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CHAPTER 12

Conventional and alternative financial supports

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12.1 Importance of financing in the life of agricultural enterprises (investment and working capital financing)

Financing sources are necessary for the establishment, operation and growth of the enterprise. The purpose of the financing decisions is to satisfy the capital requirement for the company's investments, as well as to provide the capital necessary for operation on an ongoing basis.

Financing decisions are influenced by many factors:

- Duration of resources availability. How long are the funds available, and what schedule must be used to repay the money?
- The cost of the resource. How much does it actually cost to raise a particular source of funds, and does the business's ability to generate income allow repayment?
- The risk of raising funds. What risks will the business be exposed to if it uses a particular source?
- Availability of the source. What is the range of resources available to the business?
- Flexibility of the source. Does the resource match the fluctuations?
- The influence. To what extent does the involvement of the given source hinder the entrepreneur in managing the business?

A wide range of financing options are available in the financial markets. A thorough consideration is required before a financing decision is made. In order to find the right form of financing, it is worth considering the following basic principles:

- Principle of profitability: the profitability of the investment realized from the source must exceed the cost of the source involved.
- Safety principle: the company's operation and turnover cannot be hindered by repayment obligations.
- Principle of flexibility: capital needs must be managed flexibly in accordance with fluctuations.

- Principle of normativity: in order to obtain foreign capital and assess creditworthiness, they start from certain standards that must be met.
- Liquidity principle: the conditions of the debt service obligation must be ensured.

By the financing, source or capital structure of a company, we mean the composition of the financing sources used. When establishing the company's funding structure, it is recommended to pay special attention to compliance with the principle of maturity matching. The maturity matching principle states that it is necessary to finance permanently fixed assets from permanent sources, and temporarily fixed assets from temporary sources. We can talk about financing balance if the balance sheet complies with the matching principle, which is illustrated in the figure below:

TOOLS	SOURCES
Fixed assets	Sustainable resources (equity and long-term liabilities)
Preservation of fixed assets	
Temporary working capital tie-up	Short-term liabilities

Figure 1. Funding balance
Source: own editing

Depending on whether a company adheres to the matching principle or deviates from it, three types of financing strategies can be distinguished^[1]:

- Solid strategy: the company adheres to the principle of maturity matching.
- Conservative strategy: the company finances even part of the temporary asset needs with permanent resources. The advantage is safety, the disadvantage is higher cost.
- Aggressive strategy: The company also uses short-term funds to finance durable assets. It's a risky, but much cheaper solution.

One of the important tasks of the entrepreneur is to raise the funds necessary for operation. In the case of startups or businesses with high growth potential, the need for financing sources is even more significant. Small and medium-sized enterprises (SMEs) are characterized everywhere by low capital availability and limited internal financing options. Their own fundraising possibilities are more limited due to the narrow range of owners and their own accumulation capabilities are also weaker. In addition to their low risk-taking, their external involvement of sources is also limited by the fact that they themselves pose a high risk to their financiers. Although the planning activity of SMEs has improved in Hungary in recent years, planning deficiencies and even the lack of business/financial plans themselves further increase the risk and the limitations of raising funds^[2].

Their ongoing liquidity problems can be traced back to a number of factors. Due to their weak bargaining position, they face long payment deadlines, while their suppliers are less likely to provide them with trade credit. The risk of non-payment by customers affects them much more. They have few customer and supplier relationships, so the loss of even just one customer or supplier can cause serious difficulties for them. They have little equity capital and typically engage in less asset-intensive activities, which does not favor the acquisition of debt resources. The specific transaction costs of obtaining funds are also much more significant for them than for large companies. Another limitation of external fundraising is the lack of transparency, that is, that their activities cannot be seen. The owner, who also plays the role of manager, tries to show the lowest possible pre-tax profit for the purpose of tax optimization. Therefore, financiers treat small business annual reports with caution. The biggest problem that arises when financing SMEs is the lack of collateral^[3]. The aim of the financiers is to minimize their risk, and to this end they require companies to have as much coverage as possible. Most owners can only meet the collateral requirements of credit institutions by involving their private assets.

The capital requirements of start-up or growing businesses are relatively the highest when their income-generating capacity is the lowest. In the initial or growth phase of the company's life cycle, the signif-

icant capital requirement is typically coupled with negative net cash flows, which qualifies these companies as rather risky clients for financiers. In this case, lenders are only willing to provide short-term loans at best, with high financing costs and the inclusion of the owner's assets as collateral. Although, keeping in mind the principle of maturity matching, it would be justified to involve permanent funds for the acquisition and expansion of durable assets.

Informal investors play a significant role in the financing of start-ups. The circle of informal investors is often referred to as 3F or FFF in the literature based on the English term "family, friends and fools". One of the other possible ways of obtaining initial equity capital can be the involvement of venture capital^[4].

For banks, businesses become attractive clients when, thanks to their increasing income-generating capacity, their need for financing is less significant. In the stage of maturity, a bank loan is a realistic financing option and a typical form of financing. Moreover, in a developed capital market, a company can use the tool of bond issuance. In this stage, significant internal resources are also generated (profit and depreciation), so companies no longer necessarily choose external resources.

The purpose of working capital financing is to ensure continuous liquidity, which can be ensured by coordinating income and expenses. A company's immediate solvency can be characterized using a short-term, cash-flow-based financial plan, known as a liquidity plan. From the liquidity plan, we can determine in which period and to what extent there is a lack of funds or a surplus of funds during the course of business, and we can look for solutions to finance the deficit or tie up excess funds.

Bridging the lack of funds is usually the biggest headache, but excessive liquidity is not good either, as it can worsen profitability. By increasing efficiency, the ratio of tied up current assets can be reduced, while cash management reduces costs and improves profitability by determining the optimal level of cash.

To ensure temporary working capital needs, companies mainly use internal funds, commercial loans or finance them with short-term external funds (working capital loans, overdrafts)^[5].

Due to the cyclical characteristic of agriculture, and agriculture within it, the financing of working capital in this sector is even more challenging.

Since joining the European Union and mainly as a result of EU agricultural subsidies, agricultural enterprises have become important clients for commercial banks and more and more financing schemes have appeared specifically for this target group. The spectrum of funding opportunities is further broadened by state interest subsidy and guarantee programs.

12.2 The classification of the types of financing, characteristics of certain financing forms

One of the pivotal points of corporate operation is financing, decisions related to financing. In Europe, credit institutions traditionally provide the corporate sector with short- and long-term funds. In the United States of America, direct funding from the money and capital markets is much more a part of the normal course of business. The source of financing a company can be realized not only from outside, but also with internal sources. We distinguish three types of internal sources:

- profit after tax,
- depreciation (amortization),
- sale of assets.

