

State and challenges of financing family farms in Bosnia and Herzegovina

Željko VAŠKO* and Đorđe OŽEGOVIĆ

University of Banja Luka, Faculty of Agriculture, Bosnia and Herzegovina, *correspondence:
zeljko.vasko@agro.unibl.org

Abstract

The development of agricultural sector in Bosnia and Herzegovina (BiH) is still determined by the processes of transition of the economic system and overcoming the consequences of the last war. Therefore, it inevitably requires modernization which again requires investments. Provided financial sources are the main preconditions for investing, so the researching sources and terms of financing investments in agricultural sector in BiH are the actual subject of research. The goal of the research presented in this paper is to determine sources of financing agricultural business at the level of family farms, dominating in the agriculture of BiH, the structure of their investment, lending conditions and other sources of financing and farmers' satisfaction with those conditions. Besides the review of literature, the research has been conducted by interviewing a random sample of hundred family farms from the five different regions in BiH, in spring of 2016. The results indicate that self-financing is still a dominant source of financing agricultural businesses, which reduces and slows down level of investment. The next source by relevance is lending (the farmers are not very satisfied with the lending terms and conditions), and followed by subsidies.

Keywords: Bosnia and Herzegovina, family farms, financing, investment

Introduction

Agriculture is a dominant type of business in rural areas in Bosnia and Herzegovina (BiH). In fact, one of the most common problems faced by small family farms in BiH is the lack of capital and difficult access to external sources of financing. That is not a problem only for farmers in BiH, but a problem that was or still is relevant for farms in other transitional countries.

From the past experience in BiH it is known that banks and financial institutions are "running away" from the financing of agriculture. Overall, the share of agriculture in total volume of loans in Bosnia and Herzegovina is low in case of banks, and slightly higher in case of microcredit organizations (Ivanković et al., 2016). So far, a certain number of authors have researched influence of financing and micro financing on agriculture in BiH and the region in recent period. Ramić and Vasiljević (2009) found

that banks in BiH are almost the sole source of financing investment in the economy and agriculture, where their agricultural lending conditions are unfavourable. Unlike them, Hartarska and Nadolnyak (2007) research the influence of microcredit organizations (hereinafter MCOs) presence in BiH and found that the presence of one or more MCOs in a municipality contributes to the increase of investments in agriculture. Matul and Tsilikounas (2004) concluded that the microcredit organizations stimulated renewal of households in BiH, including the rural households. Vaško et al. (2011) investigated the experience with lending of the projects of International Fund for Agricultural Development and concluded that precisely these projects had great importance for the introduction of agricultural loans, especially through commercial banks. Vučenović and Vaško (2009) came to the conclusion that, although farmers have access to several sources of financing, they prefer borrowing. At the time of their research, the share of agricultural lending compared to total lending in the Republic of Srpska, one of two BiH entities, was just 1.6%. Mrdalj et al. (2013) analysed the case of the Republic of Srpska, and came to the position that, irrespective of grants and loans, the level of investment in agriculture is insufficient and varies from 2.1% to 3.6% of total investment in that entity. Vaško et al. (2012) stressed the fact that the subsidies are significant source of competitiveness because the farms that use subsidies are more competitive on liberalized food market in BiH. Berjan et al. (2014) wrote about the availability of loans in rural areas of South-East BiH. Their conclusion is that lack of credit facilities specialized for agriculture and rural business are major obstacle for development of agriculture and rural economy in BiH.

Also, in neighbouring countries of BiH, there were research on the topic of sources and conditions of financing investment in agriculture. Jolović et al. (2014) concluded that the financing of agriculture in Serbia is significantly below the importance of that sector and promote an increase of lending to agriculture. However, Tomašević et al. (2014) analysed financial situation of agricultural companies in Serbia over a period of three years. Analysis of indebtedness showed that debts of agricultural enterprises is higher than 50% and they suggest limitation of further borrowing. Jovović et al. (2014) investigated the foreign direct investment in Serbia and calculated that a very small part of these investments and up in agriculture, while Radović (2010) wrote about the influence of securities in the financing of agriculture in Serbia.

