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STATUS OF AGRICULTURAL FARMERS IN THE REPUBLIC OF SERBIA IN RELATION TO BANKING INSTITUTIONS

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SUMMARY

This paper examines the registered agricultural holdings (RAHs) in the Republic of Serbia. The present research aims to assess the current condition of RAHs in Serbia and highlight the considerable opportunities that banks and insurance companies possess to promote loans and insurance to small-scale farms. The data on Serbian RAHs were collected for the period 2018–2021. Descriptive statistics served as the primary tool for data analysis. The findings obtained indicate that the small-scale producers in Serbia face restricted access to financial services from banks, which in turn hampers their operational and investment capacities.

Key words:

agriculture, farms, banks, Republic of Serbia

Abbreviations:

RAHs - registered agricultural holdings

INTRODUCTION

Agricultural holdings, or farms, are established on agricultural land and are typically based on private land ownership, as well as other means of production (Simonović et al., 2017). Research has shown that small farms play a continuous and significant role in the global food economy, as evidenced by a marked increase in their numbers in the latter half of the twentieth century (Lowder et al., 2014). There are approximately 450 million private agricultural farms worldwide, supporting around 800 million people. These farms, operating within the cycles of agricultural production, consistently require investments for production enhancement and financial borrowing. Consequently, access to adequate working capital to finance production cycles, and funds for modernization investments, is often contingent on credit support.

Analyses indicate that small farms face numerous challenges, particularly a lack of investment (Varga, 2016). The absence of business records and financial reports among these small farms suggests they are often overlooked by commercial banks for credit support. As a result, commercial banks typically do not view small farms as potential clients, despite their continual need for credit. Additionally, the lack of a sufficiently detailed and effective model for assessing the creditworthiness of this client group leads to their exclusion from commercial banking portfolios. For the average farmer in Serbia, this situation greatly limits access to alternative financing sources and is compounded by an insufficient level of financial literacy (Zakić et al., 2017). Consequently, agricultural producers tend to finance their needs through personal funds, family loans, microcredit organizations, and by extending payment terms with suppliers to manage liquidity during investment cycles. However, this approach does not offer a sustainable long-term solution. Agricultural loans are pivotal for modernizing agricultural production and advancing rural development (Chandio et al., 2018). They offer agricultural producers numerous opportunities such as the additional use and enhancement of inputs, the adoption of modern technologies, and the efficient allocation of resources. These benefits are aimed at improving the food security of the population and combating poverty (World Bank, 2003).

In light of the aforementioned issues, this study focuses on the registered agricultural holdings (RAHs) in the Republic of Serbia. The research aims to assess the current state of these holdings and to underscore the substantial

potential that banks and insurance companies hold in popularizing loans and insurance products among small farms. The available data were analyzed for the period 2018–2021 to provide insights into the status and challenges of RAHs in Serbia.

MATERIAL AND METHODS

During the analysis of the Serbian agricultural sector according to the operational activities of agricultural farms, the data from 4,115 RAHs were utilized. The data, obtained upon request from a commercial bank operating in Serbia, included the following quantitative information about the farms: the years of existence (operation), utilized agricultural land (in hectares), age of the farm owner, number of agricultural crops cultivated, number of family members involved, and amount of approved loans (in local currency).

The qualitative indicators considered assessed the dominant type of production on each farm, as well as the principal work activity of the farm's household members. The type of production on each farm was classified according to the primary agricultural output constituting more than 50% of the farm's total production value. Similarly, the primary work activity of household members was identified on the basis of the main source of income for the family. Accordingly, commercial banks categorized the farms into five groups: those primarily engaged in agricultural production, those involved in rural tourism, those operated by pensioners, those with agriculture as a secondary activity, and those with agriculture as the main activity.

Basic descriptive statistical tools were employed for data analysis, including the calculation of mean values, variation intervals (min and max), and standard deviation. The SPSS version 21 software package was used for data processing.

RESULTS AND DISCUSSION

In the Republic of Serbia, agricultural holdings are categorized into registered or unregistered agricultural holdings. The prerequisite for registering an agricultural holding is the ownership of at least 0.5 hectares of agricultural land actively used for agricultural production. Table 1 presents the distribution of RAHs in the Republic of Serbia by region, all of which are active and thus potential candidates for credit services.