Among the three forms, the role of the after-tax result is clear. The company operates profitably – we assume that this is not only an accounting result, but also reflected in the cash flow – and instead of paying dividends, it invests the profit back into its operations. The form of financing is unrestricted, it can be used for both current stock and investment financing, and the management of the company decides on the method of use.

The role of depreciation in financing is perhaps less obvious. Fixed assets with a higher value (typically buildings, vehicles, software) cannot be accounted for in one sum as an expense, they must be capitalized and their value must be continuously reduced over the years and accounted for as an expense. From a

financing point of view, the effect of this is significant: When pricing products and services, depreciation can be calculated, costs and revenues can be balanced, so the return on investments is continuous.

A third form of internal financing is the sale of assets. In production companies, the role of tools is emphasized, so their sale is justified when they are exchanged for a better or newer tool. If the purpose of selling assets is to satisfy the demand for working capital, then the operation of the company is not sustainable in the long term.

The role and weight of internal financing is not clear among economists. From the owner's point of view, the goal is to increase the company's value. Properly utilized internal resources – typically unpaid dividends – increase the value of the company, but the fact that the owner can take dividends from his business is also valuable. However, internal financing is not suitable for financing long-term investments, and we must renounce the tax-saving function of debt. The “healthy” capital structure is unique for every company, which is influenced by the scope of activities, positive net present value investment opportunities, as well as the market environment and economic prospects.

There is no uniform, publicly agreed ratio for the development of the appropriate financing structure. In all cases, a balance must be found between company growth and the size of the dividend payment, and the ratio of external sources must be chosen accordingly. Among the external forms of financing, we will review the following:

- bank loan/loan/lease,
- factoring,
- venture capital,
- bond issue,
- issuance of shares.

Of the external sources, the forms of bank financing clearly dominate, typically in the form of loans or credits. We talk about a loan when the requested amount has already been disbursed by the credit institution, i.e. the amount is on the company's account or, in the case of asset acquisition, the seller has received the amount. In case of taking out a loan, the company and the bank agree on a credit line that the company can draw on. For individual investments (e.g. construction), a loan is the most typical form of financing, while for an asset purchase (e.g. a machine line) a loan is the appropriate option. Financial leasing is legally no different from a loan agreement. Operating leasing, on the other hand, is similar to a rental agreement, in the framework of which the asset is not included in the lessee's accounting and the lessee returns the asset at the end of the term. At the end of the financial lease, the asset typically remains with the company. When we hear the word leasing, we primarily think of vehicles, but this form of financing can also be used for production machinery.

Loan financing is a good solution for long-term projects. Of course, it is also possible to finance liquidity problems with a loan (e.g. revolving loan), but in all cases the term of the loan and the purpose of the loan must be harmonized so that the financing methods do not determine the operation of the company, but that the financing needs are adapted to the operation of the company.

Another possible way to solve the temporary financing need is factoring. During factoring, we sell an existing customer account to the factor house, of course in exchange for handling costs and interest. During factoring, we can “bring” the payment deadline to an earlier date, so we get money sooner. Factoring is a popular form of financing these days, there are companies that include the cost of factoring in the pricing of their products and services, because they know in advance that their receivables will be sold. A common objection to factoring is that it assumes a lack of trust between the buyer and the seller. The so-called “silent factoring” provides a solution to this, where the company's partner does not know that his account has been sold^[6].

The traditional meaning of venture capital financing and its implementation in our region differ significantly. In the classic sense, venture capital is private capital that finances start-ups and small companies with high growth potential. During the financing, the company receives capital, in return the venture capital company receives a share of ownership, this capital has no interest, but a so-called exit value is determined. The exit can take place through a buyback by the original owner or a stock market issue. On the other

hand, in Central and Eastern Europe, the state and European Union programs have a significant share of the venture capital market, and the financing of start-ups and small companies is less important, high growth potential is more important.

Financing through the issue of bonds and shares is not considered a traditional form of financing in the region. With both forms of financing, the company reaches the capital market directly, no financial intermediary is necessary, as in the case of bank financing. Bond issuance is similar to borrowing. The company issuing the bond indicates what purpose it needs capital to achieve (it happens that there is no specific purpose), how much capital it needs and how much interest it is willing to pay for it. The issued bonds can be purchased by financial institutions (banks, investment funds, insurance companies, etc.) and private sector players, typically private individuals through some financial service provider. A bond issue is attractive to the bond issuer if it can obtain funds at a lower interest rate than a bank loan. The bond is purchased by market participants if it offers a higher interest rate than other financial products with a similar risk profile. One of the disadvantages of bond issuance is that, due to the high costs, issuance is only economical in large volumes.

Unlike the issue of bonds, the funds obtained during the issue of shares do not have to be repaid, the capital raised in this way is part of the company's equity. Risk capital is also part of equity capital, but there is a planned exit^[7]. Of course, the capital raised without the obligation to repay is not free, the "price" is the transfer of ownership, so the existing owner gives up a significant part of his ownership share and, with it, control. On the other hand, your company is evaluated on a daily basis and your ownership becomes liquid, you can sell it at any time. One of the disadvantages of being on the stock exchange is the high degree of transparency, which has deterred many potentially listed companies from going public. Similar to issuing bonds, listing on the stock market can also be a suitable form of financing in case of a large size, this type of financing is not an option for small and medium-sized companies.

Last but not least, the member loan is also a possible form of financing, which is halfway between internal and external financing. On the one hand, it is external financing, because we keep the liabilities open and the company is burdened with a repayment obligation (in the case of a capital increase, there is no repayment). On the other hand, the existing owners of the company finance the company (perhaps from dividends received from previous years). Technically, it belongs to external financing.

Digitization and FinTech also affect financing and shape trends^[8]. Nowadays, crowdfunding is also becoming commonplace, the different forms of which are close to different traditional forms of financing (e.g. equity-based or lending-based). We can also mention microloans, which are currently primarily available to private individuals. Developments related to blockchain technology are also possible processes in the field of financing. FinTech companies that have grown almost out of nowhere (e.g. Revolut, Wise) are also developing very quickly. These processes make it difficult and encourage the actors of the credit institution system to develop themselves and prefer digital solutions.

