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MACEDONIAN AGRICULTURAL CAPITAL MARKET AND SUPPORTING MECHANISMS: AN OVERVIEW

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ABSTRACT
The Macedonian agricultural capital market is not efficient enough, although there have been some improvements due to the established supporting mechanisms. This paper aims to identify current gaps between agricultural financial services' and mechanisms' supply and demand on the agricultural capital market. In this regard, literature and other available secondary sources have been reviewed. Additionally, focused discussions with different stakeholders in the agricultural capital market were conducted, including representatives from the capital demand side (farmers and their associations), and supply side (banks, saving houses, and their associations), as well as supporting institutions and intermediaries (government institutions and donor projects that work towards improvement of farmers' access to finance in the country). Crediting is one of the key drivers of agricultural and rural development. There are other external financial sources that should be considered, which could contribute in improved capital flow to the agricultural sector. The results revealed critical segments in the agricultural capital market based on the mismatches between the supply and demand for capital and supporting mechanisms, and suggest directions for further improvements of this market. The findings may serve as a baseline for future policy settings and enhancement of a more efficient development of the agricultural capital market in the country.

Key words: Agriculture, capital demand, capital supply, supporting mechanisms.

INTRODUCTION
Access to financial services is of crucial importance to the agricultural sector - farmers need credit for their activities and business development, as most of these activities are capital intensive. Still, access to finance in agriculture remains a weak segment in the country (Simonovska *et al*., 2014; Martinovska-Stojcheska *et al*., 2015). Crediting is one of the key drivers of agricultural development (Arsov, 2008), but, there are other external capital sources that should be considered for improved capital inflow in the agricultural sector.

Farm capital requirements can be met by internal and external sources of financing. Internal financing is a direct investment provided by the accumulated income of the farm business, whereas external funding is provided by outside institutions (Zhao *et al.*, 2008). Family farm businesses are less complex in terms of capital structure than agricultural companies (Barry & Ellinger, 2012), since the ownership and management is typically concentrated in one or a few individuals. Internal equity and debt in family farms are the primary financing alternatives, since external equity and direct access to capital markets is often beyond the reach of most farms (Zinych & Odening, 2009). Nevertheless, given the seasonality character and the biological nature of agricultural production systems, the capital intensity of farm businesses is

high, and the rates of return on assets are relatively low and volatile (Simonovska & Gjosevski, 2016). This is relevant to the Macedonian context, where the dual farm structure is especially pronounced, with family farms (individual agricultural holdings) dominating the agricultural landscape (Gjosevski & Simonovska, 2018).

Several theories interact in relation to the agricultural capital market and financial services provided and used by agricultural producers. Access to financial services can be seen through two perspectives - demand and supply (Stijn, 2005). Demand refers to the choices made by agricultural producers, given the available financial services and products provided by financial institutions, whereas supply represents the financial services and production availability.

Awunyo-Vitor (2018) suggests four theories explaining the concept of access to financial services including the access by smallholder farmers in developing and transition economies. Two of these theories explain the demand side for financial services (delegated monitoring theory and rational choice theory), and two theories refer to the supply side of access and intermediation of financial services (information asymmetry theory and transaction cost theory). The theory of delegated monitoring entrusts the financial institutions to act as delegated monitors for net savers, based on minimizing the cost of monitoring information which is useful for resolving incentive problems between borrowers and lenders; farmers have the power to put their savings in the institution of their choice and discipline the institution if their interest is not met (Diamond, 1984).

The rational choice theory, also known as choice theory or rational action theory, constitutes a set of ideas with several variants, basically considering the behaviour of the individual in choosing and making a decision in line with the personal preferences (Levin and Milgrom, 2004). In the case of access to finance, farmers have multiple institutions and type of services and products to choose from, hence their decision involves first the desire to use financial services, and then choosing the nature, type and conditions of the respective services provided by the financial institutions. The demand for financial services is, in this sense, seen as a function of the characteristics of the financial service provider, the concrete financial services features and the attributes of the decision-making unit.

The information asymmetry theory addresses the imperfect information where one party in a certain transaction has more or better information than the other, thus resulting in unbalanced power in the transaction and information problem. The consequences of an information issue within a financial market, according to the Hoff and Stiglitz's classification (1990), can result into a screening problem (related to the extent of the risk), incentives problem (related to honoring the credit contracts) and enforcement problem (related to ensuring of the loan repayment). The transaction cost theory (set out by Coarse, 1937) attempts to define the firm's relation to the market. In the given context, it relates to the costs associated with gathering and processing information needed for making a decision with regard to the transactions in the process, finding, honoring and enforcing of the financial contract (Benston & Smith, 1976).

