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How to Improve a Farm Financial Management? The Lesson from Poland

Abstract: *There are some logical connections between financial results (as some kind of proxy for 'outcomes' of financial management) at farm level and the income situation of the agricultural sector, in general. The main aim of this paper was to present selected challenges from the perspective of improvement of farm financial management in Poland. Multifaceted aspects for farm financial management in Poland were indicated. Key elements leading to a significant improvement of farm financial management were identified (within a proposed conceptual framework). Improvement of farm financial management as a long-term process (both at farm and sectoral levels) should concentrate on four components that are quite closely related to each other, namely: (1) human and social capital on rural areas, (2) institutions, (3) regulations, (4) financial products. Particular attention should be paid to providing reliable data for further processes of financial management. Thus, there is a strong need for promoting systems of agricultural accounting. Furthermore, institutional infrastructure may substantially affect popularisation techniques and tools for financial management at the farm (e.g. tools, based on some FADN solution, such as Individual Farm Report with additional report).*

Keywords: *agricultural finance, financial management, farm, financial analysis, FADN.*

Agriculture is treated as a very risky sector. As Kay, Edward and Duffy (2012, p. 31) convincingly state “the unpredictability of the production process is unique to agriculture”. Economic and financial results of farm households may strongly fluctuate as a result of many factors, including both exo- and endogenous ones. Barry (2003, p.2-3) underlines some of ‘the sector’s unique characteristics’: (1) ‘close linkages between the household and business’ (based on family-sized operations); (2) a ‘relatively high capital intensity’; (3) ‘non-depreciability of farm land’, and, consequently, problems concerning ‘liquidity of assets’; (4) a relatively low level of profitability (compared to other sectors of the economy); (5) time-dependent sequential processes of agricultural production that is dependent on a set of natural conditions. Finally, the above-mentioned distinguishing features of agricultural sector indicate a need for public policy initiatives.

A combination of family household and small business may be treated as a farm household (Schmaunz, 2007; Doluschitz, Morath, Pape, 2011; Mußhoff, Hirschauer, 2011). This determines some challenges for financial management of farms. There is a relatively growing body of literature (e.g. Gloy, LaDue, 2003; Mishra, Wilson, Williams 2009; Wolf, Lupi, Harsh, 2011; Ahrendsen, Katchova, 2012; Barnard, Nordquist, 2012; Turvey, Woodard, Liu, 2014; Purves, Niblock, Sloan, 2015) that explores the use of various techniques of financial management in agriculture, with particular emphasis on the specifics of the financial processes in this sector. Whereas American literature in agricultural finance has identified several institutional, top-down (including government-support programmes) and bottom-up initiatives related to dissemination of tools supporting financial management, German literature has focused on a linkage between financial planning and control.

Financial management of household (including farm household as a specific entity) as – a part of whole-farm management – deals with an essential question how to use financial resources efficiently¹. Amid growing concerns about the impact of the EU and national agricultural subsidies on economic and financial situation of farms in Poland, the number of various initiatives (including formal networks, oriented to policy goals, such as FADN, commercial/semicommercial programmes for farm financial management) has rapidly increased in Poland. The important issue of improving financial management is important in practical terms, because there are some logical connections between financial results (as some kind of proxy for ‘outcomes’ of financial management) at farm and sector levels. This implies some difficulties that can be solved using tools of public policies.

¹ For example, one of encyclopaedic definitions (from the Encyclopaedia Britannica) of ‘farm management’ emphasizes a strong orientation of farm household toward achieving economic goals: “making and implementing of the decisions involved in organizing and operating a farm for maximum production and profit” (Farm Management, 2016).

The main aim of this paper is to indicate selected challenges from the perspective of improvement of farm financial management in Poland. The remainder of the article is as follows. In the first part we present multi-faceted aspects for farm financial management in Poland. Then, in the second section we identify key elements leading to a significant improvement of farm financial management (within a proposed conceptual framework). The answer to the question posed in the title of the paper is presented in concluding remarks.

Multi-faceted aspects for farm financial management in Poland

Table 1 presents changes in the number and the share of agricultural holdings in Poland. As Dzun (2014) concluded, the number of agricultural holdings conducting agricultural activity has significantly decreased in 2002-2010. The main factors reducing the dynamics were the introduction of direct payments (Pillar 1 of CAP) and change in the definition of the category “households conducting agricultural activity”.

Table 1. Agricultural holdings conducting agricultural activity by the legal and organisational form

Description	Agricultural holdings			Agricultural holdings conducting agricultural activity				
	2002	2010	Change 2010/2002	2002	2010	Change 2010/2002	% of total number	
							2002	2010
Agricultural holdings	2,933,228	2,277,613	77.6	2,177,591	1,891,065	86.8	74.2	83.0
of which: natural persons	2,928,578	2,273,284	77.6	2,174,015	1,886,888	86.8	74.2	83.0
of which: legal entities	4,650	4,329	93.1	3,576	4,177	116.8	76.9	96.5

Source: adapted from Dzun (2014) whose calculations were based on GUS data (Central Statistical Office).

