriculture for the economic development of the Republic of Serbia. The Kruskal-Wallis test was used to compare subsidies in agriculture in relation to other economic activities, as well as to compare agricultural lending between commercial banks, while the Friedman test was used to examine the lending of observed banks. The results showed that subsidies in agriculture are higher compared to other economic activities, and that they are growing, as well as the entire agricultural budget, especially in recent years, when they reach record amounts. The same case was recorded in lending to farmers by commercial banks. The increase in agricultural financing and lending was accompanied by an increase in agricultural production and GVA of agriculture. It is concluded that adequate financing of agriculture has a positive impact on both agriculture and the overall economic development of the Republic of Serbia.

Keywords: agriculture, agricultural budget, subsidies, lending, commercial banks, economic development, Republic of Serbia.

JEL classification: Q14, G21, H81, O13

Introduction

Bearing in mind the importance of agriculture for the economic development of the Republic of Serbia (RS), the Government places increasing emphasis on the agricultural budget and financing of this sector. One of the main reasons for the inadequate development of the agricultural sector was precisely the inadequate system of financing and crediting agricultural production.

RS has a significant agricultural sector, the potential of which is based mainly on high-quality arable land, a favorable continental climate, and an abundance of labor. In order to reach its full potential, Serbian agriculture needs to overcome the overall low level of productivity. Although a small number of larger producers are able to compete and participate in global markets by investing in technology, thus reaching a high level of productivity, most of the activities of agricultural producers are characterized by old technology and undercapitalized production with low added value. That is why investment, adequate financing and investment along the entire agribusiness value chain are important for further agricultural development and improvement of productivity (Atanasijević & Danon, 2014).

Due to the specificity of production, slower turnover of capital, low profitability, and lack of own sources of financing, agriculture needs financial and credit support, which should be implemented with the support of the Government. The need for a dominant role of the state is also caused by the underdevelopment of financial markets and institutions. The financial support of the state should be manifested in a larger allocation from the state budget for the agricultural budget, but also through directing the use of other financial instruments, such as EU pre-accession funds (IPARD), securities, financial derivatives, etc. (Radović, 2015).

Access to finance for farmers and the entire agribusiness has been poor for years due to numerous constraints that are interconnected and influenced by various legal, economic and institutional factors. All these limitations can be summarized in the broadest sense as follows: inconsistent agricultural policy; ineffective subsidy programs; disincentivizing regulation or lack of regulation; several alternative sources of financing; lenders' knowledge and risk perception in agribusiness; knowledge and access to information; not taking advantage of the value chain concept; high risk sector etc. That is why various recommendations are made (Jolović et al., 2014):

- Government: improvement of formulation, timeliness of implementation of agricultural policy measures of RS; improvement of the legal framework for lending to agribusiness; and improvement of Government support mechanisms and institutional framework;
- Agribusiness sector: strengthen the capacity of farmers and agribusiness to access formal finance, strengthen the capacity of business associations and clusters to improve access to finance for their members, strengthen the capacity of business associations and clusters to advocate for reforms to improve access to finance for agribusiness, building the capacity of value chains, develop a portal for agribusiness financing;
- Financial sector: develop agricultural insurance, develop specialized credit skills and policies, increase value chain financing, etc.

The subject of the work is an overview of the state of agriculture and the agrarian budget of the RS, as part of the agrarian policy, while the goal of the work is to show trends that indicate the importance of public (Government) financing and private (commercial) crediting for the strengthening of this sector and the economic development of the country. In accordance with the subject and aim of the research, the following hypothesis was defined:

H1: A larger agricultural budget and crediting of agriculture leads to greater economic development of the RS.

The State and Specifics of Agriculture in the Republic of Serbia

Agriculture is a very important sector of the Serbian economy, considering its high participation in the GDP and total employment. Agricultural production is characterized by a wealth of natural resources and favorable climatic conditions, while on the other hand, one of the biggest problems is the large fragmentation of plots, where the total structure is dominated by farms up to 5ha (Stojanović, 2022).

Table 1: Agriculture of RS vs. EU

Year	Agriculture, forestry and fishing, added value, % GDP		Employment in agriculture, % of total employment		Agriculture, forestry and fishing, value added per worker, US\$	
	RS	EU	RS	EU	RS	EU
2010	6.60	1.65	22.34	5.80	4559.66	18929.83
2011	7.45	1.72	21.22	5.59	5106.88	20251.12
2012	6.43	1.70	20.96	5.57	4320.96	19426.30
2013	7.41	1.74	21.29	5.42	4956.84	20690.29
2014	7.07	1.71	19.86	5.28	5201.78	22181.60
2015	6.71	1.64	19.41	5.06	5378.93	22725.84
2016	6.81	1.59	18.61	4.79	5683.09	23318.84
2017	6.01	1.70	17.22	4.67	5285.17	24006.40
2018	6.34	1.62	15.93	4.50	6474.28	24500.88
2019	5.95	1.59	15.61	4.35	6334.18	25475.68
2020	6.34	1.64	14.56	4.34	/	/
2021	6.29	1.63	13.92	4.13	/	/
2022	6.75	1.73			/	/

Source: World Bank, 2023.

