# IMPACT OF AGRICULTURAL PRODUCTION ON GROSS DOMESTIC PRODUCT IN THE REPUBLIC OF SERBIA

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A R T I C L E   I N F O

A B S T R A C T

The goal of this research is to quantify the influence of each segment of agricultural production individually on the formation of the total gross domestic product in Serbia. For the purposes of the research, the gross domestic product at the level of Serbia, expressed at current prices, was used as the dependent variable. On the other hand, the values of agricultural production (plant production, vegetable production and horticultural products, livestock production, production of livestock products, and agricultural services) expressed also in current prices were observed as independent variables. The research used regression analysis. The most important result of this research is that plant production is recommended as the dominant direction of Serbian agriculture, given that its influence is most pronounced when it comes to the formation of the value of agricultural production, and therefore the total gross domestic product of Serbia.

## Introduction

The agricultural sector is crucial for the country's economic growth, food security, job creation, and poverty reduction, especially in rural areas. Agriculture represents an important sector of the Serbian economy, whose participation in the gross domestic

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product (hereinafter GDP) of Serbia is around 6%, in the period from 2016-2020. The value structure of agricultural production is dominated by crop production, with a share of about 70%, while the value of livestock production makes up about 30% of the value of total agricultural production. (Ministry of Agriculture, Forestry and Water Management, 2022). In the period 2011–2021. year, the average share of the production of agricultural goods in the total production of agricultural goods and services is 97.6%, while the share of agricultural services is 2.4%. In the same period, the average participation of livestock production output in the total production of agricultural goods and services was 29.3%, while the participation of plant production output was 68.3%. In 2021, the share of crop production in the total production of agricultural goods and services will increase to 75.1%, while the share of livestock production in the total production of agricultural goods and services is 22.5% (Republican Bureau of Statistics, 2022). Increasing agricultural productivity, therefore, requires the adoption of new approaches. A strong connection with the secondary (industrial) and tertiary (service) sectors can play a key role in stimulating economic growth. The agriculture sector remains vulnerable to challenges such as climate change, variations in temperature, water scarcity, and changes in rainfall patterns along with increasing input prices.

Agricultural production more than tripled between 1960 and 2015, globally, thanks in part to modern technologies associated with the Green Revolution (FAO, 2017). It enabled an increase in productivity in agriculture, had a significant impact on the expansion of cultivated land, and had a positive impact on water and other natural resources used for agricultural purposes. All these processes are parallel to the industrialization and globalization of food in agriculture. The consumption of processed, packaged, and prepared food has a growing trend in all rural communities, except for the most isolated ones.

Serbia's strategic orientation towards the EU calls for harmonization of Serbian agriculture with EU standards and methods of agricultural production. Multifunctional agriculture, (Birovljev, 2013), a concept that is also called the "European model" of agriculture, is the opposite of intensively industrialized agricultural production since it advocates the preservation of traditional values, production methods, and people's lifestyles. Its basic characteristic is based on the concept of multifunctionality of rural areas and, therefore, the aspiration towards sustainable development. Non-market functions or positive effects that by definition make agriculture multifunctional are:

a)  Food safety,

b)  Equal availability of food for all social groups,

c)  Adequate rural living conditions, i

d)  Protection of the environment (landscape, biodiversity, spread of pathogens and pests).

The advantages of multifunctional agriculture can best be seen if they are compared to the other two types of agriculture, and we distinguish three types of agriculture (Šomođi, 2006):

a) Monofunctional agriculture - represented in economically less developed parts of the world, with unfavorable production conditions, underdeveloped infrastructure, and a large population. The main goal is to provide food for the population at any price;

b) Profit-oriented agriculture - represented in countries with favorable conditions for the production of certain products for the world market based on the criteria of the economy of scale and high efficiency, with the aim of retaining a certain market segment;

c) Multifunctional agriculture - characteristic of the European Union. In addition to the primary function of providing food, it also provides non-market functions.