Gjosheva-Kovachevikj et al. (2013) wrote about agriculture lending in Macedonia. According to them, availability of loans for agriculture and rural development is low because financial institutions see this sector as very risky.

Ranogajec et al. (2009) wrote about agriculture as a low-productive activity in Croatia, with small possibilities of accession to the relatively expensive loans, because the government is trying to foster agriculture by obtaining some more favourable funds for investment in agriculture: lower interest rates, longer repayment periods, contracting the grace periods, etc. Jež-Rogelj et al. (2017) found that for most of the surveyed farms, subsidies make up to 30% of income.

Radović (2011) wrote about the model of transition of Slovenian agriculture. In the entire transitional period, there was the protectionist agrarian policy. Slovenian model of financing agriculture in the transitional period was based on the European Union

(EU) model. The entire support to agriculture was financed from the agricultural budget and the pre-accession programmes of the EU.

The presented results of research during which there was study on the needs and terms of agriculture financing on the Balkans can be summarized as that there is not enough funding, it is mainly focused on borrowing, while the lending conditions are unfavourable and unacceptable for farmers. As far as other alternative sources of agriculture financing are concerned, different types of subsidies are the most commonly mentioned.

Material and methods

Subject of the research is examined through desk literature review, both from national and regional standpoints. There has been an overview of the position of agriculture in the overall financing of the economy, as well as summary of these results. As far as the micro-level is concerned, there are some data about the size of investments, the scope and terms of lending in BiH. However, there is no data about sources and effects of financing of agriculture at the micro level of individual farms.

Therefore, in order to further survey the situation with financing family farm business in BiH, the survey of 100 family farms (n=100) from five different regions was carried out: Herzegovina (represented by the Municipality Bileća), Eastern Bosnia (represented by the Municipality Rogatica), Birač (represented by the Municipality Bratunac), Posavina (represented by the Municipality Derventa) and Krajina (represented by the Municipality Novi Grad). The survey was conducted by face to face interviews and it was done on the randomly selected farms, in spring of 2016. The survey questionnaire had 45 questions grouped in 8 groups (general data on respondent and farm, data on funding sources, data on bank lending, data on MCO lending, data on saving and credit organization (SCO) lending, data on financial leasing, data on subsidizing and data on donations). The farms were selected in different villages, with the assistance of advisors from Agricultural Advisory Services. The heads of farm were interviewed predominantly, and in the case of their absence, some of the family members. Qualitative and quantitative results of the survey were analysed by descriptive statistics methods (mainly by univariate analyses of frequency of distribution and analyses of structure) and presented in tabular and graphic ways. In the discussion of the results, the method of simple and cross comparisons was used.

The profile of the respondents (farmers, i.e. the farms to which they belong) is shown in Table 1.

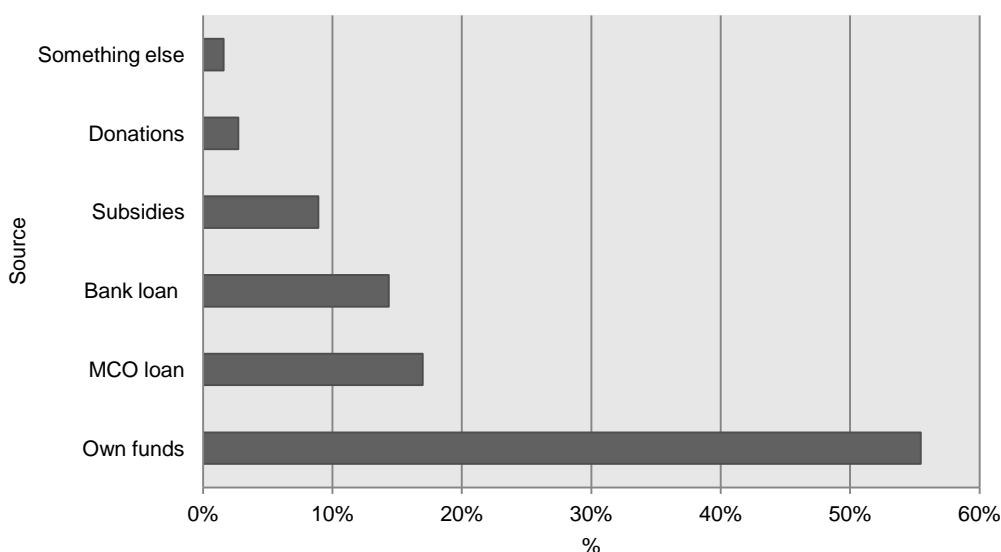
Table 1. Socio-economic characteristics of respondents and farms participating in the survey