Table 1 shows the high participation of agriculture in the GDP and employment, which is at a much higher level compared to the EU. On the other hand, the productivity of RS agriculture is at a very low level. If we look at the added value per worker in agriculture, as a measure of labor productivity, we can see a constant and high lag behind the EU, which is why an adequate policy of financing and investing in agriculture is important, all with the aim of technical and technological progress, innovation, and the acquisition of new knowledge, and increasing the productivity of Serbian agriculture. This could also affect the decline in the share of agriculture in the GDP and employment, bearing in mind that the high share of agriculture in these indicators has a negative impact on economic development. On the other hand, the agricultural production of RS, as well as exports, record a high value, especially in relation to neighboring countries, which has a positive effect on the country's economic development (Dimitrijević et al., 2023).

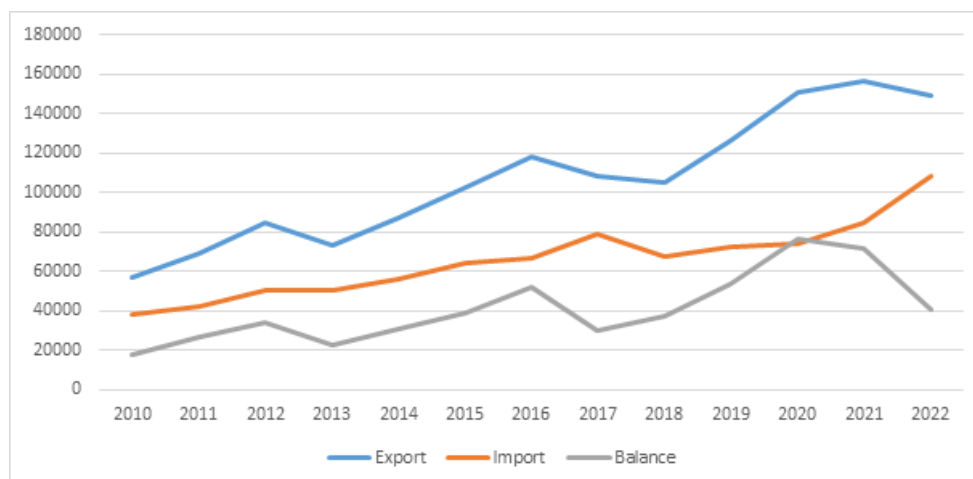
Table 2: The Value of the Agricultural Production of the RS, in Current Prices, in Mill. RSD

Label	2012.	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Production value	542919	621215	635984	584834	643685	590706	640861	653183	700488	785422	918689
GVA	229404	265665	265818	240778	271831	254597	274792	275642	300569	347739	404654

Source: SORS, Economic Accounts of Agriculture, 2022.

Table 2 shows the growth in the value of agricultural production and GVA, especially in recent years, which has a positive effect on the overall foreign trade and economic development of the RS.

Figure 1: Foreign Trade of Agriculture, Forestry, and Fisheries of the RS, in Mill. RSD



Source: SORS, Statistical Yearbook of the RS, 2010-2023.

The export of agricultural products is constantly higher than the import, so the agricultural sector constantly records a foreign trade surplus (Figure 1). It is also encouraging that exports record year-on-year growth, with a slight decline in 2022, which is also reflected in the total foreign trade of RS agriculture, which has an increasing trend.

Table 3: Exports and Imports of the RS by Sectors and Areas of CA, 2022, in Bill. RSD

	Export	Import	Balance
In total	3242.5	4582.4	-1339.9
Agriculture, forestry, and fishing	149.5	108.5	41
Mining	210.2	518.5	-308.3
Manufacturing industry	2749.2	3242.7	-493.5
Electricity, gas, and steam supply	100.5	185	-84.5

Water supply and wastewater management	23.9	17.6	6,3
Information and communications	8.9	8.9	0
Professional, scientific, innovative, and technical activities	0	0	0
Arts, entertainment, and recreation	0.1	0.1	0
Other service activities	0	0	0
Not classified by CA	0.1	501	-500.9