Within the framework of the **Mutiannual Programmes** (2011-2014 and 2015-2019) the Institute of Agricultural and Food Economics – National Research Institute (IERiGŻ-PIB) monitors annually the financial and economic situation of commodity farms in the form of entities belonging to natural persons. **Particular attention is paid to quantitative exploration of relationships between subsidy rates and economic/financial situation of farms.** The panel of farms² over the period of 2005-2012 consisted of 5,068 entities, but, as

² It should be noted that “the database of the Polish FADN includes many detailed records of data, verified in terms of their correctness and uniformly processed, which may be used in various types of economic analyses. Thus, it is a uniquely valuable resource.” (see: Góral (ed.) 2015, pp. 107-108). More details concerning rules of selection of farm households, cutting outliers objects, as well as shaping of descriptive statistics for the variables analysed were presented by Góral (ed.) 2015 (pp. 103-124).

a result of methodological changes in the Polish FADN³, 2010 is currently treated as baseline year⁴. As Table 2 shows, in 2013 financial performance, expressed by ROE and ROA, noticeably declined (in comparison to the previous years). Furthermore, current liquidity can be regarded as relatively stable and even there was a trend to maintain excess financial liquidity. Subsidy rate (I) in 2013 was higher than in previous years, 2010-2012. This may be treated as a typical ‘risk factor’ at the sector level,

Table 2. Economic and financial situation of commodity farms – the panel prepared for monitoring financial situation of farms

Variable	Unit	Years 2010-2012	2010	2011	2012	2013	Change [%] [2013/2012] x 100
ROE (1)*	%	6.0	5.3	6.1	6.5	5.5	86.0
ROA (1)*	%	5.8	5.1	5.9	6.2	5.4	86.2
Current liquidity	Times	4.0	3.7	4.1	4.2	4.0	94.5
Coverage of overall loans with cash flows	Times	0.9	0.9	0.9	0.9	0.8	92.7
Share of gross margin in agricultural production	%	56.4	57.7	56.2	55.7	53.6	96.1
Equity growth	%	8.0	7.8	8.1	8.2	7.2	88.3
Family farm income	PLN [thousand]	94.9	84.1	96.1	104.4	97.5	93.4
Subsidy rate (I)**	%	17.0	18.5	17.9	15.1	17.7	116.9

Note: *own labour costs were deducted in the numerator of these indicators, ** calculated as: [(subsidies to operational activities + subsidies to investments + compensation for milk)/ (vegetable production + animal production) × 100%].

Source: based on data presented in Góral (ed.), 2016 (calculations on the FADN data).

Table 3 presents some critical areas for financial management in Polish agriculture, including legal environment, access to external financing, structural changes, risk management as well as socio-demographic aspects. It should be underlined that processes of financial management are determined by the group of factors that are beyond the control of farm operators (for example, ‘legal environment’). Nonetheless, to some extent the areas related to ‘risk management’ and ‘socio-demographic aspects’ may be controlled by agricultural producers (decisions on succession as a noteworthy example).

³ Farm Accountancy Data Network (FADN) may be treated as an information tool that supports decision making processes related to Common Agricultural Policy. Moreover, the concept of FADN (designed in 1965) has evolved into ‘an instrument for evaluating the income of agricultural holdings and the impacts of the Common Agricultural Policy’ (European Commission, 2015).

⁴ See: Góral (ed.) 2015 (pp. 103-124).