Criteria	Attribute	Percentage
Age (years)	16-25	3%
	26-35	18%
	36-45	22%
	46-55	36%
	56-65	17%
	Over 65	4%
Gender of the farm holder	Male	77%
	Female	23%
Production orientation	Crop farming	9%
	Vegetable growing	9%
	Fruit growing	17%
	Animal husbandry	63%
	Other	2%
Farm size	Small	53%
	Medium	41%
	Big	6%

Source: Authors' calculations, based on research results.

Results and discussion

From a much wider range of questions and answers, some results have been selected that show some aspects of financing family farms in BIH. The first question to farmers was how they finance their agricultural business. The Figure 1 presents graphical results of these responses. There were no answers that leasing or loans from the savings and credit organizations were used as sources of financing, although they were also offered as possible responses.



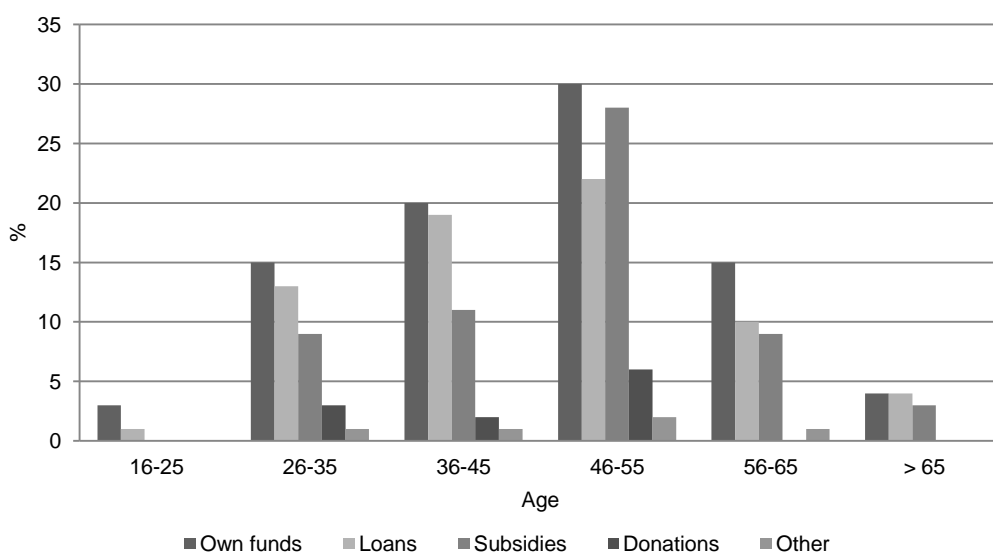
Source: Authors' calculations, based on research results.

Figure 1. Sources of financing of family farm business

According to the survey, the dominant source of financing of agricultural business are own funds (55%), while loans are at the second position (31%). Unlike the situation in EU, farms in BiH are much less dependent on subsidies and grants, which all together make up 11.6%.

In addition to the formal channels of business financing, farmers were also asked whether they used informal sources of financing, i.e. borrowing from relatives, friends and neighbours, and even 65% of them confirmed that they do borrow funds. This indicates the underdevelopment of financial market, at least when it comes to financing the agricultural sector (e.g., leasing, although available in BiH to certain extent, was not used by any single farmer). Obviously, it is evident that farmers much more trust to each other than to financial institutions when it comes to borrowing funds (moral versus legal guarantee).