If the aforementioned views and data are viewed in the context of a comparison with the agricultural sector in the European Union, a certain similarity with Serbian agriculture can be observed. In the structure of agricultural production in the EU, crop production dominates - 53.2% of producers are specialized in crop production, 19.3% of agricultural producers are engaged in growing perennial plants, and 24.5% of producers are specialized in livestock production. The agricultural sector in the EU participates with 1.3% of the GDP of the Union, which is significantly lower compared to this indicator in Serbia. (Ministry of Agriculture, Forestry and Water Management, 2022).

The key factors of agricultural production are (FAO, 2021):

a) Land and water: The area of agricultural land in the world in 2019 was 4.8 billion hectares, which is a decrease of 3 percent, or 0.13 billion hectares compared to the year 2000. Between 2000 and 2019, approximately two-thirds of agricultural land was permanently used, while the share of meadows and pastures declined by 6 percent. One-third of the total agricultural land was arable land and it is 1.6 billion hectares in 2019. The share of water used in agriculture in total water consumption is an indicator of the growing agricultural water compared to industrial and civil (municipal) consumption. The development of irrigation in agriculture is one of the aspects of the intensification of agricultural production, which enabled the total production to grow significantly faster than the growth of cultivated areas.

b) Agricultural workforce: The number of people working in agriculture, forestry, and fishing globally declined by 17% in the period 2000–2020, reaching 874 million in 2020, or 173 million fewer than in 2000. The COVID-19 pandemic has interrupted this general downward trend. While employment fell in all sectors due to restrictions caused by the COVID-19 measures, the industry and service sectors were much more affected than agriculture. All this resulted in an increase in the share of employment in the agricultural sector, in all regions of the world except Europe, in the period between 2019 and 2020.

c) Capital and investments: Capital, which in the agricultural sector includes machines, equipment, and tools, as well as farms (agricultural holdings), is crucial for the production of all agricultural products. Government investment in agriculture is measured by public financial support to the sector and complements investments made by the private sector.

**Figure 1**. Share of Agriculture, Forestry, and Fishing value added in total GDP by region (USD 2015 prices)
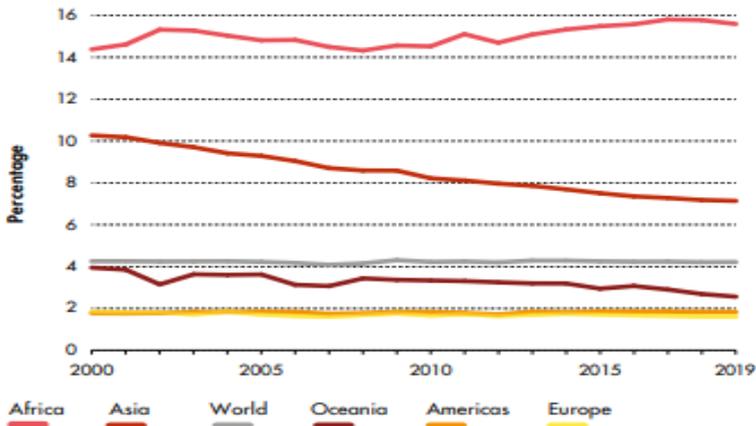


*Source*: FAOSTAT, 2021.

The share of agriculture in the global GDP, as shown in Graph 1, has a generally downward trend, except when it comes to Africa. When it comes to Europe, the participation in GDP moves from 1.8 percent in 2000 to 1.6 percent in 2019. In Asia, the trend is from 10.3 to 7.1 percent, and from 3.9 percent to 2, 6 percent in Oceania (the share remained practically unchanged in America, where it is 1.8 percent). Growth is recorded only in Africa, from 14.3 percent to 15.6 percent, but with a slight downward trend between 2018 and 2019. The trend for Africa is logical since the rule applies that the share of agriculture in GDP decreases with the economic development of the country, and this development is the slowest in Africa.