12.3 Special issues in the financing of agricultural enterprises

Modern agriculture is capital-intensive, and most of it can only be covered by loans. A drop in prices due to an unexpected drop in demand can cause serious problems. Through the development of sales revenue and income, the risk of production may adversely affect the producer. It is typical of the sector all over the world that producers take out larger loans and encumber their existing assets with mortgages. The result of this is that, as a result of unfavorable economic conditions, not only the economy goes bankrupt, but also the producer (farmer) is placed in an existentially threatened position. The willingness of banks to extend loans is also significantly influenced by the level of uncertainty associated with the activity in question.

One of the characteristic features of agricultural production is the long time of the product production process. (10 months for winter wheat, 18 months for calves, 7-8 months for slaughter pigs). The economic effect of this is that switching to another production process is time-consuming. A further economic consequence is that the economic program must be drawn up and recorded significantly earlier before the start of the production process.

A third economic consequence is that the payback period of investments and current assets is significantly longer than in the majority of industries. These characteristics are *factors influencing the maturity of loans, the size of the interest rate, and taxation as necessary*.

Due to the relatively long duration of production processes, agriculture also adapts relatively slowly to market conditions. By simply changing the amount of work, it is not possible to speed up the production process and multiply the production processes as in industry. Due to the relative length of the agricultural production process, the long-term economic objective and business comes to the fore^[9].

Due to seasonality and the production cycle, the disadvantage of the business – even with a multilateral production structure – is the additional cost resulting from the interruption of income continuity. As long as the production process lasts, the costs (materials, wages, etc.) must be financed. Obviously, if this is done with a loan, the interest is an additional cost. The coordination of sectors with different production cycles and the multilateral production structure mitigated the disadvantage arising from the specific nature of agricultural production (e.g. the continuous income of dairy farming covers the costs of wheat production or pig fattening until the payback).

The peculiarity of the cycle, however, has significant agrarian political consequences. Farmers are not always able to cover their expenses during the production period and their livelihood until sales from their cash reserves. One solution could be a down payment from the customer. However, there is a need for a credit system (green loan, mortgage loan, other short-term low-interest loans) that can resolve this issue. Another solution is the payment of subsidies.

12.3.1 The practice of conventional financing by banks in the agricultural sector

The financing of agricultural enterprises is becoming more and more attractive for commercial banks, as more and more financing schemes are appearing, which almost completely eliminate the risk of the outsourced financial institution. While in the past, only the results of the enterprises served as “collateral” in addition to overdrafts and liquidity loans, *now temporary funds are provided at the expense of cash flows that can be said to be fixed, such as area-based subsidies or goods placed in public warehouses*.

Enterprises are characterized by low capital availability, risk avoidance and refraining from external sources. The financial resources of SMEs are usually based on the owner’s assets. This greatly restricts their growth opportunities and productivity. The subsidy policy of recent years has largely shifted the financing of businesses towards non-refundable subsidies from the cohesion funds of the European Union^[10]. This significantly *distorted market decisions and investment structure*.

When analyzing external financing and indebtedness, it is particularly important to take into account the seasonality of the agricultural sector and the difference between the farming year and the calendar year. According to the opinion of many agricultural experts, *the current practice of credit institutions does not tolerate the above characteristics of agriculture. The end-of-year data of agricultural enterprises usually do not reflect the typical values of the agricultural enterprise, they are often worse from a management point of view than the mid-year data, which are only very rarely taken into account by the current accounting and crediting practice, since they usually work with end-of-year data^[11]. The sowing-harvest and purchasing-selling cycle of plant cultivation can differ significantly during the year, as a result of which different opinions can be formed about the same agricultural enterprise at different times*.

2006-2015. the level of indebtedness of individual farms was low, equity accounted for 78.3% of all resources on average. Typically, smaller, mainly individual enterprises have a higher share of equity in relation to the total balance sheet, while the amount of debt stock of cooperative enterprises is more significant, in their case the share of equity is only 63.9%. One of the main reasons for the high equity ratio is that in the 1990s, the realized income of the majority of agricultural enterprises was lower than the interest paid, so in case of higher indebtedness, the losses suffered by the owners are increasing. On the other hand, in the low interest rate environment of the 2010s, this remaining capital structure stands in the way of developments and investments. Those who develop only organically from a given year’s results will be at a competitive disadvantage at the domestic and international level, *since the increase in results resulting from increased efficiency these days can more easily be higher than the relatively low loan interest rates*.

A risk management tool that helps agricultural producers insure against extreme environmental and weather effects is essential for building effective long-term bank financing. This tool must be adapted to the characteristics of the agricultural economy^[12].

On the other hand, the high ratio of short-term liabilities is disadvantageous in the case of the agricultural economy, due to the relatively higher interest rates, and the shorter term than the production cycle carries an interest rate environment and liquidity risk. Here, the basic tendency is revealed, according to which the credit institutions - basically due to the poverty of their long-term sources and the additional risks occurring in the longer term - were reluctant to grant long-term loans. Furthermore, despite the many preferential loan schemes, the banks still use the simplest solutions to manage risks, so they set high risk premiums and ask for unrealistic coverage from the players in the sector.

12.3.2 State involvement in the financing of agricultural enterprises (state-subsidized loan programs)

The purpose of preferential financing schemes is primarily to give agricultural sectors with below-average profitability (mainly animal husbandry and certain horticultural sectors) a chance for development and breakthrough with the help of loans whose low interest rates also ensure the return on investments in the case of agriculture and the food industry, on the other hand provide long-term working capital to the capital-deficient sector. In Hungary, the Ministry of Agriculture (FM) tries to ensure preferential financing of the sectors basically with preferential loan schemes operated by the MFB, as well as with other agricultural financing programs operating with budgetary interest and/or guarantor fee subsidies, which were supplemented by the Growth Loan Program launched in 2013^[13].

Relying on this discounted toolkit, agricultural and food industry enterprises could benefit from the following loan programs:

1. MFB loan programs

The common element of the agricultural financing programs operated by MFB Zrt. is the sectoral orientation, on the basis of which it is ensured that the funds of the program can only be used by the targeted group of borrowers for the purpose defined in the conditions, and the preferential interest charged by MFB Zrt. it is based on the difference in the market interest rate of the HUF. The credit programs charge foreign currency interest on HUF loans, and if MFB Zrt. incurs losses, the central budget compensates the bank for these losses based on an exchange rate guarantee agreement. In cooperation with the Ministry of Agriculture, MFB Zrt. launched three loan programs in 2015 – MFB Agricultural Current Asset Loan Program 2020, MFB TESZ Current Asset Loan Program 2020, MFB Food Current Asset Loan Program 2020. With its working capital loan programs, MFB Zrt. basically targeted three segments of agriculture: agricultural production (especially increasing the competitiveness of animal husbandry), providing working capital loans to fruit and vegetable producer groups and producer organizations, and increasing the competitiveness of the food industry. The loan programs are considered to be one of the lowest-interest, state-supported agricultural working capital loan schemes available on the Hungarian market.