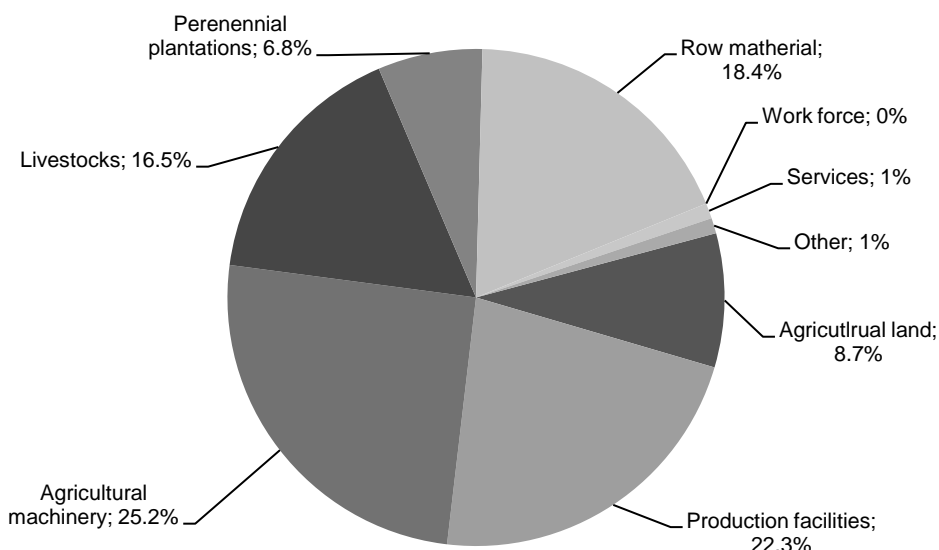
Statistical sources show similar data related to the structure of financing investments of legal entities in the agricultural sector, according to which the share of own funds is a bit higher than the share of loans and grants (Agency for Statistics of Bosnia and Herzegovina, 2014). The influence of farmer's age on the type of sources of financing agricultural investment is affected by age structure of the sample of surveyed farmers. However, it is evident that the younger farmers generally don't have access to subsidies and grants. All sources of financing increase their presence with increasing of the farmer's age up to 55 years, after which their economic activity and propensity to invest begins to decline (details on Figure 2).



Source: Authors' calculations, based on research results.

Figure 2. Dependence between the age of farmers and sources of financing

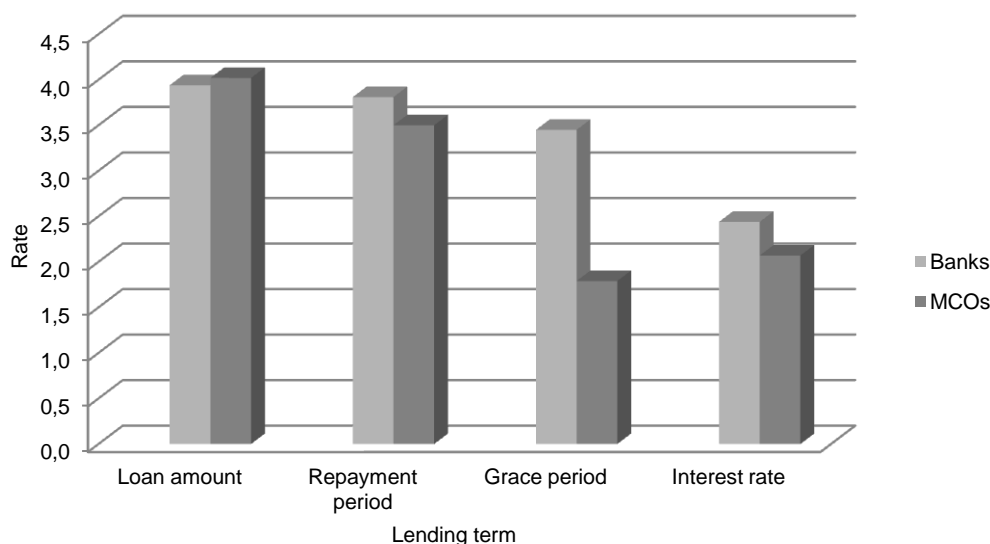
Farmers mainly borrow money for fix assets investment financing (purchase of land, construction of production facilities, purchase of agricultural machinery and livestock and planting of perennial plantations) 80%, and the remaining 20% for purchase of raw materials and paying for different services. The entire spectrum of purposes for farmers' borrowing is shown on Figure 3.



Source: Authors' calculations, based on research results.