Table 3. Critical areas for financial management in Polish agriculture

Areas	Particular challenges	Remarks	Importance from the perspective of 'improvement of farm financial management' (at micro level)
Legal environment	Tax expenditures: agricultural taxation and social securities (<i>podatek rolny</i>) as preferential forms; agro-environmental regulations; dilemmas on legal definitions of 'farm' for different purposes	Agricultural taxation is based on the so-called 'agricultural tax' (<i>podatek rolny</i>), that is a typical lump-sum levy. Moreover, there is no linkage between the income situation and this tax burden.	There is no category of income tax (except for payers of personal income tax from special branches of agriculture), which maintains the state of information gap in Polish agriculture
Access to external financing	The EU subsidies (mainly direct payments)	A strong dependence on an external financial support; justified rationales for financial reporting in some Rural Development Programme Areas (measures concerning farm investment)	There is a complex and subtle mechanism how the EU subsidies affect financial situation. In the case of reducing the scope for funding, a reduced rate of subsidization may mean a weakening of the financial stability of small family farms.
	Access to credit and loans	Still, there is a limited willingness of Polish farmers to take credits and loans (debt-to-assets-ratio < 15%)	Use of agricultural accounting system may be treated as a form of collateral for financial institutions.
Structural changes	Changes in the number of commodity farms, average area, intensity, product orientation	'A polarised structure of farms' in Poland (Wąs and Małazewska, 2012) may be maintained.	Differences between scale of financial processes between small-sized family-owned farms and large-sized agricultural enterprises
Market structure in the agri-food systems	The degree of vertical and horizontal integration	Participation of farms in formal and informal forms of vertical and horizontal integration leads to increase in their bargaining power. Agricultural finance found the positive impact of the degree of overall integration on financial efficiency of farms.	Limited possibilities of adaptation of selected solutions related to financial management from food processing industry to farm households.
Information systems in the agribusiness	Commercial agricultural decision support systems (including agricultural accounting-based systems), public systems (mainly related to sectoral dimension)	A limited number of initiatives are being implemented. This mainly refers to monitoring of market situation (e.g. Integrated Agricultural Market Information System in Poland).	The information gap relates to the lack of accounting and financial reporting obligations for most households in Poland. This leads to some negative implications.
Risk management	Insurance products	Partially state-subsidized crop insurances; mutual funds as the institutional form	Unwillingness of farmers to buy insurance products
	Income diversification	Income diversification should be considered in parallel with development of entrepreneurship on rural areas	Increase in total income, the element of reducing the level of income risk
Socio-demographic aspects	Socio-demographic aspects: ageing, problem of succession	A strong need for careful merging of small farms	Possibilities of using the positive effects of economies of scale
	Quality of human and social capital	The importance of initiatives of lifelong learning programmes (for example, as on-line course) will be growing.	A particular attention should be paid to promoting record-keeping systems with some analytical functions

Source: own studies.

Figure 1 presents a detailed cycle of processes indicating how the impact of subsidies (mainly, in the form of direct payments) could lead to the improvement of the financial situation of the farm. Although this mechanism was described by American agricultural economists (see: Krop, Katchova, 2011), this may refer to the situation in Polish agriculture. The positive effect of subsidies on income stabilisation leads to better creditworthiness, what may potentially encourage higher investment activity in a farm. The aforesaid changes at the micro level lead to a transformation in the scale of the sector.



Figure 1. Mechanism: how may agricultural subsidies lead to higher investment activity of farms?

Source: adapted from Góral (ed.), 2015 (based on Krop and Katchova, 2011).

How to lead to a significant improvement of farm financial management? A conceptual proposal

As Figure 2 shows, improvement of farm financial management as a long-term process (both at farm and sectoral level) should concentrate on four components that are quite closely related to each other, namely, (1) human and social capital on rural areas, (2) institutions, (3) regulations, (4) financial products⁵. Nevertheless, some additional and detailed factors may be found as the combination of the aforesaid key components. Moreover, a part of them relates to characteristics of farm operators that affect how farm resources are utilised. It should be added that the linkage between ‘institutions’ and ‘regulations’ can be referred to the structural changes in the agri-food systems.

As for the quality of human and social capital on rural areas, the importance/role of financial education on rural areas cannot be neglected. The results of Osteen et al. (2003) suggested that participants of financial education programme (in general) may benefit from, for example, better analysis of financial data collected by accounting systems. Moreover, a holistic approach to farm management includes an integration processing financial data with typically strategic or operational data. This may be illustrated by the concept of Balanced Scorecard or other pyramidal constructions that can be also used by farmers.

⁵ Barry (2003, p. 15) stressed the processes and areas related to ‘finance’ (in general, in a broad sense) refer to the evolution of agricultural finance. Having cited Weston’s article from ‘Financial Management’ (1994), similarly as in the case of ‘general finance’, he admitted that new concepts, then methodologies, practical tools, have been evaluated as the consequence of changes in economic, financial and societal environments.

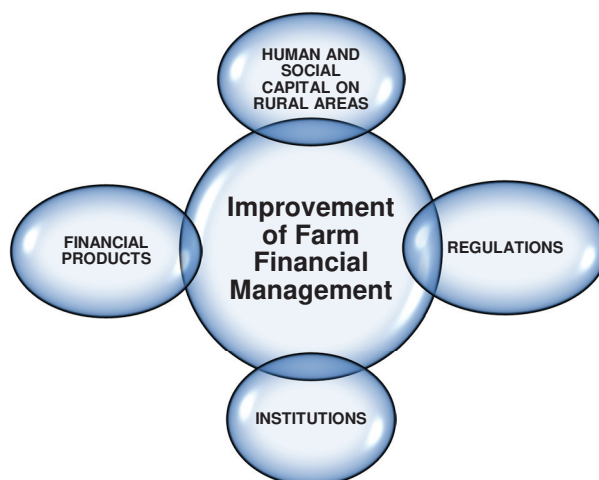


Figure 2. Key components for improvement of financial management in Polish agriculture

Source: own studies.