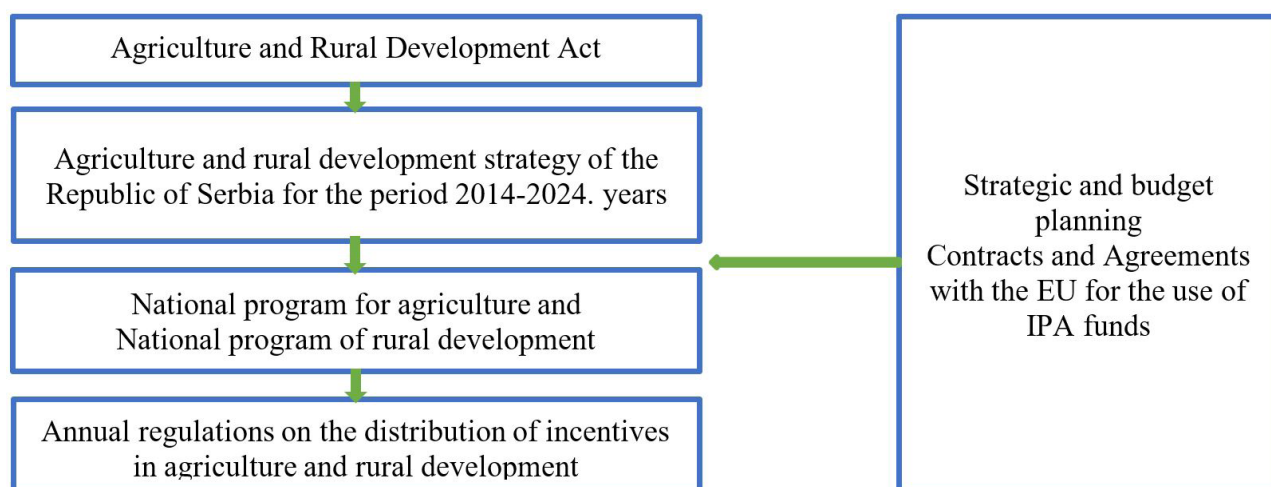
Source: SORS, Foreign Trade in Goods, 2022a.

Table 3 shows exports, imports, and total balance by sector. It is concluded that although agriculture does not achieve the largest export compared to other sectors, it nevertheless achieves the largest surplus, compared to all other sectors of the RS, which once again speaks of its importance for the economic development of the country.

Legal Regulation of Agricultural Development

Agriculture of the RS is regulated by legal regulations, which refer to the functioning of agricultural policy measures and instruments. The most important is the Law on Agriculture and Rural Development, on the basis of which the Strategy for Agriculture and Rural Development of the RS for the period 2014-2024 was adopted, the National Program for Agriculture (NPA) for the period 2018-2020 and 2022-2024, the National Program for Rural Development and the Annual Regulation on the distribution of incentives in agriculture and rural development (Picture 1).

Picture 1: Regulation of agricultural development of RS



Source: Agriculture and Rural Development Strategy of the Republic of Serbia ("Official Gazette of RS", No. 85/2014)

The Law on Agriculture and Rural Development regulates (Law on Agriculture and Rural Development): the goals of agricultural policy and rural development policy, as well as the way to achieve them, the Register of Agricultural Farms, recording and reporting in agriculture, as well as the supervision of the implementation of this law. This law regulates the rules of the special procedure for the implementation and control of the IPARD program. It foresees the agricultural policy and rural development policy of the RS, which includes measures and activities undertaken by competent authorities, with the aim of:

- 1) Production growth and producer income stability;
- 2) Increasing competitiveness while adapting to the requirements of the domestic and foreign markets and technical and technological improvement of the agricultural sector;
- 3) Sustainable resource management and environmental protection;
- 4) Improving the quality of life in rural areas and reducing poverty;
- 5) Efficient management of public policies and improvement of the institutional framework for the development of agriculture and rural areas.

Agriculture and rural development strategy of the RS for the period 2014-2024 ("Official Gazette of RS", no. 85/2014), which stems from the Law on Agriculture and Rural Development, aims to define:

1. Directions of future development of agriculture and food industry, based on the concept of sustainable development, which affirms the preservation of the environment and sustainable management of natural resources;

2. A support model that would lead to accelerating the development of the agricultural and food sector, which has significant potential for increasing the volume of production and long-term sustainable growth of competitiveness in an environment wider than local-regional;

3. Directions of future reforms of agricultural policy and institutional framework, in the three most important segments:

1) agricultural policy reform in terms of the introduction of agricultural policy instruments that enable dynamic restructuring of the agricultural sector, effective approach to EU integration through gradual alignment of policy with the principles of the Common Agricultural Policy and the modern role of the state in managing the development of agriculture and rural areas;

2) the adoption and full implementation of the legislative framework that provides a legal basis both for the implementation of the Strategy itself and for the harmonization of national legislation with EU legislation;

3) institutional reforms that, by reforming existing and building missing parts of institutional structures, would enable the achievement of strategic goals, effective implementation of the selected policy and harmonization of administrative structures with EU requirements.

According to this strategy, agriculture in the RS should be a sector whose development will be based on knowledge, modern technologies and innovations. The National Program for Agriculture (NPA) is

a further elaboration of the Strategy for Agriculture and Rural Development of the RS for the period 2014-2024. The NPA for the period 2018-2020 ("Official Gazette of the RS", no. 120/17) is an operational program for the implementation of agricultural policy, which contains measures classified as direct payment measures, market regulation measures, as well as special incentives and credit support in agriculture. The NPA also defines: the starting points and general and specific objectives of the agricultural policy, types of measures and the dynamics of their adaptation to the final form of application with anticipated financial amounts and basic rules for implementation, as well as indicators for measuring the achievement of goals with base and target values. According to him, the main source of funding for agricultural policy is the RS budget. The NPA 2022-2024 (Ministry of Agriculture, Forestry and Water Management, 2022) is a continuation of the NPP 2018-2020. Unlike the old NPP, whose measures were primarily aimed at support within the framework of direct payments and market regulation measures, the new NPA, in addition to these activities, also includes organic production and harmonization with the Common Agricultural Policy of the EU for the period 2021-2027.