2. Discounted EXIM constructions

The goal of Magyar Export-Import Bank Zrt. (Eximbank) and Magyar Exporthitel Biztosító Zrt. (MEHIB) is to provide efficient financing and insurance schemes for Hungarian exporters. The bank and insurance company, which operates within an integrated framework, performs its tasks in a joint organization and appearance, under the name EXIM. EXIM strives to cover the entire vertical of export activities from procurement to production to sales process support. With its export pre-financing products, Eximbank provides financing directly to exporters for the period prior to export performance, and indirectly, through credit institutions, in the form of refinancing loans. Post-export financing means the period that sets the export performance in stone, creating an opportunity for the exporter to provide his customer with deferred payment terms, while receiving the consideration immediately after the performance. Short-term loans have a term of 6-24 months, medium/long-term loans have a term of 2-5 years.

EXIM's export promotion loans were primarily used by large and medium-sized enterprises. Within the export promotion loans of large enterprises, long-term working capital loans dominated, but the proportion of investment loans also increased. Among medium-sized enterprises, the share of long-term working capital loans was outstanding. Small businesses primarily took out short-term working capital loans, while micro-enterprises mainly used investment loans.

3. Széchenyi Card Overdraft

Free-to-use current account loan for companies working in the agricultural sector, with preferential conditions, state interest and guarantee fee subsidies.

Advantages:

- state interest and guarantee fee subsidy,
- even without real estate collateral,
- fast and simplified credit assessment,
- can be requested at more than 200 points in the country,
- can be used for cash withdrawals and purchases by bank transfer or bank card.

The Széchenyi Card Program, which has been available to agricultural enterprises since 2011, also serves to make the short-term financing of Hungarian agriculture more stable. The Agrár Széchenyi Kártya (ASZK) Overdraft provides social enterprises, cooperatives and individual farms/enterprises (primary producers, family farms) working in the agricultural and food industry with overdrafts on preferential terms, with state interest and guarantee fee subsidies. Within the framework of the program, the Ministry of Agriculture continues to provide an annual interest subsidy of 4 percentage points and an 80 percent guarantee fee subsidy. As a result, the actors of the agrarian sector can obtain funds more easily with cheaper loans.

4. Growth Loan Program

NHP Hajrá is a new sub-program of the Magyar Nemzeti Bank's Growth Loan Program, which aims to help micro-, small- and medium-sized enterprises obtain loans to finance their new investments and operations, and to help them overcome the economic difficulties caused by the coronavirus epidemic. Within the framework of a new state-supported loan program with a fixed, maximum interest rate of 2.5% until the end of the term, it is also possible to apply for an investment loan, finance working capital, pay wages, modernize or replace an existing loan.

5. State involvement in the financing of agricultural enterprises (state-subsidized loan programs) in Croatia

From September 2019 onwards OTP, Privredna and Zagrebačka Bank as intermediaries for the implementation of the RDP Investment Loans for rural development provide investment loans for rural development. The product is based on a shared risk model whereby the 5. State involvement institution provides the part for 50% of the loan at 0% interest rate and the commercial intermediary bank adds the remaining 50% of the loan at an interest rate previously agreed between the loan applicant and the bank, which depends mostly on risk factors and collateral offered. The minimum loan amount is fixed at EUR 5000 and each credit could be disbursed within a period of 18 months after its approval. Grace periods are also foreseen, up to three years (five years for investments in orchards/vineyards) for eligible costs as indicated in specific sub-measures of the RDP. Receiving of applications for funding started in September 2019 and it is yet early for providing data^[14].

12.4 Specific risks in the agriculture and in the food industry and their management with financial instruments (insurances)

Among the agricultural risks, the weather-related risk is of particular importance, as the probability of extreme weather conditions increases every year as a result of climate change. A harmonized agricultural risk management system has not yet been developed in the European Union. Therefore, Common Agricul-

tural Policy I. and II. pillar and in accordance with the regulations governing state subsidies, individual member states use different risk management tools.

Yield fluctuations related to extreme weather are much larger in Hungary than in other Western European countries, which is why Hungary uses a wide range of risk management tools. In this chapter, among the agricultural risk management techniques, the possible methods of crop insurance and the intensity of state subsidies related to them are presented^[15].

1. Subsidies related to crop insurance in the European Union

Support for agricultural risk management first appeared in the European Union's Common Agricultural Policy in 2007. In the beginning, harvest damage mitigation was available in the fruit and vegetable sectors and in the national wine programs. After that, Article 68 of Regulation 73/2009/EC extended the possibility of damage mitigation to all agricultural sectors from 2008, but only France, Hungary, the Netherlands, and Italy applied it. In addition to the development of the damage mitigation system, since 2012 in Hungary, support for insurance premiums has also become available to agricultural producers^[16]. Hungary used this fee subsidy in the period 2012-2014 based on Article 68 of Regulation 73/2009/EC, and in 2015 it was financed by the central budget as a group exemption subsidy. From 2016, farmers can apply for rural development support based on the Rural Development Program^[17].

The Common Agricultural Policy II. In addition to the support of the mutual risk management fund and premium support for agricultural insurance, the income stabilization tool appeared as a new element in its pillar. The analyzes for the period 2014-2020 show that Italy is the only member state that will use all three instruments, all of which account for more than half of the resources planned at the EU level (1,590.8 million euros). Stabilizing the income of Hungarian agricultural producers is crucial from the point of view of agricultural production. In addition to the insurance premium subsidy, Hungary will introduce the income stabilization tool in the future, with which the risk management system will be extended to livestock producers as well. The latter tool will provide support to livestock farmers who suffer a loss of income of over 30 percent^[18].

In the 2014-2020 period, Hungary earmarked 95.3 million euros for agricultural risk management subsidies provided on the basis of rural development programs. Only Italy (1,590.8 million euros), France (600.7 million euros) and Romania (200 million euros) planned more than this amount, of which Romania is the only country that does not use the insurance premium subsidy tool^[19].

2. Crop insurance schemes in Hungary

Agricultural insurance accounts for 2.85 percent (HUF 10,956 million) of non-life insurance premiums in Hungary, of which 87 percent is the insurance amount related to agricultural crops. Currently, in Hungary, producers can choose from 4 types of crop insurance schemes to manage the risks inherent in crop cultivation.

In the case of the so-called traditional crop insurance scheme, the insurance companies reimburse even in the event of a 10 percent drop in yield. In this case, the farmers' share of the risk is small, so no state support can be granted to them.