Figure 3. Purposes of farmer's borrowing

When focusing only on loans, surveyed farmers were less satisfied with the lending conditions (17%), majority of them have confirmed their dissatisfaction (43%), while 40% were neutral. Comparison of satisfaction by bank and MCO loan terms shows the following Figure 4 (the maximum rate was 5).



Source: Authors' calculations, based on research results.

Figure 4. The satisfaction of the lending terms

As far as borrowing by the family farms is concerned, it is dominated by two types of institutions, commercial banks and microcredit organizations. The average terms of these lending arrangements are shown in Table 2.

Table 2. The terms of family farm lending

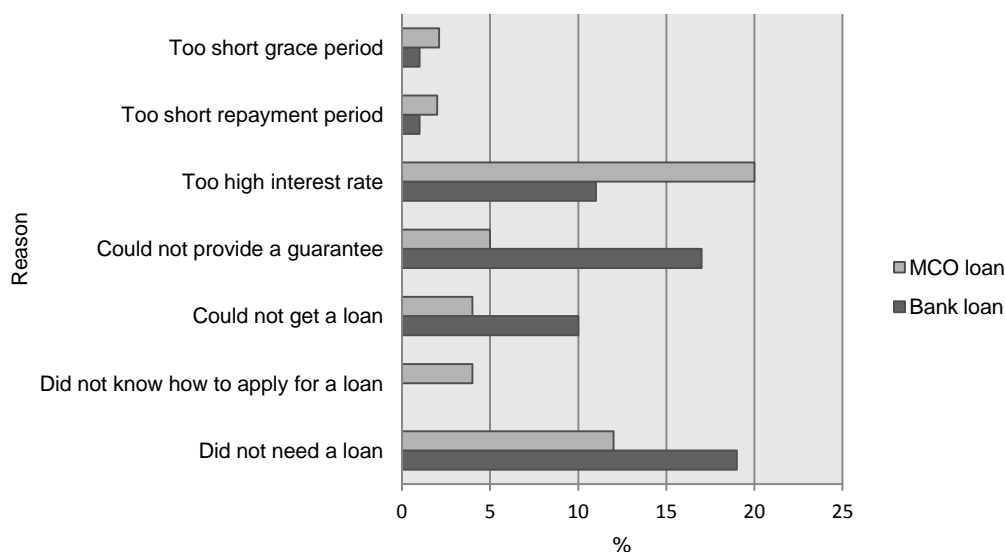
Term	Commercial banks			MCOs		
	Average	Modus	Median	Average	Modus	Median
Loan size (BAM) ¹	12,694	5,000	10,000	9,289	5,000	6,500
Repayment (months)	45.7	60	60	36.1	36	36
Grace period (months)	8.4	12	12	1	1	1
Effective interest rate (%)	7.81	4.9	6.45	12.39	4.6	12.99

Source: Authors' calculations, based on research results.

¹ BAM – the international banking code for Convertible Mark, currency of Bosnia and Herzegovina (BAM has a fix exchange rate 1 BAM=0.51129 EURO).

The terms and conditions of loans of commercial banks are more favourable than loans of MCOs (repayment period, grace period, interest rate). However, still a significant number of farmers borrow money from MCOs, mostly due to more flexible procedures for applying and approving loans, and less demanding collateral requirements.

Since significant number of farmers has not borrowed any fund yet, the reasons for such outcome are further explained (Figure 5).



Source: Authors' calculations, based on research results.

Figure 5. Reasons for not borrowing

The main constraints for borrowing money from commercial banks are demanding instruments for loan repayments (guarantees) and complexity of procedures (which farmers interpret as inability to obtain a loan). In case of MCOs, requirements for documentations and guaranties are moderate, but the main constraint for borrowing is too high interest rate.

Subsidies are paid at the entity and district level (BiH consists of two entities - the Federation of Bosnia and Herzegovina and the Republic of Srpska, and one district (Brčko District BiH). In BiH there are no agricultural subsidies on the state level, and less at cantonal and local (municipality) level. The most common agricultural subsidies are received by farms specialized in fruit and crop production, but when assessing the amounts, greater subsidies are received by livestock farms, i.e. milk producers. A typical farm received BAM 3,395 of average annual subsidy, with the minimum of only BAM 30 and a maximum of BAM 32,500.