Methodology and Data

The research was carried out through several units, i.e. allocated funds for the agricultural budget were examined, as well as Government financing of agriculture, in the form of subsidies and other incentives, as well as agricultural lending by commercial banks. Data for the research was collected from: the Budget Law; Realization of subsidies in agriculture, that is, the Ministry of Agriculture, Forestry and Water Management (MAFWM); and financial reports of observed commercial banks. The commercial banks that were selected for observation are those that have signed an agreement on subsidized loans with the MAFWM. Banks that granted interest-free loans to agricultural producers are: NLB Komercijalna bank, ProCredit bank, Sberbank, Banca Intesa, OTP bank, Credit Agricole, Halk Bank, UniCredit bank, Raiffeisen bank, and AIK bank (MAFWM, 2022). Given that Sberbank became part of AIK Bank, and Credit Agricole part of Raiffeisen Bank, the commercial banks selected for research, according to the list of banks (NBS, 2023), are: NLB Komercijalna bank, ProCredit bank, Banca Intesa, OTP bank, Halk Bank, UniCredit Bank, Raiffeisen Bank, and AIK Bank.

The applied research methodology is based on: descriptive analysis and comparative method in order to make a comparison between the allocated subsidies in agriculture and the realized agricultural production, i.e. GVA in agriculture; historical analysis, which was used to examine the chronology of the movement of agricultural subsidies and total allocations for the agricultural budget. The Kruskal-Wallis test was also used in order to compare subsidies in agriculture in relation to subsidies given to other economic activities, as well as to compare agricultural lending between commercial banks. The Friedman test was used to examine the lending of all these banks over a different period of time. The research was conducted, in the period from 2010-2023, in the SPPS program.

Research Results

As part of the research, the agricultural budget was first examined, i.e. allocations for the Ministry of Agriculture, Forestry and Water Management. Then the subsidies in agriculture were observed and compared with other subsidies given. Also, within the framework of Government financing of agriculture, the movement of subsidies from year to year was observed and how this was reflected in the GVA of agriculture. Finally, agricultural lending by commercial banks was also investigated.

Agrarian Budget

The agrarian budget was established by the Decision on the Formation of the Agrarian Budget, which was adopted at the end of 1995, and it has been an integral part of the budget since 1996. It is defined as a form of state support to agriculture, which is implemented through subsidizing agricultural production (Radović, 2015). The agrarian budget is adopted on the proposal of the MAFWM and is an integral part of the Budget Law, which is adopted by the Government of the RS.

The goals of the agricultural budget are (Kuzman et al., 2017): growth of production, productivity, exports, and monitoring of technological innovations in agricultural production; improving the quality of production and increasing the competitiveness of agriculture; growth of living standards and provision of adequate income in agriculture; environmental protection and production sustainability; development of rural areas and stopping depopulation.

Table 4: Agrarian Budget of the RS

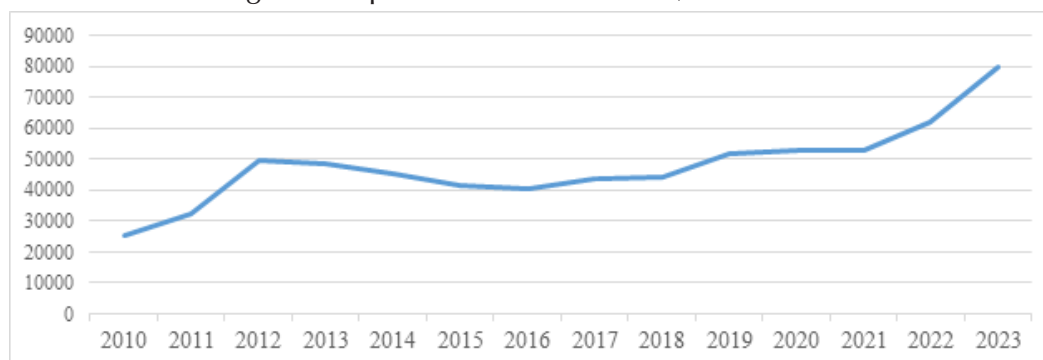
Year	Expenditures for MAFWM	Share of the agricultural budget in the total budget ¹
2010	25621810000	4.20
2011	32593228000	4.81
2012	49485490000	7.30
2013	48434882000	5.79
2014	45394698000	5.66
2015	41433438000	5.42
2016	40465692000	4.88
2017	43787556000	4.78
2018	44109239000	4.46
2019	51776908000	4.89
2020	52713012000	4.66
2021	52824876000	4.58
2022	62074179000	4.71
2023	79704221000	5.00

Source: Budget Law, 2010-2023

It can be seen from Table 4 that although the share of the agricultural budget in the total budget fluctuates (third column), where tax revenues, in accordance with the Budget System Law, were used as the basis, allocations for MAFWM expressed in total absolute amounts (second column) are increasing, especially since 2016, so that in 2023 the largest allocations will be realized.

