

DO DIVESTMENTS AND INVESTMENTS DETERMINE FARM DEVELOPMENT?

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Abstract

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The paper focuses on the role of divestments and investments in the process of shaping the development of agricultural farms. The Farm Accountancy Data Network system data were used in its empirical part. A cost-output rate was estimated for Polish commodity farms, which operated in the year of Poland's accession to the European Union and continued to operate uninterrupted for 5 years. From among 6 900 farms a population of 668 was selected whose total costs in 2004 exceeded the value of their output. The reallocation of resources was particularly justified for those farms. As part of research, costs of farmer's own labor were valued and the cost-output rate was modified. Then changes affecting the rate were examined on selected farms after five years of management. It was found that the improved profitability of the farms was not closely related to investments and/or divestments made by farmers. However, research results confirmed Drucker's theory of a high cost of idle capacity: a group of farms with idle capacity, i.e. those that did not take any measures with regard to the reallocation of their resources of land and capital, was the least probable to improve the cost-output rate.

Key words: commodity farms, Polish agriculture, development, divestments, investments, costs, output

Abbreviations: ACOR – Adjusted Cost-Output Rate; AWU – Annual Work Unit; COR – Cost-Output Rate; FADN - Farm Accountancy Data Network; OLC – Own Labour Cost; TC – Total Costs; TO – Total Output

Introduction

Development is a multi-dimensional issue. Being a process of transformations and changes, it involves the transformation to more complex or enhanced conditions or forms. A positive connotation predominates over a general understanding of the notion: the word "development" is usually associated with an improvement of a given condition and progress. Many various economic, organizational and technical aspects may evidence the development of business entities. Economic aspects are the most important ones, however, because a major purpose of management is to maximize profits from business and/or maximize the value of an enterprise. Hence, in the case of individual farms, different income categories are the basic success criterion (being a total remuneration of all production factors). The income being a measure

of success and development can be considered in different ways. Its total or relative value can be analyzed per engaged resources of production factors (economic effectiveness). It is difficult to discuss the development of a farm without comparing the income and its determinants (production, costs and farm subsidies) with corresponding values from a prior period. The result of the comparison is important to farmers as it allows them to verify the legitimacy of decisions taken with regard to the organization of production and reallocation of resources held. Therefore, from a dynamic perspective the development of the farm should be interpreted as a desired change of an existing status-quo: basic economic figures and relations characterizing the farm. Its symptoms, among other things, include: changes of the farm's area, the volume of commodity production and the condition of fixed

assets as well as changes of their structures and economic and financial ratios attained (Dacko and Sroka, 2010).

There are numerous factors determining farm development, including a production technology being applied, the quality of human capital, the absorptive power of progress, the connection between the farm and the market and amounts of budget transfers, which were obtained (Dacko and Sroka, 2010). Development factors also include technical innovations, which are implemented, investments, organizational concentration and different forms of integration (Osbert-Pociecha and Tyminski, 2000).

A very important farm developmental factor is the size and structure of its resources (of land, labor and capital). Analogically to ecology, it is even possible to mention peculiar Law of the Minimum (This law was formulated in 1840 by J. von Liebig, German chemist, stating that yield is proportional to the amount of the most limiting nutrient, whichever nutrient it may be), namely, the scarcest resource is of key importance to the farm's development. In the southern Poland, it is usually soil.

It should be noted that the development of a business entity is inextricably linked to a crisis, too. Sometimes taking a step backward seems even necessary. Among others, Greiner (1972) presented the above from a model perspective identifying reasons for crises in enterprises, that is, a crisis of leadership, autonomy, control, bureaucracy, a professional burn-out. Greiner believes that crisis is a natural and sometimes even necessary element of growth and overcoming the crisis is an opportunity for continuing a developmental trend. Undoubtedly, the entities anticipating possible disturbances of development stand a greater chance of success. Among other things, divestments can be a response to a projected crisis, being the processes limiting an activity or restricting the volume of the resources in use. Such limitation may help search for a new balance performing activities at a smaller scale; it may also become an initial stage of the re-organization before a planned expansion. As Osbert-Pociecha and Tyminski (2000) state: "*divestments are not an alternative to taking investment decisions, rather they complement the mechanism of changes and adjustment to new conditions.*"