Other theories used in corporate finance are the peasant theory and the pecking order model. The peasant theory (Chayanov, 1925, in Thorner 1966) implies that the peasant household will increase its work until it meets (balances) the needs (consumption) of the household. If small farmers have tendencies to grow, there are different capital structure strategies they may choose. The pecking order model (Myers & Majluf, 1984) postulates that the cost of financing increases with asymmetric information, since managers are more acquainted with the situation, prospects and associated risks of their business than outsiders. Since financing comes from three sources (internal funds, debt and new equity), this theory argues that businesses prioritise the financing sources in a certain order; typically, their first choice source is using internal funds (for e.g. free cash flow) especially when external financing is not available. Barry & Ellinger (2012) indicate that farms adjust to long-run financial targets for equity, debt, and

leasing, but in terms of additional financing needs, the farms follow a pecking order that is stronger for farms with greater asymmetric information problems.

This paper *aims* to identify current gaps between agricultural financial services and mechanisms supply and demand on the Macedonian agricultural capital market. The literature review and analysis of secondary data, along with focused group discussions, enabled identifying the current condition of the agricultural capital market in the country.

The paper is structured in several sections; following the introduction, the next section describes the data collection methods. The subsequent section gives an insight into the country's financial architecture that serves the agricultural sector, followed by a discussion on the key challenges on the current setup of the agricultural capital market. Finally, the conclusion emphasizes the gap between the current supply and demand of financial services in agriculture.

METHODOLOGICAL FRAMEWORK

Finding evidence on (mis)matches between the supply and demand in the agricultural capital market requires a twofold approach of data collection: desk and field research. The first concerns review of the available literature, secondary sources on past reviews and accessible information on the current supply. The latter includes primary data collection through personal communications and discussions with representatives of financial intermediaries and relevant stakeholders to describe the current supply of external finance to farmers. These discussions were run in a structured manner by using a pre-determined set of questions. The discussions were conducted with commercial banks, saving houses, and their associations; governmental institutions (Ministry of Agriculture, Forestry and Water Economy; Ministry of Finance; Development Bank of North Macedonia (formerly Macedonian Bank for Development Promotion); Agency for Financial Support of Agriculture and Rural Development), and relevant donor projects that work towards improvement of farmers' access to finance in the country. In addition, interviews with farmers and representatives of their organisations were conducted to detect their perspective on these issues, from the demand side of financial services in the agricultural sector. We use the method of rapid market assessment (International Red Cross and Red Crescent Movement, 2014) to provide a snapshot of the condition of the agricultural capital market in 2018. All findings from desk and field research were framed within a theoretical background to support the aimed analysis and discussion.

RESULTS AND DISCUSSION

Overview of the capital supply on the Macedonian agriculture

There are multiple formal institutions that deliver financial services in the country, however many of these have not even expanded much into agricultural finance. Agricultural finance is thus far traditional and farmers' main use of external financing is through mortgage credits. The current setup of capital market in the Macedonian agriculture is summarised in Table 1, focusing on determined gaps between agricultural financial services' and mechanisms' supply and demand on the agricultural capital market.

Different formal institutions are found to deliver financial services in agriculture in the country, including commercial banks, microcredit organizations and the state development bank. Nine out of 15 banks, all three savings houses and the state development bank have a direct credit offer in agriculture, including the offer provided by the Agricultural Credit Discount Fund (ACDF).

Commercial banks are very liquid. They have available funds to place on the capital market and agriculture seems to be a good portfolio diversifier. Over 20% of banks' capital is not marketed but they also seek to support well justified quality investment projects. Savings

houses have unutilised funds as well. In total, the national credit exposure to agriculture, fishery and forestry is about 81 million EUR (NBRM, 2018), which is only 3% of the total business credit exposure in the country. Agricultural loan consumers are mainly larger farms and agribusiness companies, which constitutes only 1% of the total number of farms, hence, the consumption of loans is relatively low.

Table 1. Identified mismatches on the Macedonian agricultural capital market

Service providers; existing (+) vs. missing (-)		**Financial products and mechanisms; existing (+) vs. missing (-)**	
State development bank	+	Agricultural credit	+
		Export factoring	+
		Agricultural insurance	+
Agricultural Credit Discount Fund (ACDF)	+	Agricultural credits with reduced interest rates	+
Commercial banks	+	Mortgage commercial agricultural credit	+
		Supported mortgage agricultural credit by ACDF and other donors	+
		Guarantee scheme supported by donors	+
		Commercial agricultural credit lines	-
		Agricultural revolving arrangements	-
		Financial instruments in agriculture	-
Microfinance institutions		Mortgage commercial agricultural credit	+
Savings houses	+		
Farmers' credit unions	-	Supported mortgage agricultural credit by ACDF	+
Village banks	-		
Ministry of Agriculture Forestry and Water Economy	+	Subsidized interest rate	+
		State guarantee fund	-
Leasing companies	+	Leasing services in agriculture	-
Factoring companies	+	Factoring services in agriculture	-
Informal actors	+	Trade credits	+
		Loans	+
		Advances	+
		Payables	+

To improve the credit absorption by the agricultural sector, especially by the smallholders, the Government has established different supporting mechanisms: establishment of a state development bank (the Development Bank of North Macedonia), establishment of credit fund for agriculture to support both, the lending institutions and farmers/farm companies (ACDF), and introduction of a subsidized interest rate to support pre-financing for IPARD co-financed investments (Simonovska *et al.*, 2017).