¹ When calculating the share of budget allocations for agriculture in the total budget, tax revenues were used as the basis, in accordance with Article 5, paragraph 4 of the Budget System Law.

Figure 2: Expenditures for MAFWM , in mill. RSD



Source: Budget Law, 2010-2023

Although the share of the agricultural budget in the total budget fluctuates, the allocations for the agriculture sector grow from year to year, so that the largest allocations were realized in 2023 (Figure 2). The MAFWM received a historical amount of funds for agriculture by rebalancing the budget for 2023 (MAFWM, 2023).

One of the measures of agricultural policy are incentives, which include support for programs related to investments in agriculture to improve competitiveness and achieve quality standards, namely programs to support investments in primary crop and livestock production. Incentives in agriculture are aimed at stability in supplying the domestic market with basic foodstuffs, increasing sales and exports, and creating new jobs (Kuzman et al., 2017).

Government Funding of Agriculture

Subsidies in agriculture are the most significant state source of agricultural financing, which reflects the very important role of the Government in financing agriculture. The role of the Government in subsidized financing is extremely important, because commercial banks have a primary interest in profit when it comes to credit placements. Individual farmers usually mortgage their land when taking out loans, which makes them very attractive to banks. The influence of Government is essential and necessary, and the financial resources available to Government should be in the function of the development of agricultural production, and the policy of their spending should be in the context of the national interest (Zelenović et al., 2018).

Table 5: Subsidies in RS Agriculture

Subsides	a. Mean Rank, 2010-2023	b.% of total subsidies, 2023	c. Share of agricultural subsidies in total subsidies, by years
Subsidies in the field of science and education	27.50	1.72	2010 2.04%
Subsidies in the field of energy	66.50	17.92	2011 36.29 %
Subsidies in the field of environmental protection	32.00	2.26	2012 31.99 %
Subsidies for air transport	12.00	0.31	2013 44.77 %

Subsidies in the economy	62.82	13.11	2014 43.18 %
Subsidies in agriculture	94.71	35.62	2015 34.84 %
Subsidies for railway traffic	69.29	13.01	2016 32.51 %
Subsidies for road traffic	53.00	10.22	2017 37.44 %
Subsidies in the field of tourism	13.36	0.54	2018 38.41 %
Subsidies in the field of culture	21.27	0.93	2019 41.46 %
Other subsidies	57.50	4.36	2020 42.79 %
Chi-Square	***79.097	/	2021 34.89 %
Source: Author's research, based on the Budget Law, 2010-2023. Note: a. Kruskal Wallis Test; ***p<0.01.			2022 35.25 %
			2023 35.62 %

The research in Table 5 (a. column) was conducted with the help of the Kruskal Wallis Test and is based on the calculation of the average value (Mean Rank) for the researched time period from 2010-2023, for each given subsidy individually. The model is statistically significant at the level of statistical significance of 1% ($p < 0.01$). The second column (b. column) refers exclusively to 2023 and represents the participation of each of these subsidies in the total subsidies, while the third column (c. column) refers only to agriculture and represents the participation of agricultural subsidies in the total subsidies, for the period from 2010-2023.

The results of the Kruskal Wallis test are shown in the second column (a. column) of Table 5. Mean Rank, that is, the average value of subsidies (expressed in total absolute amounts) for the period 2010-2023, was calculated separately for each type of subsidy. This value is the highest for subsidies in agriculture, which means that in the observed period, agriculture was the most subsidized, compared to all other economic activities. Also, if these subsidies, expressed as share in total subsidies, are compared to each other only for the year 2023 (third, b. column), the results are the same, i.e. and in this year, the largest subsidies were given to agriculture. The fourth (c. column) shows only the share of agriculture subsidies in total subsidies for the period 2010-2023. According to that indicator, there are deviations from 31.99%, as the lowest recorded value in 2012, to 44.77%, as the highest recorded value in 2013.