The war in Ukraine has affected two of the most important exporters of agricultural products, at a time when food and input prices are already high and volatile on a global level. The concern stems from the fact that the conflict has a potential negative impact on food security, both domestically and internationally. At the national level, escalation could directly limit agricultural production, while at the global level, the war could put additional pressure on international food prices to the detriment of low-income countries with food deficits in particular (FAO, 2022). There is a generally accepted view that countries that are net exporters of agricultural products are winners and that countries that are net importers of such products will, as a result, be losers, due to rising prices of agricultural goods on the international market (Paz et all, 2009).

The goal of the conducted research is therefore to determine which segment of agricultural production contributes the most to the real GDP of Serbia. This would also indicate which of the mentioned segments should be emphasized when it comes to agricultural production.

## Literature review

The share of agricultural production in the structure of Serbia's GDP has been declining since the beginning of the 2000s, which is a direct consequence of the faster growth of activities in secondary and tertiary activities. The share of agriculture in the structure of the gross added value of the Serbian economy is still very high and in 2012 it was 10.1%. (Strategy, 2014). The reason for this can be attributed, on the one hand, to the possession of rich land resources, as well as favorable natural conditions for agricultural production, and on the other hand, to the slower process of structural reforming of the rest of the economy, as well as delays in that process.

Small farms, fragmented holdings, and the existing structure of production, accompanied by high production costs and irrational use of resources are the main reasons for lower efficiency in agricultural production (Nestorov-Bizonj, Kovljenić & Erdelji, 2015). Globalization in the agri-food sector leads to growing concentration in all stages of the food chain (Lovre, Gajić & Kresoja, 2011). With economic development, the lawfulness of reducing the contribution of agriculture to the economic development of the country manifests itself (Božić, Nikolić, 2017).

The place and role of agriculture in the economic development of a country are determined by legitimacy (Djurić, 2015; Ristić et al., 2021). The legitimacy is that as the level of economic development of a certain country increases, the relative importance of agriculture decreases. The more economically developed a country is in its economic structure, for example in GDP, the smaller the relative share of agriculture. As for the absolute importance of agriculture in the economies of developed countries, it is never questioned.

As research shows, the agricultural sector in Serbia represents a great development opportunity for economic growth (Stanojević et al, 2015; Milojević et al, 2020). A large part of the economic development of rural Serbia depends on agriculture and agribusiness as factors of both economic development and social stability. To determine the importance and role of agriculture in the development of a country, the following indicators are used (Stipetić, 1987):

a) Participation of active farmers in the total labor force of the given country (alternatively: participation of the agricultural population in the total);

b) Contribution of agriculture to the formation of the income of the given country;

c) Participation of agriculture in the value of the produced social wealth of the given country;

d) Importance of agriculture in international trade.

The participation of agricultural production in the creation of GDP value is an important indicator for both the degree of economic development and the relative importance of agriculture in the economic structure, which is the subject of research in this paper when it comes to GDP and agriculture in Serbia. A significant percentage share of agriculture in GDP is characteristic of those economies in which the primary dominates over the secondary and tertiary sectors, which dominates when talking about less developed

economies. The decrease in the percentage share of agriculture in the total GDP is characteristic of the later stages of the process of economic development.

Agricultural growth has long been recognized as an important instrument for poverty reduction, as discussed by many studies, which focus in particular on quantifying the relationship between agriculture and poverty (Susilastuti, 2018). When we talk about the experience of Western countries related to economic development, rapid structural transformation is focused on agricultural activities, because the primary role of agriculture is to provide food and labor for a growing industrial economy (Olajide et all, 2012; Pantić et al. 2022). GDP is the most important economic indicator in the System of National Accounts that represents the performance of a country's economy in a certain period and most often serves as the basic indicator of a country's economic success. It is arrived at by adding up all goods and services during a certain period (most often a year) in a country and is determined for all institutional sectors individually (Novakovic, 2019). Certain authors have included major segments in agriculture such as major agricultural crops, minor crops, livestock, fisheries, and poultry in their research (Zaman, Khan & Ahmad, 2010). The World Bank (2014) developed a classification of countries based on the role of agriculture in GDP. This classification has the following five levels:

1) Agriculture-based countries: the added value of agriculture is more than 25% of GDP;

2) Pre-transition countries: the contribution of agriculture's added value to GDP declines to less than 25%, but more than 10%;

3) Countries in transition: the added value of agriculture still contributes between 10% and 25% to GDP;

4) Urbanizing countries: the added value of agriculture as a percentage of GDP remains unchanged;

5) Developed countries: the contribution of agriculture to GDP falls to less than 10%.