Table 1. Structure of RAH in the Republic of Serbia according to the regional affiliation (2021)

Region	Total active RAH	Participation (%)
Belgrade	25,404	6.0
Vojvodina	114,992	27.1
Šumadija and West Srbija	177,593	41.8
South and East Serbia	100,400	23.6
Kosovo and Metohija	6,712	1.6
Total	425,101	100.0

Source: Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia

The total number of active RAHs in the Republic of Serbia was 425,000 in 2021, according to the Ministry of Agriculture, Forestry and Water Management. The Šumadija and Western Serbia regions held the majority with 41.8% of the RAHs, whereas Kosovo and Metohija had the least, with just 1.6%. The RAHs in Vojvodina and Southern and Eastern Serbia accounted for 27.1% and 23.6% of the RAHs in Serbia, respectively, and those in the Belgrade region made up 6.0%.

In 2021, the average size of utilized agricultural land per RAH was 4.6 hectares. The typical RAH holder was 59 years old, and the average household size was 1.4 persons per RAH. Furthermore, the RAHs generally cultivated an average of 5.4 different crops. The data on the years of RAH existence (operation) and amounts of existing loans were not available for the entirety of Serbia, although such information is typically considered by commercial banks when evaluating loan applications from small agricultural producers.

The research utilized these data points to calculate primary descriptive statistical indicators for the quantitative measures under review. As noted, the study covered 4,115 farms active from 2018 to 2021 (Tab. 2).

The results obtained show that the average lifespan (existence) of RAHs in Serbia was 12 years, with a range from newly established to 17 years old. The average size of agricultural land in use was 8.2 hectares per RAH, and this figure varied widely, as indicated by a high standard deviation of 20.2 hectares. The average age of RAH owners was 52 years, with a relatively broad range suggesting significant variability in their likelihood of repaying loans. On average, the RAHs cultivated 5 different crops, again with considerable variation. Typically, there was only 1

employed member per RAH, and the average loan amount stood at 541,455.2 RSD local currency units i.e. 4.628 EUR per RAH.

Table 2. Descriptive statistical overview of quantitative indicators for RAHs operations in the Republic of Serbia (2018–2021)

Indicator	Average	Min	Max	Standard deviation
Years of RAH existence	12.0	0.0	17.0	3.8
Used agricultural land registered as RAH	8.2	0.5	870.8	20.2
Age of the RAH owner	52.0	19.0	80.0	11.5
Number of crops grown on a RAH	5.0	0.0	24.0	2.7
Number of RAH members	1.0	0.0	6.0	1.0
Amount of loans	541,455.2	60,000.0	42,324,048.0	11,632.1

Source: Author's calculation

With regard to qualitative data, the analysis conducted focused on the primary type of production and the associated work activities on the RAHs considered. Figure 1 depicts the structure of RAHs according to their main type of production. The data reveal that livestock production is the predominant activity in 47.5% of the RAHs, with pig farming accounting for 21.3% of this figure, and other forms of livestock production comprising the remaining 26.2%. Additionally, a substantial portion of the RAHs, amounting to 38.5%, primarily engage in arable crop production. Fruit and vegetable production constitute a smaller proportion, representing 10.0% and 4.1% of the RAHs, respectively.

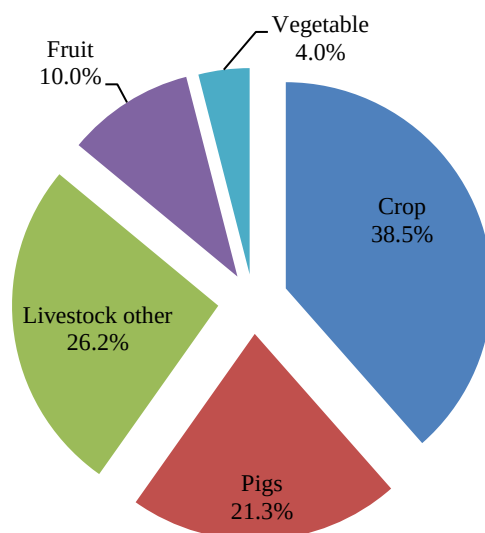


Figure 1. Structure of RAHs in the Republic of Serbia according to the dominant type of production (2021)

Figure 2 illustrates the structure of RAHs in Serbia according to the work activity of their members. It is evident that the majority of RAH members are solely devoted to agricultural production, accounting for 61.6% of the total. Additionally, the RAHs where agriculture constitutes the primary activity represent 10.8%. A considerable RAH portion of 23.0% engage in agricultural production as a secondary activity. The RAHs operated by pensioners make up 4.3%, whereas a small RAH fraction of merely 0.3% are involved in rural tourism.