It is also an interesting fact that even 59% of farms used the assistance for the preparation and submission of application for subsidies, much less than for preparation and submission of loan applications (40%). A similar trend is also in the neighbouring countries that have recently joined the EU (Croatia, Slovenia) where

advisory support to farmers move from issues related to the improving production technology to assistance to obtain subsidies.

Conclusions

The main concern of every single farmer, no matter where s/he lives, is how to finance some investments (in the long term) and on-going agricultural business (in the short term). This is especially a challenge for farmers in BiH, where financial market is still underdeveloped, and the creditworthiness of farmers, who need external financing, is modest. In discrepancy between the needs and the opportunities they still finance the most of their business from their own funds, based on which there is a delay of necessary investments in the modernization of their farms, and scope of their business is under the objective level of their capacity. The financial institutions in Bosnia and Herzegovina are slowly turning to agriculture, and loans are predominant type and external source of their financing. Due to size and small-scale business, family farms are more oriented to microcredit organizations, which offer more expensive loans than banks, but have a methodology and terms which are more suitable for small borrowers. Subsidies are also becoming increasingly common source of financing of agricultural business, but budgetary possibilities of the different administrative levels in BiH are modest, and therefore the share of subsidies is still very low.

Examples of some sophisticated ways of financing of agriculture in BiH (joint ventures, leasing, futures, forwards, etc.) practically do not exist, and they are inappropriate for small-scale family farms, which will remain dependant on three key sources of financing for their business: own funds, loans and subsidies. Therefore, it is important that the loans and subsidies become and stay accessible also for small family farms in order to avoid some radical solutions in agricultural and credit-monetary policy, which would exclude them from the group of eligible beneficiaries, and thereby cause the undesirable socio-economic changes in rural areas.

Acknowledgments

This article contains some of data collected for the purpose of writing a master work of student Đorđe Ožegović on the topic "Sources and ways of financing investment in the agriculture of the Republic of Srpska" supervised by prof. dr Željko Vaško, defended at the University of Banja Luka in 2016.

References

- Agency for Statistics of Bosnia and Herzegovina (2014) Investments, thematic bulletin 04. Sarajevo: Agency for Statistics of Bosnia and Herzegovina. Available at: http://www.bhas.ba/tematskibilteni/TB_Investicije_2014_BiH.pdf

- Berjan, S., El Bilali, H., Sorajić, B., Le Thi Minh, C., Driouech, N., Milutinović, H., (2014) Rural finance and credit access in south-eastern Bosnia and Herzegovina. *Agriculture and Forestry*, 60 (4), 119-126. Available at: <http://89.188.43.75/agricultforest/20141214-016%20Berjan%20et.pdf>
- Gjosheva-Kovachevik, M., Kovacev, G., Risteski, H. (2013) Conditions and perspectives of financial lending in Macedonian agriculture and rural development. In: Kovacevic, D., Book of proceedings, IV International Symposium Agrosym. Jahorina, BiH, 3-6 October 2013, Faculty of Agriculture, University of East Sarajevo, 2-7. Available at: https://mpra.ub.uni-muenchen.de/51338/1/MPRA_paper_51338.pdf
- Hartarska, V., Nadolnyak, D. (2007) An impact analysis of microfinance in Bosnia and Herzegovina. *World Development*, 36 (12), 2605-2619. Available at: <https://www.sciencedirect.com/science/article/pii/S0305750X08001800?via%3Dihub>
- Ivanković, M., Vaško, Ž., Jurilj, I., Lasić, M. (2016) Sources of financing of agriculture and rural development (in Croatian). In: Dmitrović, M., 17th International Symposium A2A Reform agenda for the application for EU membership, Book of proceedings. Neum, BiH, 26-28 May 2016, Revicon, 533-541. [Print]
- Jež-Rogelj, M., Zrakić, M., Hadelan, L. (2017) Impact of state aid on business decisions and financial stability of family farms in Croatia. *Journal of Central European Agriculture*, 18 (1), 260-277. Available at: https://jcea.agr.hr/articles/773918_Utjecaj_potpora_na_poslovne_odluke_i_financijsku_stabilnost_poljoprivrednih_gospodarstava_u_Hrvatskoj_hr.pdf
- Jolović, A., Njegovan, Z., Čavlin, M. (2014) Financing of the agriculture in Serbia: state and prospects. *Economics of Agriculture*, 61 (1), 127-136. Available at: <http://www.ea.bg.ac.rs/images/Arhiva/2014/Broj%201/11%20EP%201%202014.pdf>
- Jovović, D., Stojadinović Jovanović, S., Dašić, B. (2014) Agricultural trade and financing through FDI. *Economics of Agriculture*, 61 (2), 455-468. [Print]
- Matul, M., Tsilikounas, C. (2004) Role of microfinance in the household reconstruction process in Bosnia and Herzegovina. *Journal of International Development*, 16 (3), 429-466. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/jid.1086/full>
- Mrdalj, V., Mirjanić, S., Vaško, Ž., Ostojić, A. (2013) Instruments of economic measures of agricultural policy of the Republic of Srpska. In: Kovacevic, D., Book of proceedings, IV International Symposium Agrosym. Jahorina, BiH, 3-6 October 2013, Faculty of Agriculture, University of East Sarajevo, 1283-1289. Available at: http://www.agrosym.rs.ba/agrosym/agrosym_2013/documents/6rd/rd30.pdf