In accordance with the construction of subsidized insurances determined on the basis of the rural development program, each insurance company develops the scope of premium-subsidized insurance offers. An insurance scheme is eligible for support if the insured event is associated with a decrease in yield of more than 30 percent per plant crop at plant level. So, in this case, the farmers' risk-taking covers the 30 percent loss of yield, for which they are entitled to state support. Comparing subsidized and non-subsidized schemes, it can be concluded that the essential element of the subsidy lies in the fact that the risks assumed by the insurance companies are lower. Thus encouraging insurance companies to take risks. In addition, in exchange for state support, the farmer must undertake to waive the claim for damages up to the extent of a 30 percent loss of yield.

The state-supported insurance schemes can be classified into 3 groups ("A", "B", "C") based on different risk assumptions and crops. For the financing of Rural Development Program No. 17.1.1 ("Subsidy for agricultural insurance premiums"), Hungary has set a budget of HUF 23.7 billion until 2020. The support framework

covers all three premium-subsidized insurance plans (“A”, “B”, “C”), however, the support rate differs for each plan. In the framework of the Rural Development Program, the financial settlement of the fee subsidy is done afterwards^[20]. Therefore, as a first step, insurance companies create insurance plans that comply with the regulations of the support program (“A”, “B”, “C”). After that, the producer selects the types of risk for which he wants to take out insurance, and then they determine the construction suitable for his sowing structure. After the conclusion of the contract, the producer can indicate the type of subsidized insurance scheme (“A”, “B”, “C”) in the uniform area-based support application for each plot. Based on the submitted application, the Agricultural and Rural Development Support Department keeps records and checks the correctness of the data. The condition for eligibility for the subsidy is that the producer pays the insurance premium in full to the insurance company by September 30 of the given year. Both parties must inform the Department of Agricultural and Rural Development Support about the fact of equalization. The financial arrangement of the support takes place after the payment of the fee for the entire year. The value of the subsidy is a fixed proportion of the insurance premium, which varies by type. Its maximum rate is 65 percent, but due to the annual subsidy frame, the actual rate may differ from the planned one. A decrease in the intensity of “B” and “C” type insurances, the reason for which is the different degree of risk-taking associated with the scheme.

3. Plant insurance risk elements and fee calculation

Plant insurance plans can be distinguished based on the insured risk elements. It can be linked to ice damage, flood damage, frost damage, storm damage and sand damage for insurance events, both separately and combined. In Hungary, there is a particularly high probability of frostbite damage, which mainly occurs during the growing season of cultivated plants^[21].

Insurance companies classify individual plants into different risk classes. Thus, for example, the lowest risk is green fodder, medium risk is winter wheat and high risk is vegetables and fruits. The insurance company assigns fixed rates to these risks (the higher the risk, the higher the rate).

When calculating the premium, the insurance companies use the data specified by the producer. The producer must indicate how much yield he expects and what unit price he wants to sell the product at maturity. The so-called insurance amount is formed as the product of this expected yield and the market price, i.e. the producer has this amount of insurance. This insurance amount is weighted by a rate (%) determined based on the risk classification of the plant. Thus, in the end, the insurance premium to be paid by the producer is formed as a product of the premium and the insurance amount. The rates are in line with the probability of occurrence of weather hazards in Hungary, as the insurance company charges the highest multiplier in the case of ice damage that poses the greatest risk. It is somewhat lower in the case of storm damage, and a negligible fee is associated with fire damage.

4. Types of subsidized crop insurance

Type “A” plant insurance provides joint coverage for all risks, which includes insurance events such as hail damage, drought damage, flood damage, frost damage, cloud damage, storm damage and fire damage. In these constructions, those arable crops that have a significant sowing area in Hungary (corn, wheat, autumn cabbage rape, barley, sunflower) can be insured. The other two types contain fewer elements of danger than this extensive coverage.

In the case of type “B” and “C” insurance schemes, only ice damage, storm damage, winter frost damage and fire damage are considered insured events. In the case of types “B” and “C”, the range of insured events is the same, only the range of insurable plants differs. In addition to field crops, a significant part of plantations and vegetable crops can be covered with type “B” insurance. Type “C” is available for all plants that cannot be provided in “A” or “B” construction.

12.5 Alternative financing models in agriculture

We have seen and still see well-functioning units, communities, and societies, the transformation of these continuous changes can be easily explained by technological progress, but the immoderate pursuit of indi-

vidual interests is less so. Not only in agriculture, but in many other economic and management areas, we can find the emergence of the need for sharing and cooperation.

The development dynamics of the agricultural and food sector is even more unique due to its exposure and characteristics. The agricultural and food economy is the basis of our past, our present and our future, which without community and cooperation turns into meaningless land use, which only serves to increase the wealth of the capitalists (owners)^[22]. The development of technology brought with it a significant reduction of the workforce within the sector and the organization of collaborations exclusively on a market basis. According to a Hungarian survey, three reasons for staying away from cooperation can be identified in the sector: “Fear of commitment, dependence”; “Excessive view of the organization on the individual economy” and “Previous bad experience”.

At the same time, we feel that the lack of cooperation results in economic problems such as unbalanced income distribution, market dominance independent of expertise and competitive disadvantage.

Can we find a good solution to eliminate this? In fact, we are looking for a model that is able to forge an advantage from cooperation for all actors and, by prioritizing common interests, can bring about the maximization of individual benefits.

As a practical example, we have dozens of community-based organizations in Hungary. Today, community farming is a personal collaboration between producer and consumer, in which the risks, responsibilities and fruits of farming are jointly shared in a regulated manner in a long-term agreement.

In practice today, this means that the farmer undertakes to produce for the members of the community throughout the year, while the customers undertake to receive the crops in exchange for a flat fee. Designing and financing the system is a big challenge from the part of the participants. However, nothing proves its importance better than the fact that, from 2017, substantial amounts of support became available for the development of the systems.

Let’s review the factors that form the basis of today’s collaborations.