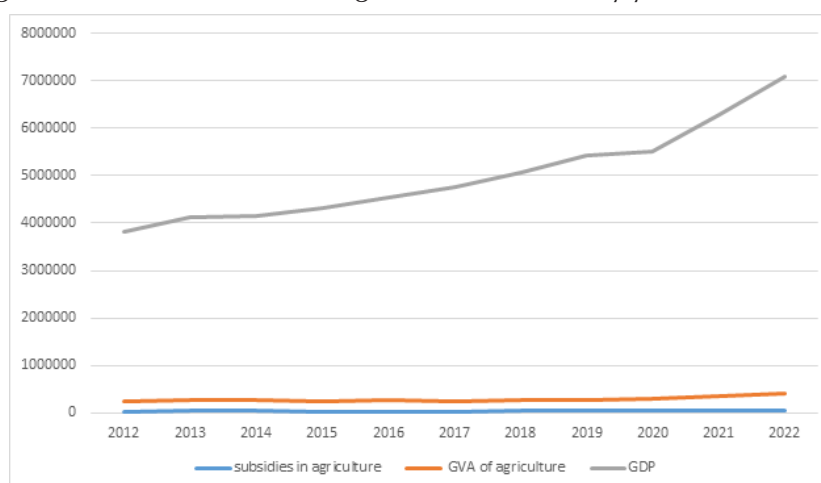
From Table 5, it can be seen that subsidies in agriculture are the largest in relation to all other subsidies, regardless of whether the entire observation period is observed, from 2010-2023 (a. column), or only in 2023 (b. column). These subsidies were higher every year compared to other subsidies. When observing the participation of subsidies in agriculture in total subsidies, oscillations are recorded from year to year (c. column).

It is a stable practice that developed countries help their agriculture with subsidies, premiums, tax breaks, affordable loans, but also provide cheap inputs. With the help of subsidies, developed countries provide enough food for their own needs, but also for export. The purpose of incentives in agricultural production is to create conditions for increasing its volume, increasing employment and the number of self-sustaining agricultural households, ensuring stable agricultural income and a better standard of living for farmers. Incentives should encourage sustainability and profitability of market-oriented farmers and improve technical-technological and organizational aspects (Kuzman et al., 2017).

As far as the RS is concerned, the structural problems in agriculture need to be solved as soon as possible so that the given subsidies can be used in the best way, according to the given purpose, and lead to the previously mentioned goals. The RS faces a very poor age and educational structure of the agricultural population, fragmented land, inadequate and low processing capacities and technological equipment, which all lead to a low standard of living of the entire rural population, but also to the unsustainability of such agricultural households.

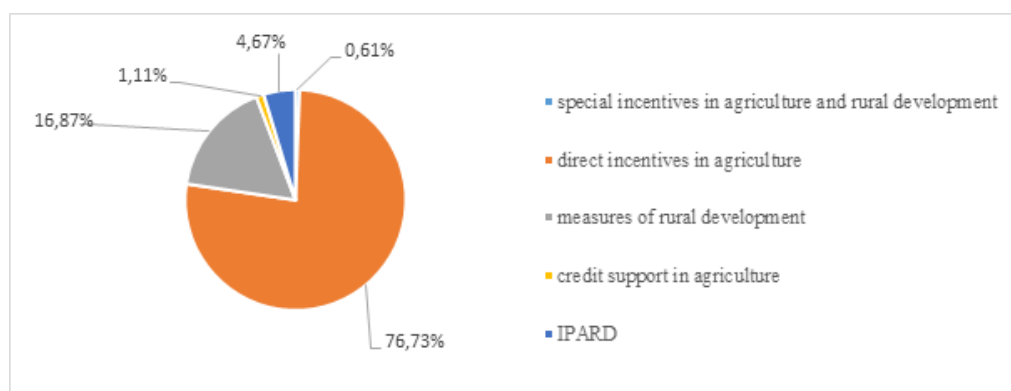
In order for the given subsidies to be self-sustaining, the RS harmonizes its agricultural policy with the Common Agricultural Policy of the EU and incorporates EU-compatible goals into its development documents, thus striving to ensure a long-term perspective for Serbian farmers. Through the use of IPARD funds, the development of processing capacities, equipment, diversification and further development of agricultural holdings should be encouraged. However, a big problem can be caused by the abolition of certain incentives, both in the EU and in the RS, which is why special attention should be paid to the design of subsidies and agricultural policy.

Figure 3: Subsidies & GVA in agriculture vs. GDP, by years, in mill. RSD



An increase in subsidies, in absolute terms, is observed from year to year. The increase in subsidies is accompanied by the increase in GVA of agriculture (Figure 3). This means that higher allocations for agriculture also affect the increase in agricultural production and total GVA.

Figure 4: Types of Incentives in Agriculture and Rural Development of the RS, 2021.



Source: MAFW, Realization of the budget, 2021.

Most incentives are allocated for direct incentives in agriculture, then for rural development measures, IPARD, credit support and finally for special incentives (Figure 4). Direct payments include: premiums, incentives for production, basic incentives for crop production, incentives in animal husbandry, rebates, rebates for fertilizer, etc., rebates for storage costs in public warehouses; incentives for rural development measures include: incentives for improving competitiveness, incentives for preserving and improving the environment and natural resources, incentives for diversifying income and improving the quality of life in rural areas, incentives for the preparation and implementation of local rural development strategies, incentives for improving system of creation and transfer of knowledge; special incentives include: incentives for the implementation of breeding programs, in order to achieve breeding goals in animal husbandry - selection measures, incentives for promotional activities in agriculture and rural development (measures and actions in agriculture), incentives for the production of planting material, certification and clonal selection; IPARD includes: measures 1, 3 and 7; and the credit support includes: subsidizing part of the interest rate and insurance premiums (MAFWM, 2020).