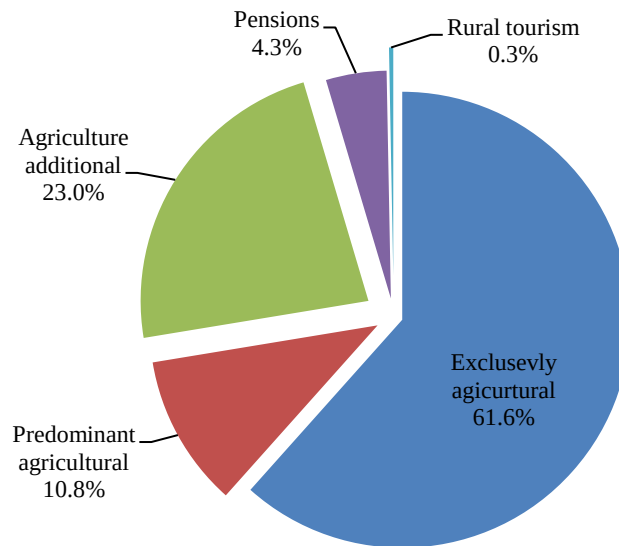


Figure 2. Structure of RAHs in the Republic of Serbia according to the work activity (2021)

Small agricultural holdings are predominantly engaged in exclusive agricultural production. Consequently, small-scale producers often lack the capacity to engage more deeply with banking institutions, including meeting the comprehensive requirements set by banks for loan applications. Instead of seeking financial assistance from banks or microcredit organizations, many of these producers rely on internal financing through the farm's resources, or through loans from friends and relatives, and frequently seek to extend payment terms with suppliers. Despite this, they are quite disciplined in loan repayment, resulting in a notably low non-performing loan (NPL) rate among this group. This financial prudence can be attributed to the fact that entire families are often invested in the farm, which serves as their sole source of income, leading them to be cautious with borrowing and diligent in repaying loans (FAO, 2019).

Banks have access to comprehensive data on the operations of small farms through various databases, such as the Treasury Department, Credit Bureau, account turnover, and Tax Administration, enabling certain analyses to be automated and streamlining the entire process. In recent years, an increasing number of small producers have been registering with these databases, which are predominantly accessible to financial institutions.

Loan prices for small producers are, on average, 20% to 30% higher than those for typical consumer loans (like housing or personal loans) or for larger economic entities. Consequently, loans tailored for RAHs tend to be more profitable for banks than other banking products. When investment loans for RAHs are compared to housing loans for individuals, it is clear that the former are approximately 50% more expensive. Furthermore, when investment loans for farms are contrasted with equivalent loans for legal entities and larger companies, this percentage disparity is even greater. Likewise, working capital loans for RAHs are, on average, 20 to 40% more expensive than similar loans for larger businesses (FAO, 2019).

Table 3 offers a comparative analysis of interest rates for loans issued to RAHs, individuals, and legal entities, categorized by the loan type. Specifically, the interest rates for investment loans and working capital loans are examined. The average annual interest rate for agricultural investment loans stands at 5.5%, in contrast to the rates for investment loans to legal entities and individuals, which are 4% and 2.8%, respectively. Moreover, the annual interest rate for working capital loans aimed at supporting agricultural production is 7.5%, compared to 6% for both individuals and legal entities.

Table 3. Comparative analysis of interest rates for investment and working capital loans for agricultural producers, individuals, and legal entities

Type of loans	Investment loans - EUR			Working capital - LCY		
	Agricultural investment loans	Housing loans for individuals	Investment loans for legal entities	Agricultural working capital	Cash loan for individuals	Working capital loan for legal entities
annual interest rate	5.5%	2.8%	4.0%	7.5%	6.0%	6.0%

Source: OTP bank Serbia (average values in the observed period 2018 - 2021)

Based on the information previously discussed, the primary factors driving the demand for financing among RAHs include:

- the desire to increase yields and decrease production costs through investment in modern mechanization and technology, making low loan margins a significant incentive for fixed asset investments,
- the need to manage low and highly variable profit margins, which necessitates working capital for day-to-day expenses, and agricultural cooperatives, traders, and integrators to alleviate financial pressures on small farmers by offering extended payment terms, and
- a stronger inclination of young producers towards investment and innovation, leading to an increased demand for financial support.

CONCLUSION

In line with current practices regarding the business relationships between banks and small agricultural producers in Serbia, it is evident that these producers have limited access to financial resources from banks. This restriction impacts both their operational and investment capital. The primary reason is that banks tend to prioritize collaboration with legal entities and large companies in the realm of primary agricultural production, lacking appropriate financial and credit analysis tools for small producers.

The high operational costs for banks to process loans for small producers, coupled with unpredictable risks and uncertain profits, make such transactions less appealing. Consequently, commercial banks demonstrate limited interest in extending credit to small farms. Furthermore, the fact that small producers often operate outside the VAT system and do not maintain formal business records complicates creditworthiness assessments.

A potential solution to bridge the gap between small producers and commercial banks could involve developing a model that allows banks to automate the processing, approval, and monitoring of loans designed for small farms.

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