Many studies have analyzed the impact of the agricultural sector on GDP. Researchers have studied the relationship between GDP and livestock production (Rehman et all, 2017). The Kingdom of Saudi Arabia has set a vision to reduce the country's total dependence on oil sectors by 2030, diversifying the economy to achieve sustainable food security (Emam et all, 2021). The purpose of the research was to analyze the connection and influence of selected agricultural sub-sectors (dates, honey, fish, chicken, and cattle) on agriculture and the growth of the domestic GDP of Saudi Arabia and to identify the leading sub-sector in the economy that could significantly affect the agricultural GDP and other subsectors. Researchers have also studied the cointegration between GDP and the agricultural sector and studied the causal relationship between the gross domestic product and the agricultural sector (Potharla, Satyanarayana, 2011).

The data used to calculate the indicators of the contribution of agriculture to economic development are provided from the national statistical database. In the case of the Republic of Serbia, it is the Republic Bureau of Statistics (Djurić, 2015).

The expansion of (private and public) food standards is associated with the increase in international trade. Consumers in developed countries increasingly demand specific quality attributes of processed and fresh food products and are increasingly aware of food safety issues. Food standards are becoming increasingly strict, especially for fresh food products such as fruits, vegetables, meat, dairy products, fish, and seafood products, which are prone to food safety risks. These requirements for food quality and safety are most pronounced in Western markets (Meijerink, Roza, 2007).

## Materials and methods

Liberalization of investment policy encouraged foreign investments in agribusiness, the food industry, and further in the chain, which had great implications for farmers (Dries, Swinnen, 2004). If we look at the movement of GDP in the Republic of Serbia, it has had serious variations since the observed period, from 2012, to reach the highest level in 2018. A slight decline in GDP begins right after 2018, and a noticeable decline occurs in 2019, the most intense period of the pandemic Covid-19 (Figure 2). The return of GDP to the pre-crisis level was already achieved in the first quarter of 2021, and good economic trends continued during the second quarter, and such a result was fully achieved by the recovery of domestic demand. Real GDP growth in the third quarter was contributed by all sectors except agriculture (drought year), and according to the latest data from the Republic Bureau of Statistics, the real GDP growth of the Republic of Serbia in the fourth quarter of 2021 compared to the same period of the previous year was 7.0%.

**Figure 2.** GDP of the Republic of Serbia, annual real growth rates (%)
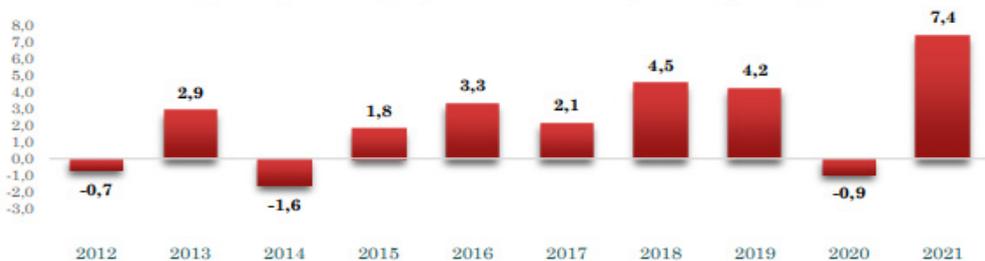


*Source*: Chamber of Commerce of Vojvodina, 2021

Observed from the production side, GDP growth in the fourth quarter of 2021 was led by the services sector (contribution of 4.6 percentage points), primarily due to growth in the activities of trade, tourism, transport, professional and technical services, as well as activities with dominant state participation (state administration, education, and health). Economic activity in the industry sector contributed to GDP growth in the fourth quarter by 0.8 percentage points. The recovery of the private construction industry with the continuation of infrastructure works resulted in an increase in construction of about 11.0% in the fourth quarter (contribution to GDP growth of 0.8

percentage points). The drought during the summer affected the agricultural production of the Republic of Serbia, which in the fourth quarter recorded a drop of around 5.0% (negative contribution to GDP of -0.4 percentage points).