- Radović, G. (2010) The role of securities in financing agriculture (in Serbian). *Agroekonomika*, 39 (45-46), 69-77. Available at: http://www.agroekonomika.rs/images/arhiva/agroekonomika_45-46.pdf
- Radović, G. (2011) Slovenian agriculture transition model (in Serbian). *Škola biznisa*, 101-113. Available at: <http://www.vps.ns.ac.rs/SB/2011/5.9.pdf>
- Ramić, E., Vasiljević, Z. (2009) Financing of rural development and economic performances in rural areas of Bosnia and Herzegovina (in Serbian). *Economics of Agriculture*, 56 (1), 111-131. Available at: <http://www.ea.bg.ac.rs/images/Arhiva/2009/Broj%201%20-%202009%20=%20Issue%201%20-%202009.pdf>
- Ranogajec, Lj., Deže, J., Josipović, P. (2009) Investment sources of agricultural production (in Croatian). In: Marić, S., Lončarić, D., ed., *Proceedings, 44th Croatian and 4th International Symposium on Agriculture*, Opatija, Croatia, 16-20 February 2009, Agriculture Faculty, Josip Juraj Strossmayer University, 247-251. Available at: http://sa.agr.hr/pdf/2009/sa2009_p0225.pdf
- Tomašević, S., Vlaović-Begović, S., Momčilović, M. (2014) The financial position of agricultural enterprises in the Republic of Serbia (in Serbian). *Agroekonomika*, 43 (61-62), 90-100. Available at: http://www.agroekonomika.rs/images/arhiva/Agroekonomika_61-62.pdf
- Vaško, Ž., Omanović, H., Figurek, A., Kosić, N. (2011) Agriculture lending in Bosnia and Herzegovina – From the experience of IFAD projects. In: Ateljević, J., Poljašćević, B., 1st REDETE Conference. Banja Luka, BiH, 27-29 October 2011, Faculty of Economics, University of Banja Luka, 1-12. Available at: <https://eprints.ugd.edu.mk/800/1/ConfrenceProceedings.pdf>
- Vaško, Ž., Mirjanić, S., Figurek, A. (2012) Subsidies as a factor in the competitiveness of domestic agricultural production. In: Kovacevic, D., *Book of proceedings, Third International Scientific Symposium Agrosym*. Jahorina, BiH, 15-17 November 2012, Faculty of Agriculture, University of East Sarajevo, 567-574. Available at: http://www.agrosym.rs.ba/agrosym/agrosym_2012/dokumenti/zbornik%20radova.pdf
- Vučenović, A., Vaško, Ž. (2009) Financing agricultural development (in Serbian). *Agro-knowledge Journal*, 10 (4), 165-174. Available at: http://agro.unibl.org/wp-content/themes/poljoprivredni/pdf/2009/Agroznanje_3.pdf