Social and economic transformations of the 20-th and 21-st century and Poland's integration with the European Union's structures resulted in Polish farmers facing new conditions of management. On many farms, symptoms of the crisis appeared manifested by, among other things, a rapid increase of costs and decrease of production profitability. Many farms were forced to reorganize their production by divesting and/or investing. Did those activities produce expected results? Were they effective? The purpose of the paper is an attempt at answering those questions by evaluating the changes of

the cost-output relation on farms engaged in investments or disinvestments.

Materials and Methods

According to Wojewodziec (2010) divestments on farms consist in the planned limitation of production or withdrawal of resources of land, labor and capital from agricultural activities for the purpose of improving the efficiency of the farm's functioning or increasing the farm's income (a farming family's incomes). In reference books also the term "disinvestment" is used which refers to the limitation of resources of assets (mostly land, machinery, equipment and buildings). On the other hand, farm investments can be defined as a value of purchased and manufactured fixed assets. Contrary to investments, divestments limit the agricultural farm's production potential. They can, however, be applied for facilitating the farm's functioning or can become an initial stage of the farm's re-organization prior to investments. Sometimes divestments and investments occur concurrently. Divestments can also be subsequent stages of the business entity's winding up its business.

Data of the Polish Farm Accountancy Data Network (FADN) were the background for theoretical considerations presented in the paper. The system covers 12.1k commodity farms, including nearly 57% (6.9k) covered by the system in 2004-2009 without any interruptions (Goraj et al., 2010). Individual, i.e. farms owned by individuals were the subject of interest. For more on the selection of the commodity farms, please refer to the Polish FADN website (www.fadn.pl). From among that population, 668 farms were selected characterized by negative cost-output rate ($COR > 1$) in 2004. There were farms on which divestments and/or investments seemed to be particularly justified. Changes affecting the initially negative rate after five years of management were evaluated.

COR is used for the economic evaluation of the farm profitability or the profitability of individual production activities. It is a relation of total costs (TC) to total output (TO). The rate's value in excess of 1 means that the costs exceeded the value of output.

Such situation is undoubtedly unfavorable and in many cases may prove a crisis. However, it should be stated that in the case of the farms it does not have to equal negative financial performance. The farm can be a beneficiary of grants, farming subsidies to production and additional payments to investments. Such benefits may determine the farming income's positive value despite a negative value of the COR being subject to the analysis.

According to FADN's methodology, the category of total costs is exclusive of the cost of own labor, therefore, the

value of cost-output rate was adjusted by an estimated cost of unpaid labor, i.e. the farmer's and his family's labor. In such way, a new rate was developed which was called the adjusted cost-output rate: $ACOR = (TC+OLC)/TO$. It was necessary, as very frequently both due to investments and disinvestments labor outlay was limited which would not be reflected in economic categories being analyzed.

Own labor cost was estimated assuming that own labor remuneration equaled an average hired labor remuneration on all farms in the FADN system, i.e. for 2004 = PLN 5.32/h and for 2009 - PLN 10.99/h.