**Figure 3.** Contributions to quarterly GDP growth rate (%), the production side



*Source*: Chamber of Commerce of Vojvodina, 2021

In accordance with all the above, the subject of the research that follows is the realized value of agricultural production, shown at current prices, as well as to see to what extent the segments of agricultural production participate in the formation of GDP. Total agricultural production is divided in accordance with the methodology used by the Republic Bureau of Statistics into plant production, vegetables and horticultural products, livestock production, production of livestock products, and agricultural services.

The goal of the research is to quantify the impact of each listed production individually on the formation of the total GDP in Serbia and thus indicate the contribution of each shown production. The research was based on the following assumptions:

H1: The total value of plant production affects the achieved level of GDP in Serbia;

H2: The total value of the production of vegetables and horticultural products affects the achieved level of GDP in Serbia;

H3: The total value of livestock production affects the achieved level of GDP in Serbia;

H4: The total value of production of livestock products affects the achieved level of GDP in Serbia;

H5: The total value of agricultural services affects the realized level of GDP in Serbia.

The period for which the value of realized segments of agricultural production at current prices is observed, together with the values of real GDP in the Republic of Serbia, also expressed in current prices, is from 2018 to 2021, and everything is in accordance with the available data of the Republic Bureau of Statistics of the Republic of Serbia and the National Bank of Serbia.

For the purposes of the research, GDP at the level of Serbia expressed at current prices, served as the dependent variable. On the other hand, the values of agricultural production (plant production, vegetable production, and horticultural products, livestock production, production of livestock products, and agricultural services) expressed also in current prices were observed as independent variables. The research used regression analysis.

## Results

As shown in Table 1, in the observed period 2018-2021, there was an increase in plant production in each observed year. When it comes to the production of vegetables and horticultural products, this segment of agricultural production recorded a decline in 2020, which is the year of the Covid-19 pandemic, which can explain this decline. Production already next year in 2021 has a significant growth trend. In the field of livestock production, a slight decrease was recorded in 2019, and this decrease would be more pronounced in 2021. An adequate trend is also noticeable in the production of livestock products. On the other hand, agricultural services recorded constant growth in the observed period.

**Table 1**. Agricultural output (goods and services) and Real GDP at producers' prices of the current year, 2019–2021. RSD million

| Year | Plant production | Vegetables and horticultural products | Livestock production | Production of livestock products | Agricultural services | Real GDP |
|---|---|---|---|---|---|---|
| 2018 | 398513,5 | 26097,1 | 176190,4 | 61660,1 | 15000,5 | 1,350,727.4 |
| 2019 | 414528,6 | 31554,1 | 175449,7 | 53480,5 | 15313 | 1,472,665.4 |
| 2020 | 473693,3 | 28125,3 | 177938,3 | 54029,2 | 16223,2 | 1,497,507.9 |
| 2021 | 544202,2 | 35756,3 | 163011 | 51182,6 | 17119,2 | 1,747,067.7 |

*Source*: Statistical Yearbook of the Republic of Serbia, 2022.

To test the proposed hypotheses, we will move on to the regression analysis. The regression is used to show whether the proposed variables impact GDP. The results are shown in Table 2-6.

**Table 2**. Relationship between real GDP and plant production

| Indicator | Real GDP | | | | |
|---|---|---|---|---|---|
| | Beta Coefficient | $R^2$ | F | t | p |
| Plant production | 2.392 | 0.904 | 18.851 | 4.342 | <0.001 |

*Source*: Authors' calculations

For H1, regression was used to test if plant production carries an impact on the real GDP. The variable plant production was regressed on the variable real GDP. Plant production predicted real GDP $F_{(3, 1)} = 18.851$, p= <0.001, which indicates that plant production plays a significant role in shaping the GDP. The $R^2 = 0.904$ depicts that the

model explains 90% of the GDP. It can be concluded that H1 is accepted.