Lending to agriculture by commercial banks

In this part, we will look at commercial banks that granted interest-free loans to agricultural producers, that is, that have a signed contract on subsidized loans with MAFWM. Agricultural loans approved by these banks in the period 2010-2022 years will be observed. The total agricultural loans mentioned in the further analysis refer to the total approved loans to agriculture by all banks, while the bank's loan portfolio refers to all types of approved loans by the given bank.

In addition to the important role of Government in financing agriculture through subsidies and other incentives, the role of lending to agriculture by commercial banks is also important. Government has recognized the significant role of commercial banks in lending to agriculture, with whom it works to contract subsidized and interest-free loans for farmers.

Subsidized loans of the Ministry of Agriculture, Forestry and Water Management are intended for farmers in cooperation with commercial banks that grant loans, while the MAFWM subsidizes the interest on these loans. Government credit support is a kind of incentive for facilitating access to loans for agricultural farms (Zelenović et al., 2018).

Banks are dominantly oriented towards larger producers and agricultural enterprises, while smaller agricultural producers are squeezed out of the market. Also, bank loans are characterized by high interest rates, high collateral and insufficiently long terms (Popović et al., 2018).

The most important agricultural creditor in RS is ProCredit Bank, which approved almost 45% of total agricultural loans in 2016. Since these loans make up a little more than a third of the bank's loan portfolio, it could be said that this bank specializes in financing the agricultural sector. Bank Intesa is in second place with almost a quarter of the total amount of approved agricultural loans. However, these loans make up only 5% of the bank's loan portfolio. Komercijalna bank is in third place in terms of participation in total agricultural loans, which make up 13% of the bank's loan portfolio. Only three banks have a share of agricultural loans greater than 10%, which proves that banks are not willing to penetrate this market. Banks perceive agricultural loans as riskier than loans to other industrial sectors (Popović et al., 2018).

Table 6: Loans approved for agriculture

Bank	a.Mean Rank, 2010-2022.	Year	a.Mean Rank
NLB Komercijalna banka	64.92	2010	4.00
ProCredit banka	93.85	2011	3.63
Banca Intesa	87.00	2012	4.50
OTP banka	51.08	2013	4.50
Halk Bank	19.85	2014	6.00
UniCredit banka	48.38	2015	5.88
Raiffeisen banka	38.85	2016	6.38
AIK banka	16.08	2017	7.00
Chi-Square	***80.748	2018	7.50
Source: Author's research, based od financial reports of observed banks, 2010-2022. ² Note: a. Kruskal Wallis Test; b. Friednman Test; ***p<0.01.		2019	11.13
		2020	10.00
		2021	10.50
		2022	10.00
		Chi-Square	***43.813

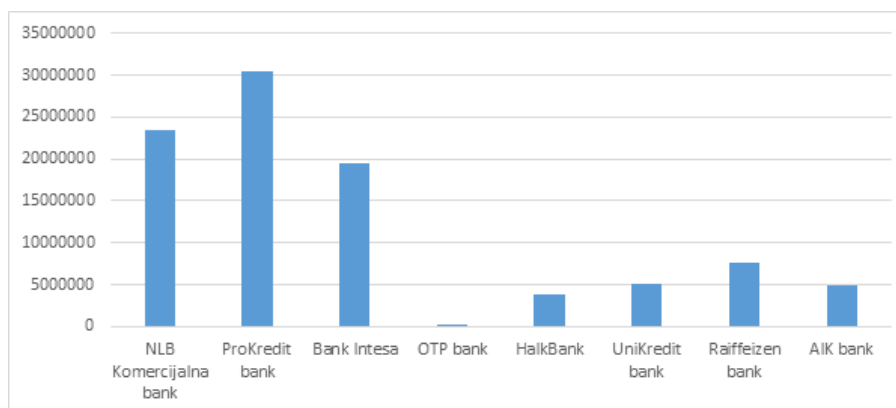
The research in Table 6 (a. column) was conducted with the help of the Kruskal Wallis Test and is based on the calculation of the average value (Mean Rank) of agricultural loans, for the researched period from 2010-2022, for each observed bank individually, in order to compare agricultural loans between banks. The Friedman Test (b. column) was used to calculate the average values (Mean Rank) of all banks for each year individually, from 2010-2022, in order to observe the trend of approved agricultural loans by these commercial banks. Both models are statistically significant at the level of statistical significance of 1% ($p < 0.01$).

The second column (a. column) of Table 6 shows the results of the Kruskal Wallis test. Mean Rank, that is, the average value of approved agricultural loans (expressed in total absolute amounts) for the period 2010-2022, are shown for each individually observed bank. Those values were the highest for ProCredit banka, Banca Intesa and NLB Komercijalna banka. The results of the Friedman test are shown in the fourth column (b. column). They show the Mean Rank, that is, the average value of agricultural loans (expressed in total absolute amounts) for all observed banks, but for each individual year for the period 2010-2022, in order to establish the trend of approved loans to agriculture by the observed commercial banks. From 2010-2015 oscillations are recorded, while after that period there is a constant growth of commercial loans granted to agriculture, until 2019, with a slight decline after that.