Depending on changes in the resources of land, labor and capital as well as changes of the output scale and structure in the group of the farms under analysis, the following five categories of divestments could be distinguished:

- divestments in the area of plant production (liquidation of at least one of the activities: fruit-growing production, production of vegetables and flowers, production of potatoes, production of sugar beets, production of oil plants, production of industrial plants);
- divestments in the area of animal production (the liquidation of at least one activity: raising dairy cattle, raising other cattle, raising sheep and goats, raising swine, raising poultry or raising animals in general);
- divestments in the area of land (the decrease of the area of own utilized agricultural area by at least 1 ha, however, not less than 10% vis-à-vis the area held in 2004);
- divestments in the area of labor (the decrease of the number of hours of total labor performed by at least $\frac{1}{2}$ AWU – 1,100 man-hours and, at the same time, keeping the value of plant and machinery at an unchanged level). The condition was necessary in order for the phenomenon of substituting work with capital not to be classified as divestments;
- divestments in the area of capital (the decrease of the value of fixed assets by an amount exceeding the value of depreciation within the period under analysis). Due to the lack of data regarding sale or liquidation of fixed assets it was assumed that the decrease of the value of the fixed assets in excess of their natural wear (depreciation) indirectly shows the decrease of the resources of fixed assets.

Each of the said categories of divestments was classified and the result of the classification was expressed using a nominal scale as follows: 1—where divestments have been made, 0—where divestments have not been made. The investments on a farm were classified analogically. Despite such simplifications the number of all possible combinations with regard to the reallocation of resources was very large and totaled: $C = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 2^5 = 32$. Therefore, to make the interpretation of the results easier, the authors focused only on two categories of resource divestments: land and capital (which

were together treated as disinvestments). Then the relation between disinvestments and investments was examined with the change of the adjusted cost-output rate.

The theory of divestments

Due to their nature, divestments are activities performed by managers reluctantly. Frequently they are perceived as a manifestation of an enterprise's weakness and a consequence of mistakes made at an earlier stage. However, refraining from any corrective measures can be even more detrimental to the farm and frequently accelerates its crash. Drucker, an excellent management theorist, stated that: the cost of idle capacity can be high and it is usually concealed in the tangle of numbers (Drucker, 1976).

Hence, divestments are needed and should not be automatically equaled with the crash or bankruptcy, although they frequently accompany the processes of withdrawing from production or closing down a business. An efficiently performed divestment, decreasing resources or production scale can be a transitional stage for the enterprise being mobilized for an expansion. According to Osbert-Pociecha (2002), the necessity to divest can also be the outcome of a merger or take-over of enterprises whereby a newly established economic entity has been seeking a new balance (an optimal configuration of resources, the scale and structure of production).

Reasons for divestments can be both endogenous and exogenous. Based on the studies of reference books (Markides and Berg, 1992; Osbert-Pociecha, 1998 and Wojewodzic, 2010) the reasons for the divestments can be:

- a business entity's (or its branch's) poor financial performance or low profitability of a given activity where the improvement of such condition in the future is unlikely,
- seeking cash for payment of liabilities or investments (especially where there are no possibilities of obtaining financial means otherwise),
- a much too high capital absorptive power of the entity being reduced which makes it difficult to satisfy capital needs of the remaining components of the company or perform business activities,
- a reoriented business profile,
- changing a manufacturing technology,
- obtaining exceptionally beneficial terms for selling the resources owned,
- changing the location of the manufacturing activities,
- complying with anti-monopoly regulations by the entity,
- attempting at increasing attractiveness in the eyes of business partners in relation to planned take-over, mergers or sales,
- seeking tax benefits,
- attempting at changing conditions or terminating contracts with employees, managers and contracting parties.

A farm's dual nature being at the same time a manufacturing unit and its owner's household results in the following typical objectives of divestments:

- resigning from an activity generating a negative direct surplus, without channeling the released resources to another activity. Failure to use the resources as part of a given activity becomes economically justified where the income from such activity does not cover direct costs, which have been incurred.
- re-allocating the resources within the household (from an activity characterized by lower economic efficiency to the higher one),
- withdrawing resources from farm production and engaging them into non-agricultural activities,
- obtaining, from the sale of the farm or its part, funds for the family's household use (e.g. repaying bank loans, erecting a residential building, purchasing a car, children's education),
- liquidating the farm due to the change of the farm family's life and work model.