**Table 3**. Relationship between real GDP and vegetable and horticultural production

| Indicator | Real GDP | | | | |
|---|---|---|---|---|---|
| | Beta Coefficient | $R^2$ | F | t | p |
| Vegetable and horticultural production | 36.137 | 0.846 | 10.973 | 3.313 | <0.001 |

*Source*: Authors' calculations

The regression was used to test whether vegetable and horticultural production impact real GDP, for H2. The variable production was regressed on variable GDP. Vegetable and horticultural production predicted GDP $F(3, 1) = 10.973$, $p < 0.001$, which indicates that production plays a significant role in shaping the real GDP. The $R^2 = 0.846$ depicts that the model explains 84.6% of the variance in the GDP. Based on the results, it can be concluded that H2 is accepted.

**Table 4**. Relationship between livestock production and real GDP

| Indicator | Real GDP | | | | |
|---|---|---|---|---|---|
| | Beta Coefficient | $R^2$ | F | t | p |
| Livestock production | 21.628 | 0.791 | 7.557 | 2.753 | <0.001 |

*Source*: Authors' calculations

For H3, the regression was used to test if livestock production carries an impact on real GDP. The variable livestock production was regressed on GDP. Livestock production predicted GDP $F(3, 1) = 7.557$, $p < 0.001$, which indicates that livestock plays a significant role in shaping the real GDP. The $R^2 = 0.791$ depicts that the model explains 79% of the variance in the GDP. According to the results stated above, H3 is accepted.

**Table 5.** Relationship between the production of livestock products and real GDP

| Indicator | Real GDP | | | | |
|---|---|---|---|---|---|
| | Beta Coefficient | $R^2$ | F | t | p |
| Production of livestock products | 14.148 | 0.700 | 4.667 | 2.160 | <0.001 |

*Source*: Authors' calculations

For H4, the regression was used to test if the production of livestock products carries an impact on real GDP. The variable livestock products were regressed on variable GDP. Livestock products predicted real GDP $F(3, 1) = 4.667$, $p < 0.001$, which indicates that livestock product production plays a significant role in shaping the GDP. The $R^2 = 0.700$ depicts that the model explains as much as 70% of the variance in the real GDP. It can be concluded that H4 is accepted.

**Table 6.** Relationship between agricultural services and real GDP

| Indicator | Real GDP | | | | |
|---|---|---|---|---|---|
| | Beta Coefficient | $R^2$ | F | $t$ | $p$ |
| Agricultural services | 40.936 | 0.889 | 16.045 | 4.006 | <0.001 |

*Source*: Authors' calculations

Lastly, for H5, the regression was used to test if agricultural services carry an impact on real GDP. The variable agricultural services were regressed on variable GDP. Services predicted real GDP F (3, 1) = 16.045, p< 0.001, which indicates that agricultural services play a t role in shaping the GDP. The $R^2$ = 0.889 depicts that the model explains 88.9% of the variance in the real GDP. Based on the results obtained, H5 is accepted.

## Discussions

The main goal of this paper was to analyze the relationship between real GDP (as a dependent variable) and segments of agricultural production as independent variables. Plant production predicts real GDP F (3, 1) = 18.851, p= <0.001, which indicates that plant production has a very important role in shaping GDP. $R^2$ = 0.904 shows that the model explains 90% of the variance in GDP. Vegetable and horticultural production predict GDP F (3, 1) = 10.973, p< 0.001, which indicates that this production plays a significant role in shaping real GDP. $R^2$ = 0.846 shows that the model explains 84.6% of the variance in GDP. Livestock production predicted GDP F (3, 1) = 7.557, p< 0.001, which indicates that livestock plays a significant role in shaping real GDP. $R^2$ = 0.791 shows that the model explains 79% of the variance in GDP. Livestock products predict real GDP F (3, 1) = 4.667, p< 0.001, indicating that the production of livestock products plays a significant role in shaping GDP. $R^2$ = 0.700 shows that the model explains as much as 70% of the variance in real GDP. Services predict real GDP F (3, 1) = 16.045, p< 0.001, indicating that agricultural services play an important role in shaping GDP. $R^2$ = 0.889 shows that the model explains 88.9% of the variance in real GDP. The mentioned results showed that all hypotheses are accepted, that is, that each of the lines of agricultural production has its own influence on real GDP, with the fact that this influence is most pronounced when it comes to plant production. In this way, plant production is recommended as the dominant direction of Serbian agriculture, given that its influence is most pronounced when it comes to the formation of the value of agricultural production, and therefore the total GDP.