Soliwoda (2014) proposed hybrid solutions (instead of costly audits) of maintenance of accountancy systems oriented to management objectives in Polish agriculture. It should be noted that public policy intervention should be focused on partly subsidized support in the form of hiring (participating) economists from agricultural advisory centres. The abovementioned solution would be beneficial not only to farmers, but also to the central budget. Such approach would promote improvement in financial management. According to the current legal status, obligations of maintaining even simplified accounting system refer to a very limited group of large-sized agricultural holdings. This leads to the occurrence of the information gap, and as a result, a lot of simplifications in financial management (Soliwoda, 2014).

There are some initiatives supporting simplified financial controlling (analysis of financial reports with a financial control). This refers to the so-called **Individual Farm Report** (Raport Indywidualny) that may be used by farmers participating in the Polish FADN system. For example, “the Individual Farm Report provides the picture of the agricultural holding’s activity” (Polish FADN, 2015), including necessary data for decision-making processes (simplified cash flow statement, balance sheet, report on land ownership, land usage, labour, agricultural production). Box 1 enumerates a set of actions (classified into three groups) that may be used for improvement of farm financial management in Poland. It needs to be highlighted that most family farms in Poland do not have any record-keeping systems. This means that making financial decisions is based on some simplified categories (for example, monthly cash flows, cash farm income, etc.).

Box 1. Actions to improve a farm financial management – adaption of the U.S. practices to conditions of Polish family farming
Scale

- Use fixed resources fully.
- Identify low-cost ways to expand, such as renting additional land or facilities.
- Examine whether management ability and emotional stability are sufficient to handle the additional stress of expansion.
- Scale back the farm business to allow a significant increase in off-farm income.
- Analyse various options for succession or merging with another farming unit.

Efficiency

- Reduce family living expenditures and operating costs.
- Improve enterprise record-keeping and analysis.
- Reorient priorities; focus on management.
- Use advisory (extension) services.
- Improve marketing skills and performance (other areas of management).
- Off-farm income as additional source of income.
- Reduce family withdrawals to a level that is consistent with efficiency or level of farm employment.

Capital Structure and Investment Activity

- Establish minimum standards for the financial performance of new investments.
- Use retained earnings to finance the equity component of capital purchases.
- Maintain adequate financial reserves.
- Structure debt in order to maintain balance between assets' useful lives and repayment periods.
- Identify and sell unproductive/unprofitable assets, reduce and restructure debts.
- Take into a detailed investment analysis.

Source: adapted from Boehlje (1994); Barnard and Boehlje (1998-1999), Jolly and Vontalge (1995).

As Miller et al. (2012, p. 39) stated “financial success requires skill, diligence, and the willingness and ability to change your farm operation”, a particular attention should be paid to financial education programmes oriented to various needs of farm operators. Evidence from the U.S. (see: Ahrendsen and Katchova, 2012) aimed to evaluate the financial performance measures of farm households (collected by Economic Resource Service (ERS) from Agricultural Resource Management Survey (ARMS) data). Wolf et al. (2011, p. 259) emphasise the aspect of cooperation between farm and providers of a financial record-keeping system. This may be used as the tool for ‘benchmarking farm financial performance over time’.

Concluding remarks

Critical areas for financial management in Polish agriculture include, inter alia, legal environment, access to external financing, structural changes, risk management, as well as socio-demographic aspects. A system of CAP measures, including direct payments, leads to significant changes in financial situation of Polish farms. Particularly, small-sized farms have benefited from financial support. A peculiarity of the agrarian structure in Poland (marginal farms vs. agricultural enterprises) indicates that most problems related to financial management refer to small-sized family-owned farms.

Particular attention should be paid to providing reliable data for further processes of financial management (mainly, analysing/monitoring, planning and control). Thus, there is a strong need for promoting systems of agricultural accounting. It should be noted that information gap may be reduced by even simplified bookkeeping and financial reporting (using a cash method) for most farms. Nevertheless, as experiences from some EU countries indicate, there is a very crucial problem how to set criteria and thresholds for this requirement.

Given lessons learnt from countries representing a highly developed agriculture that may benefit from public financial support (e.g. Canada, the USA, Western countries – the EU Member States, Switzerland), a basis is preparing and using cash flow statement. Furthermore, institutional infrastructure may substantially affect popularization techniques and tools for financial management at the farm level. This refers to software tools, based on some FADN solution (for example, Individual Report with additional report). The role of agricultural counselling combined with FADN system in Poland may be essential in promoting innovative (with respect to Poland) tools. What is needed is “quality improvement” of human and social capital on rural areas (related to skills and qualifications necessary for financial management). To achieve this goals, some measures, mainly lifelong learning programmes for farmers (on-line courses, case studies, virtual farms, etc.), may be implemented.

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