12.5.1 Community farming

The literature links the emergence and rapid development of the sharing economy to the 2008 global financial crisis^[23] and named the following four factors that drive the development of the sharing economy (Figure 2):

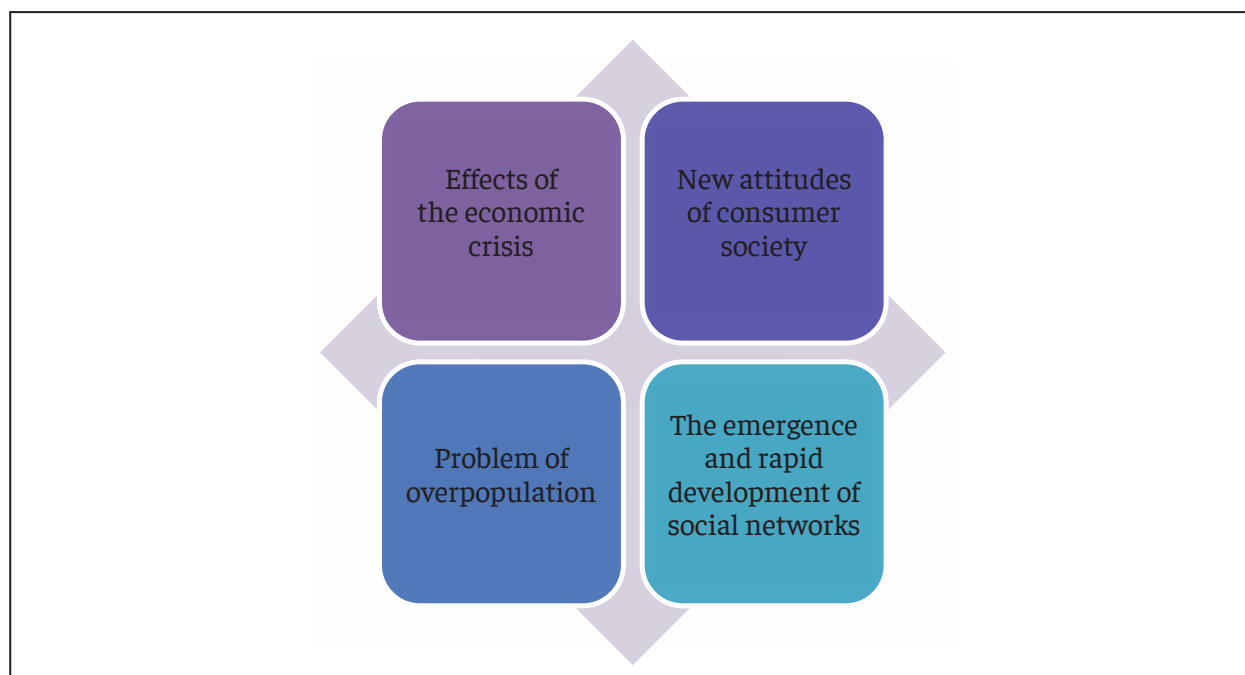


Figure 2. Factors driving the creation and development of the sharing economy
 Source: Gansky (2010) following Kapovits (2016)

No one disputes the *raison d'être* of the factors, but it is difficult to identify their meaning. Maybe the XXI. The reason for the development and spread of the sharing economy can be found among the achievements and events of the 20th century, which can also be found in the definitions of the community economy.

The sharing economy is a business model that is based on the sharing of resources between individual players, and they access these through peer-to-peer services. The essence of the phenomenon can be understood in the fact that those tools and assets whose utilization is inadequate or not maximal become salable resources. It is based on C2C (customer to customer), i.e. a sales chain established between consumer and consumer, where the aforementioned goods and services are shared by consumers^[24, 25].

In another formulation, the community economy can include four types of activities: reuse of products, better utilization of fixed assets, exchange of services and sharing of productive assets. In essence, it aims at the accessibility of unused resources, which includes information.

Based on the numerous definitions and good working examples, the characteristics of the community economy can be summarized as follows:

- Users share their resources.
- On-demand, i.e. the user can satisfy his consumption needs through the services – when they arise, he pays for the use depending on it.
- The users are members of a community, the degree of trust is high even without acquaintance.
- Sustainability – through cooperation and sharing, cost reduction can be achieved, which, by reducing the demand for new products, also results in the reduction of environmental pollution caused by production.

What makes the cloud organization created along the lines of community interests work? Digital platform providers match supply and demand for a fee. The service provider does not appear as an actor during the conclusion of the business, thus it is possible to conduct on-demand and P2P transactions. Among social services, the user pays for the use of the device and there are no maintenance costs. The basic services can typically be used for free or with a fixed monthly fee, in connection with which premium functions can be requested for a certain surcharge from the individual digital platform providers. The continuous transformation and development of the forms and spaces of communication naturally gives a changed interpretation to the community economy. Social networking sites, e-commerce, and chatbots all brought the development of new business models primarily in the last 10 years. P2P type transactions organized on the basis of community management can also be used very well to establish alternative retail channels in the food market^[26].

How can agriculture and the sharing economy be connected? Agricultural collaborations and the sharing economy are not tied to a specific form, rather the technology for information exchange is necessary for (more) efficient use of unused resources. We can find many examples of this in the cooperation of local communities and the philosophy of operating local funds. When learning about domestic and international good practices, such as the Swiss WIR or the German Chingauer, it is actually the exploitation of local resources and potentials that drives economic actors, resources and the local money system^[27].

12.5.2 Cooperative models

Today, around 1 billion members are registered in the cooperative movement worldwide. According to ICA's estimate, cooperatives directly or indirectly play a role in the livelihood of nearly 3 billion people, and are of decisive importance in the economic and social life of local communities^[28].

In the period following the regime change, cooperatives lost their credibility to a significant extent (in 2003, the number of cooperatives was over 2,000, but in 2017 only 574 agricultural cooperatives were active), so that a new word had to be found for the names of any cooperations that might be created, so that they are not create a sense of collective farm-model cooperatives in society or in the members participating in the cooperation^[29].

From the point of view of cooperative theory, experts name three market failures. These are oligopsony, information asymmetry and limited bargaining power. In the case of oligopsony, the small number of buyers present on the market worsens the producer's bargaining position. If the producer is faced with asymmetric

information, he cannot enforce the quality differences of the products in the price. Limited bargaining power arises in the case of typically specific assets, investments, and the perishability of products. In this case, the producer is also forced to accept the price offered by the buyer. In reducing the risk caused by these factors, cooperative cooperation plays an important role and vertical integration represents outstanding efficiency, because in this case production, processing and commercial activity are also in one hand^[30].

Knowing the particularities of the sector, therefore, in this type of cooperation:

- The frequency of transactions helps companies to realize transactions within the framework of internal coordination by establishing a management structure.
- The characteristics of production factors can encourage internal coordination between companies. The characteristics of the physical and intellectual production factors appearing in agriculture have a prominent role in the appearance of transaction costs and their extent. The tools related to carrying out agricultural activities (e.g. processing, soil cultivation, transport) can be very special, so there is only a specific demand for these tools, i.e. their market is special.
- Uncertainty, such as exposure to weather, is present to a large extent, which appears as a transaction cost.