A couple of previously mentioned studies in Serbia dealt with this issue in similar research. The study carried out in 2019 (Novaković, 2019) dealt with the analysis of the gross added value of agriculture in the Republic of Serbia, in the observed period of 2002-2015. The analysis in the paper determined that agricultural activity significantly participates in the formation of the total gross added value for the period 2002-2015, providing 11.1% of the total gross added value in relation to all participating activities. Through further analysis, it was determined that the total value of plant production

contributes statistically significantly to the formation of the gross added value of agriculture, from which it can be concluded that the extensive type of production is still dominant. Another study (Stanojević et all, 2015) dealt with the analysis of the production of agricultural goods and services in Serbia for the period 2007-2013. The analysis showed that the production of agricultural goods in the analyzed period participates in the total value with about 97%, while agricultural services record participation of only 3%. Regarding the production of agricultural goods, plant production has a higher share in the analyzed period (about 70%) compared to livestock production (about 30%). Unlike the previous two mentioned types of research, one of which was done in 2019, this research helps to expand the scientific basis when it comes to the influence of the value of agricultural production on the GDP in Serbia. This research determined that the value of plant production, in the structure of agricultural production, has the greatest influence on the real value of GDP, expressed at current prices. This very fact can be decisive for the state administration when it gives guidelines on which type of agricultural production is the most profitable to invest in. The same applies to managers in agriculture, whether in the public or private sector when they decide which is the most profitable segment of agricultural production for further expansion and improvement. The year of the pandemic proved to be a limiting factor when it comes to other elements of agricultural production. It is to be assumed that the results in other segments of agriculture would also have a growth trend in 2020, which would certainly affect the value of agricultural production to be higher. Future research could deal with the factors that influenced the realized value of agricultural production, with an emphasis on those factors that are under the control of the producer (the state), such as improving the value of agricultural production by increasing agricultural productivity, using modern IT technologies, professional training of employees, but also by far greater engagement relying on domestic resources, when it comes to agriculture.

## Conclusions

Based on the conducted research, it was determined that the value of agricultural production significantly participates in the formation of real GDP for the observed period of 2018-2021. Further analysis revealed that the total value of plant production statistically significantly contributes to the formation of the total GDP. Although for other segments of the value of agricultural production it can also be concluded that they have a statistically significant influence on the formation of GDP, nevertheless the value of plant production has imposed itself as the dominant direction of the future development of agriculture. The prices of agricultural products increased in the Republic of Serbia by 38.1% in 2021 compared to 2022. The biggest impact on price growth was recorded in the groups of industrial plants (54.8%), grain (42.8%), and livestock and poultry (14.6%). At the end of 2021, mineral fertilizers were three times more expensive in the world and domestic markets compared to the year before. This was contributed by the lack of them on the market caused by the global energy crisis (high gas prices) and the cessation of work of many global mineral fertilizer factories (Chamber of Commerce of Vojvodina, 2021). The obtained results from the analysis, as well as current events at the

national and global level, can be useful to both the creators of agricultural and economic policy. Especially since it is generally known that the development of the primary sector, in the first line of agricultural production, is the basis for the further development of the secondary and then the tertiary sector. Increased agricultural production and productivity tend to significantly contribute to the overall economic development of the country, so it will be quite rational and appropriate to place greater emphasis on the further development of the agricultural sector (Praburaj, 2018).

## Conflict of interests

The authors declare no conflict of interest.

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