Of the observed banks (Table 6), in the observed period from 2010-2022, ProCredit bank, Banca Intesa and NLB Komercijalna bank grant the most loans to agriculture (a. column). Also, from the same table (b. column), a significant growth, particularly expressed since 2019, of total approved loans to agriculture by the observed banks can be observed.

² Data on credit risks in agriculture was used in banks where loans approved for agriculture were not reported.

Figure 5: Approved loans in 2022, in thousand RSD



Source: Financial reports of the observed banks, 2022.

From Figure 5, it can be seen that in 2022 the situation is the same as in previous years, i.e. ProCredit bank granted the most loans to farmers, followed by NLB Komercijalna bank and Banca Intesa.

The MAFWM was a link between the agricultural and banking sectors, which contributed to commercial banks developing a portfolio for agriculture. Incentives in the form of credit support to agricultural farms enable more favorable interest rates for lending: animal purchases, plant production development, machinery and equipment purchases, animal feed purchases, fertilizer purchases, etc. (Grujić Vučkovski, 2022).

Challenges in Practice

The main challenges faced by the agriculture of RS and which should be overcome by financing this sector is the creation of competitive and sustainable agricultural farms and enterprises through investment in processing capacities, as well as the production of final products with greater value added (Dimitrijević et al., 2023a, Dimitrijević et al., 2023b). Financing of agriculture should move towards the development of innovations, modernization and digitization (Dimitrijević et al., 2022, Dimitrijević, 2023).

In order to create the preconditions for something like this, subsidies should influence the replacement of out-of-date agricultural machinery, which is mostly older than 10 years and which represents a major limitation of the agro-technical equipment of RS. Subsidizing inputs is also important, given that, according to the Agriculture and rural development strategy of the Republic of Serbia for the period 2014-2024, RS is at a very low level in terms of the use of mineral fertilizers, herbicides, pesticides, soil irrigation, etc. („Official Gazette“, No. 85/2014). In this context, regressions for fertilizer, fuel and other raw materials and inputs play a significant role. The development of livestock production is at a very low level, as well as of conservative agriculture, which is in line with sustainable development. Organic agriculture is just beginning to develop (Dimitrijević, 2023a). In this context, direct incentives for vulnerable branches of agricultural production are of great importance.

Although many strategic documents indicate the great importance of agricultural production in RS, an adequate stimulating environment for agricultural development has not yet been created (Aničić & Paraušić, 2020), bearing in mind the unregulated market of agricultural products and uncertain placement, unfavorable age and educational structure of the rural population, underdeveloped rural infrastructure, insufficient melioration, disparities price etc. (Kuzman et al., 2017).

Therefore, the further development of agriculture should be based on the elimination of these structural problems, on the application of knowledge, new technologies and innovations. Adequate support should be provided to young farmers and activities in rural areas should be diversified in the direction of developing non-agricultural activities as well (Dimitrijević et al., 2022a).

The funds of the agricultural budget are still not sufficient for a more dynamic development of agriculture in RS (Dimitrijević, 2023a). More intensive development implies a further increase in the agricultural budget and greater investments in rural development programs. The share of the agricultural budget should be harmonized with the participation of agriculture in economic development (GDP), with greater support for plant and livestock production and the creation of exportable, high-quality and highly finalized products. Subsidies should be directed in that direction and to increase yields. That is why adequate financing and planning of the agricultural budget is needed, as well as subsidies and incentives for agricultural production, the work of the advisory service and larger investments, all with the aim of sustainable development of agriculture, and thus the economic development of RS. The best example for this are economically developed countries, especially the EU (Ristić et al., 2022), with which we harmonize our agricultural policy (Dimitrijević & Ristić, 2022), which can also be the subject of future research, in terms of comparing both agricultural policy and subsidies with those countries, i.e. with the Common Agricultural Policy EU (CAP – Common Agriculture Policy).

Conclusion

In recent years, i.e. from 2019-2023 years, compared to the previously observed years, i.e. from 2010-2019 years, there has been a significant increase in the allocation and financing of agriculture, both by the state and by commercial banks. Also, the agricultural budget and subsidies grew from year to year, in order to record record historical amounts in 2023.

This was significantly reflected in the increase in agricultural production and GVA (Table 2), which also recorded higher values from 2019 compared to the previously observed years from 2010-2019 years, and which was reflected in the significant growth of GDP in that period (Graph 3), which confirms the hypothesis that greater allocation of funds for agriculture can significantly affect the GVA of agriculture, and therefore the economic development of the RS.

Government should develop new forms of agricultural financing, such as vertical and horizontal integration along the entire agribusiness value chain and the introduction of securities and financial derivatives in order to further improve agricultural financing and the financial market, all with the aim of export-oriented production, processing and creation of products with higher added value.

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