During the past 30 years, the agricultural and food trade system of Central and Eastern European countries has undergone significant changes. The previous, mainly community- and state-owned structures were suddenly replaced by sales systems basically organized on a market basis. Compared to Western countries, this change took place much faster and more aggressively, which posed a significant challenge to domestic actors.

Privatization and the disintegration of the previously existing protection structures gave way to the rise of mainly foreign-owned retail and discount chains. This can be attributed to the fact that during this period there was a strong price competition among the market players, with which many companies could not keep up. This favored the expansion of large, capital-rich foreign multinational companies and greatly contributed to the development of the current sales structure. In the period that has passed since then, there have been several attempts to create purchasing networks and cooperatives bringing together farmers (e.g. HANGYA, TÉSZs, etc.) The attempts have often failed, since the retail system was no longer organically organized as a result of privatization can be attached to these structures. Without adequate sales channels, the farmers became vulnerable to the processors and large food chains, which in the meantime were mostly in foreign hands.

51% of Hungarian business units do not participate in any kind of cooperation, despite the fact that both the European Union and Hungarian decision-makers have become aware of the importance of the creation of cooperatives in improving the ability of producers to assert their interests. organized cooperation initiative, which could be a long-term solution to the problems of small producers^[31].

12.5.3 Local money

It is difficult – perhaps impossible – to give an accurate estimate of the range of local currencies operating around the world. The vast majority of these are present in the most economically and financially developed regions, primarily in Europe and North America.

The biggest advantage of the introduction of local money can be seen as the boom in local trade and economy, and the rise in the economic performance of the given regions. Typically, local money is backed by a stable economy and a strong banking background, and its use consolidates local production and consumption, thus helping to keep local resources in the region.

Issuing local money means that we issue local money backed by collected money. Local money is an economic and not a legal term. The scope of community funds is a broader concept. The key to their operation is keeping the interests of the community in mind, in which money only plays an intermediary role. The economic actors see the satisfaction of local needs as their primary task, and their customer-supplier relationships are also predominantly outside the community. In fact, it means the creation of a settlement system in which local currencies only partially fulfill the function of national currencies^[32].

The value measurement function, which is the expression of the value of a good or service, is fulfilled in all local monetary systems. Territorial limitations may arise, i.e. local funds can only be used in the specified community and at specified acceptance points. The traffic tool function, which is supposed to carry out the exchange, is also subject to territorial and voluntary limitations. No one can be obliged to accept local money, nor to pay debts solely in this, as one of the basic requirements of these systems is the voluntary nature. The payment instrument function - the temporary or permanent separation of goods and money circulation - is technically possible in all systems.

The limited nature of local money and its economic importance are mainly shown in the function of a means of accumulation. The essence of these systems is that they were not basically created to generate savings, but, on the contrary, to boost traffic at the local level^[3].

Additional functions are also attributed to community funds, such as money circulation constraint, territorial interest protection, community wealth accumulation, etc.

Let's take a look at two European success stories from among the many functioning community money systems:

One of the best known is the WIR (Wirtschaftsring) system, which has been operating in Switzerland since 1934. WIR Bank, which was established in 1934 as WIR Cooperative and today manages the world's most successful complementary currency system in Switzerland. The WIR system was primarily aimed at stimulating trade between small and medium-sized enterprises. Its importance is confirmed by the more than 60,000 partner organizations that are active members of the system. Its importance is also shown by the fact that, in addition to the Swiss franc, their national currency also has its own currency code (CHW).

The essence of WIR is the "mutual settlement circle": in exchange for the products and services put on the market, the participants receive credit from the other members with which they can buy the products and services of other members. The participants who trade with each other form a kind of debtor community, where the members of the community stand in for each other's negative balance.

WIR Bank, as a third party keeping records, offers companies an additional currency in addition to the national currency. The WIR money substitute exists only in the form of currency and is issued when a WIR investment loan is granted, which can even be a structure consisting of a Swiss franc and WIR.

WIR loans in local currency only bear minimal interest, as WIR deposits are interest-free, so the bank does not incur any expenses. From the low loan interest, the bank can cover its administrative costs, the necessary reserve formation, and the dividend to be paid to members. Another consequence of the lower interest rate, in addition to lower burdens, is that it provides a higher turnover rate for the WIR compared to the Swiss franc. The "WIR franc", which is equivalent to the Swiss franc, is not suitable for paying taxes and public services, but it can be used for business expenses, capital investments, employee payments and personal expenses.

Chiemgauer was established primarily for non-profit purposes, primarily to support education and research. When operating Chiemgauer, environmental protection and research are priorities, not economic interest. Chiemgauer – in contrast to WIR – is a redeemable money substitute, so every Chiemgauer is backed by euros.

Accordingly, the coupon system was created and issued in the form of a non-profit organization. The aim of the initiative is to create an educational area that contributes greatly to the sustainable development of the region through special projects such as student companies, trainings, professional consultations, events and information. Through this, the concepts of environmental awareness, knowledge and economic benefit are intertwined for the people living in the region.

Bibliography

- [1] Brealey, R. A., Myers, S. C., Allen, F., Mohanty, P. (2018). Principles of Corporate Finance, 12/e (Vol. 12). McGraw-Hill Education.
- [2] Borszéki, É. (2001) Az agrárágazat finanszírozásának aktuális kérdései az EU csatlakozás tükrében. Előadás XLIII. Georgikon Napok Keszthely, 2001.
- [3] Mura, L., Buleca, J. (2012) Evaluation of financing possibilities of small and medium industrial enterprises. *Procedia Economics and Finance*, 3, 217–222. [https://doi.org/10.1016/S2212-5671\(12\)00143-8](https://doi.org/10.1016/S2212-5671(12)00143-8)