The state development bank also has a direct credit offer in agriculture available since 2012, with favorable interest rate of 2%. An additional financial service of the state development bank, significant for agriculture, is export factoring, i.e. the bank purchases invoices and makes an advance payment of 80% of the invoice value. This bank also offers credit insurance for trade companies on domestic and export receivables on a short term against commercial and political risks. The state development bank additionally supports employments through issuing low cost credits with 1% interest rate for start-up businesses and new job creations, and applications for these credits are through the Agency of Employment.

The interest rates on ACDF credit line range between 4% and 6.5%, and those solely provided by the financial institutions range between 7% and 12%. Current trends indicate that banks show tendencies to withdraw their credit programs in agriculture, but they extend their portfolios to different SMEs users. On the other hand, savings houses have special programs tailored to farming specificities, but these products are more costly since crediting conditions are more flexible.

The state has introduced a subsidized interest rate as a measure included in the national program, but it applies only to credits raised for IPARD supported investments. With this measure, 50% of the interest is supported, but only if the interest rate on the current credit does not exceed 8%, and the repayment period is shorter than 10 years.

There is no state guarantee fund for securing credits in agriculture. Other missing elements in the capital market are other microfinance providers - farmers' credit unions, village banks and similar organizations. Financial institutions offer only traditional capital products to farmers, i.e. mortgage loans. There are products that can further supplement the agricultural credit supply, such as credit lines, revolving credit arrangements, financial instruments, etc. that may be tailored to the farmers' need. Leasing and factoring companies do not offer special programs to agriculture as well.

A number of foreign donors have tried to fill the gap between the supply and demand of capital in agriculture. Especially active in the country is the USAID, endorsing different project activities, such as: establishing a Guarantee Scheme in partnership with banks and savings houses to guarantee farmers' credits; establishing a special credit line in agriculture with the largest commercial bank in the country (Komercijalna banka AD Skopje); establishing an Alliance of Microfinance Organizations; establishing inter-branching activities to proliferate capital flow between different value chain actors; improving the environment for factoring services, etc. This guarantee scheme, as a temporary solution, is securing 50% of the credit amount provided by USAID, in cooperation with the Ministry of Agriculture, Forestry and Water Economy. This scheme is available only through three commercial banks and two savings houses.

Key challenges on the current setup of the agricultural capital market

There are several key challenges that need to be addressed on the already established links between the agricultural credit markets: lack of trust and information, lack of education, lack of flexibility of banks and additional costs, which are especially a burden for the smallholders. A general finding is that there is a lack of trust and insufficient information flow, thus the very low level of using credits by farmers. The financial institutions stressed out that it is necessary to develop long-term partners' relations with the farmer clients, as well as a trust for realization of the common interest.

The first challenge is related to the lack of information to potential farmer clients. Farmers consider banks to be more active in urban than in rural areas. They find there is a lack of interest among banks to provide services in this sector.

The second challenge is related to the lack of education of farmers. Banks are profit-oriented organisations and as such are facing pressure not to put (lend) money into bad investments and insolvent clients. The major concern of commercial banks are clients' creditworthiness, but before they assess it, they look for a progressive business project with a good idea, in which the farmer strongly believes in and stands for. Thereafter, they look for a well conceptualized business plans, a good credit history of the client, and all the other loan eligibility criteria to be fulfilled and supporting documents to be provided. The same perception holds for the microfinance institutions (savings houses) and the state development bank. Even though they have been established to ease the credit access to the low-income population and as such to support farming activities, still they are looking for good business ideas and plans to

put money in. Financial institutions stress that there is a lack of innovative projects and that they are willing to support such investments (Martinovska-Stojcheska *et al.*, 2019). Therefore, there is a need for training of farmers on how to choose investments that would contribute to the development and the sustainability of their farm. In addition, the financial institutions recognize the need for farmers' training on financial literacy to better understand credit conditions and make the right credit decisions, tailored to their needs and possibilities.

Individual farmers find that the financial institutions are not flexible enough and require collateral even for low amounts of credit. Agricultural property and land are often undervalued or not accepted as collateral by financial institutions. In addition to this problem are the unclear property rights and legal entitlements that limit the ability of farmers to get credit. Young people and women, which are the most vulnerable categories of rural population, have additional barriers to access credit. A low number of them own agricultural land and other property, which is indispensable as a guarantee for raising a credit (for instance, only 23% of women own farm assets, Dimitrievski *et al*., 2019). Some savings houses tried to fill this void by offering reduced interest rates to women farmers, which may guarantee with each other for the credit (with forming a so called 'solidarity group' of 2-3 women), thus excluding the collateral from the credit conditions.