- [4] Durgula, J., Pataki, L. (2016) The startup ecosystem of Hungary in international context. In: Nowicka-Skowron, M., Illés, B. Cs., Tózsér, J. (szerk.): Contemporary issues of enterprise management in Poland and Hungary. Szent István Egyetemi Kiadó, Gödöllő, pp. 193–204.
- [5] Rajczi, A., Wickert, I. (2017) Examination of different sized agricultural enterprises operating profitability In: Szendrő K., Barna R. (szerk.) Abstracts of the 6th International Conference of Economic Sciences. Kaposvár University, Faculty of Economic Science, Kaposvár. p. 47.
- [6] Klapper, L. (2006) The role of factoring for financing small and medium enterprises. Journal of banking & Finance, 30(11), 3111–3130. <https://doi.org/10.1016/j.jbankfin.2006.05.001>
- [7] Klonowski, D. (2006) Venture capital as a method of financing enterprise development in Central and Eastern Europe. International Journal of Emerging Markets, <https://doi.org/10.1108/17468800610658325>
- [8] Kumar, K. (2018) Impact of Digitalization in Finance & Accounting. Journal of Accounting, Finance & Marketing Technology, 2(2), 1–9. <http://management.nrjip.co.in/index.php/JAFMT/article/view/242>
- [9] Kerek, Z. (2004): A mezőgazdasági társaságok hitelezési és finanszírozási problémái, megoldásának lehetőségei. IX. Nemzetközi Agrárökonómiai Tudományos Napok. 2004. március 25–26. Gyöngyös. CD-kiadvány.
- [10] OVIEW OF CAP REFORM 2014–2020 (2013) Agricultural Policy Perspectives Brief, http://ec.europa.eu/agriculture/sites/agriculture/files/policy-perspectives/policy-briefs/05_en.pdf
- [11] Horváth, J. (2017) Agrárgazdaságtan És Vállalatgazdaságtan. SZTE MGK, Hódmezővásárhely.
- [12] Bencze, Sz., Kiss, I. (2012) A kedvezményes hitelek szerepe a mezőgazdaság finanszírozásában, Hitelintézeti Szemle, 2012 (augusztus), 25–32.
- [13] Balog, Á., Matolcsy, Gy., Nagy, M., Vonnák, B. (2014) Creditcrunch Magyarországon 2009–2013 között: egy hiteltelen korszak vége? Hitelintézeti Szemle, 13(4), 11–34.
- [14] EIB 2020: European Investment Bank Financial needs in the agriculture and agri-food sectors in Croatia June 2020
- [15] NAK (2016) Harmadával nőtt a támogatott agrárbiztosítások összege, <https://www.nak.hu/agazati-hirek/mezogazdasag/146-noveny-termesztes/92887-harmadaval-nott-a-tamogatott-agrarbiztositasok-osszege>
- [16] VP3-17.1.1-16-Mezőgazdasági biztosítás díjához nyújtott támogatás pályázati kiírása, <https://www.palyazat.gov.hu/vp3-1711-16-mezogazdasgi-biztositas-dijhoz-nyujtott-tmogats>
- [17] Kemény, G., Varga, T., Fogarasi, J., Kovács, G., Tóth, O. (2010) A hazai mezőgazdasági biztosítási rendszer problémái és továbbfejlesztési lehetőségei. AKI, Budapest. (Agrárgazdasági Könyvek)
- [18] Lentner, Cs. (2011) A pénzügyi stabilitásért. Magyar Hírlap online, 2011. 02. 25.
- [19] Bardaji, I., Garrido, A. (2016) Research for Agri-Committee-State of play of risk management tools implemented by member states during the period 2014-2020: National and European frameworks, Research Centre for Management of Agricultural and Environmental, [http://www.europarl.europa.eu/RegData/etudes/STUD/2016/573415/IPOL_STU\(2016\)573415_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/573415/IPOL_STU(2016)573415_EN.pdf)
- [20] Marselek, S. Takácsné György, K. (2011) A vidék fejlesztésének stratégiája. Gazdálkodás, 55(3), 251–257.
- [21] Magyar Biztosítók Szövetsége (2017) Magyar Biztosítók Évkönyve 2016, <http://www.mabisz.hu/images/stories/docs/publikaciok/evkonyv-2016-magyar.pdf>
- [22] Sarudi, Cs., Horváth, P., Bertalan, P. (2016) Magyar vidékfejlesztési programok és élelmiszertermelés. Élelmiszer, Táplálkozás és Marketing, 12(2), 23–28.
- [23] Osztovitcs, Á., Kőszegi, Á., Nagy, B., Damjanovics, B. (2015) Osztoznak, vagy fosztoznak? A sharing economy térnyerése, PricewaterhouseCoopers Magyarország Kft 2015, letöltve: 2018.04.14. https://www.pwc.com/hu/hu/kiadvanyok/assets/pdf/sharing_economy.pdf
- [24] Eckhardt, Giana M., Bardhi, Fleura (2015) The Sharing Economy Isn't about Sharing at All, 2015. letöltve: 2018. 04. 20. <https://hbr.org/2015/01/the-sharing-economy-isnt-about-sharing-at-all>
- [25] Parragh, B. (2016) Versenyképességi kihívások és lehetséges gazdaságpolitikai válaszok a sharing economy világában, Polgári Szemle, 12(4–6).
- [26] Balyuk, T., Davydenko, S. (2019) Reintermediation in FinTech: Evidence from Online Lending. In: Cotter, J. (ed.) 31st Australasian Finance and Banking Conference 2018, Michael J. Brennan Irish Finance Working Paper Series Research Paper, pp. 18–17. <https://dx.doi.org/10.2139/ssrn.3189236>
- [27] Varga, J. (2017): A Chiemgauert, mint sikeres helyi pénz működése. Közép-Európai Közlemények, 10(2), 91–100.
- [28] Moizs, A. (2019) A szövetkezeti hitelintézetek Magyarországon. In: Kovács, T., Szóka, K., Varga, J. (szerk.) Pénzügyi Intézményrendszer Magyarországon: Soproni Egyetem Kiadó, Sopron. pp. 187–211.
- [29] Takács, I. (2017) A mezőgazdasági együttműködések és a Sharing Economy, In: Szabó, G. G., Baranyai, Zs. (szerk.): A szövetkezés-együttműködés akadályai, feltételei és fejlesztési lehetőségei a magyar élelmiszergazdaságban, Agroinform Kiadó, Budapest, pp. 291–320.
- [30] Dudás, Gy., Fertő, I. (2008) A bizalom hatása a szövetkezeti tagok teljesítményére és elégedettségére a ZÖLD-TERMÉK termelői értékesítő szövetkezetnél. Gazdálkodás, 52(23. különszám) 49–55.
- [31] Béza, D., Csákné Filep, J., Csapó, K. Csubák, T. K., Farkas, Sz., Szerb, L. (2007) Kisvállalkozások finanszírozása. Perfekt Kiadó, Budapest.
- [32] Sárdi, G., Varga, J., Parádi-Dolgos, A. (2012) Helyi pénzek, helyi célok. I. Alternatív finanszírozási stratégiák Tudományos Konferencia, Sopron, 2012. okt. 3.
- [33] Gál, V., Parádi-Dolgos, A. (2011) A helyi pénz és a pénzfunkciók kapcsolata? In: Lázár, E. (szerk.) Gazdasági és üzleti kihívások a Kárpát-medencében. Csíkszereda