The current financial settings in agriculture are not adequate for smallholders. They are left vulnerable in regard to access to finance. Finance products are very expensive for these farmers and they are not tailored to their needs. On the opposite, even if the capital supply to agriculture improves, smallholders may not be able to absorb the financial offer. If we recall to the Peasant Theory (Chayanov, 1925, in Thorner 1966), farmers may behave indifferent to prospective investments since they have no incentive to grow without some external, added factor, so they do not need investment capital. Evidences for this country show that small farmers prefer internal financial sources over the external (Simonovska *et al*., 2014). Or simply they follow the pecking order pattern described by Myers and Majluf (1984).

Financial institutions' greater flexibility in loan terms is associated with higher risk that increases the cost of the credit. The country is associated with high systematic risk, and therefore, commercial banks (the majority owned by foreign investors) have tightened the credit conditions. The risk assessment by the financial institutions is aimed at protecting potential clients from overdrafting to preliminary protect their equity holders, but also to protect their current clients. The great risk in agriculture contributes to a reduced activity of the financial institutions in this sector; however, in discussions with some of them, a possibility for higher involvement in agriculture is observed. On the other hand, commercial banks are very liquid and they have available capital to place. They also consider agriculture as an opportunity to diversify their portfolios and hedge risk, especially with larger farms. Their experience with the farm clients is positive. A general impression from the field findings is that financial institutions appreciate farmers as honest clients and regular in annuity payment, with a rate of delinquency in agriculture assessed to 2% which is low when compared to other sectors.

The additional administrative costs imposed by financial institutions are another reason for not using credits. Farmers do not have security in the timely repayment of instalments receipts due to risk factors related to uncertain sales, adverse weather conditions, irregular collection of receivables, etc. Therefore, they are often more eager to borrow from relatives and friends, then to get a formal credits. This goes in line with the pecking order theory (Myers and Majluf, 1984).

CONCLUSION

The results reveal mismatches between the supply and demand for agricultural financial services and supporting mechanisms. Capital inflow to the agricultural sector is mainly based

on conservative strategies, including mortgage credit as a main formal source, and informal sources. Certain national mechanisms have been established to improve farmers' access to capital, but still there are missing instruments that may increase the capital absorption capacity of the agricultural sector.

There has been significant progress in the overall financial systems development in the country over the past decades. Still famers are left underserved with essential financial services. The past few years have proven that neither commercial banks nor the microfinance segment alone can meet the key financial needs that arise along the agricultural value chains. Even the state development bank has had limited impact in rural areas and has bypassed the agricultural sector.

A variety of formal financial institutions and supporting mechanisms are still missing, among which farmer credit unions, financial NGOs, village banks, national agriculture credit guarantee fund, and so on. In addition, other financial services in agriculture rather than mortgage credits are also missing. In their absence, foreign donors and a variety of informal financial transactions in agriculture have tried to fill the gap, such as trade credit, increasing liabilities, borrowing from friends, relatives and from local private moneylenders.

A large number of farmers, especially smallholders, are still underprovided with financial services, and face high costs for the financial services available. They are still unsatisfied with the current supply of financial services, and the existing information flow on this issue. Additionally, other factors hinder the credit flow in agriculture, such as dispersion of agricultural households that renders the provision of services expensive; covariate risks, usually linked to weather, that affect large numbers of farmers simultaneously; lack of knowledge about new technologies and innovations in agriculture; and last but not least, low level of education in terms of financial literacy on the part of the rural service recipients.

Both the agricultural and the financial sectors are private. Under market conditions, the main goal of all business entities is to maximize their profit, or in the long run, to maximize the capital of their equity holders. Therefore, both sectors need to work in line with their common interest to achieve their long-term goal. But, the state is obliged to provide conditions, mechanisms and measures to overcome all obstacles in that direction. Agriculture as a more vulnerable sector, needs additional governmental support and interventions.

Crediting is one of the key drivers of agricultural and rural development, and as such, it deserves an urgent attention and should be put at the top of the national policy agenda. Supporting mechanisms should be aimed at self-sustainable financial services provided by farmers or rural population and soft measures as well.

More efficient and quality information flow, improved farmer financial literacy and decision making skills, additional to stronger bank flexibility towards farm lending are some of the most feasible ways, to at least partially, overcome the existing agricultural crediting situation in the country. The underlying theories provide a framework to better understand the farm financing patterns.

The identified gaps in the agricultural capital market may serve as a baseline for future policy settings and enhancement of more efficient development of the agricultural capital market in the country.

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