Both divestments and investments on farms are assumed a measure, which should help improve the farm family's living standard. Contrary to divestments, investments result in increasing the farm's production potential or improvement of labor conditions. It should be noted that divestments and investments are only seemingly contrary measures. Very frequently, divestments precede investments and become a preparatory stage for the latter. Both can for some time also run concurrently. As Drucker (1985) indicated: the first step on the road to development is taking a decision what to resign from. In such context Drucker plainly encourages asking a question: where do we lose time, money and people to produce "the absence of results". It is difficult not to agree with Drucker that many reasons determining a disadvantageous cost calculation (and, in consequence, an income, too) lie in internal limitations whereas they can be overcome by the entity and can actually be turned into the managing entity's strengths rather than its weaknesses. In the case of commodity farms, divestments seem to be mainly a tool for redesigning production organization and its streamlining.

Research Results

Mixed farms, i.e. those without a clearly specified production profile (45.8%) and farms specializing in field crops (25.1%) dominated the structure of the study population of farms characterized by the disadvantageous cost rate in 2004. The entities specializing in raising grazing stock accounted for 10.2% of all farms. The share of agricultural types such as permanent crops, grain-eating animals, dairy cows was relatively the lowest and similar (ranging from 5.5% to 6.5%).

Taking into account the economic size of the studied units, a central tendency could be observed characterized by the right-sided asymmetry being typical of that quality: in the studied population small-sized farms were predominant (34.6%) along with medium-sized ones (30.8%). The share of very small and medium-sized entities was very significant (16.3% and 14.4%, respectively), whereas the share of large farms was small (3.6%) and there was hardly any share of very large entities (2 farms only).

The distribution of the farm area was very slim and characterized by even a stronger right-sided asymmetry. Based there on the land area of an unquestionable majority of the surveyed farms were up to 20 ha (86%). Nearly 10% of the farms had land resources in excess of 20 ha, up to 40 ha. The share of the farms representing even larger area groups was minute. Only 17 farms (out of the population of 668) were characterized by the area of over 100 ha.

In 2004, the adjusted COR did not exceed 2 in the case of 85% of the farms. On 88 farms (13.2% of the study population), the adjusted total costs accounted for the two-fold or threefold production. Less disadvantageous proportions between costs and output were only sporadic. Only in the case of two farms, the rate reached nearly 5 and on one farm it exceeded 10 (the costs incurred were ten times higher than total output). In 2009 the adjusted rate in question was, for the study population, even more disadvantageous: only for 64% of all farms it was below 2. With regard to as many as 224 farms (33.5%) the adjusted total costs were 2-4 times the output value and with regard to 13 farms (2%) they were 4-6 times higher than the output value. Five farms recorded costs being 6-10 times higher than their output and one farm recorded costs exceeding the output value even 22 times. Hence, the situation of a considerable percentage of the Polish FADN farms which, upon Poland's accession to the EU, struggled with an overly high share of costs in output, tended to exacerbate. Why farms characterized by the growing disadvantageous cost-output rate did not continue their activities? The most likely reasons for this phenomenon included:

- estimated costs as part of a cost calculation, i.e. depreciation and own labor cost which do not require any actual expenditure as they arise, hence, they are frequently overlooked by farms' administrators,
- farm subsidies for farmers to operating and investing activities.

To a considerable degree thanks to farm subsidies 405 of the surveyed farms (60.6%) which suffered losses in 2004, generated profits in 2009. Despite the disadvantageous COR as many as 112 farms (16.8%) recorded profits both in 2004 and 2009. Only in the case of 128 farms (19.2%) negative financial performance was recorded in the two years in ques-

tion whereas only 23 farms (3.4%) reported profits in 2004, however, in 2009 made a loss. In such context, the farm subsidies are perceived as a factor deforming the economic calculation and contributing to the belief that agricultural activities can be profitable based on the farmer's efficiency in obtaining benefits and external aid rather than their frugality.

As presumed, the surveyed population of 668 farms was characterized by a different, vis-à-vis the entire population of 6.9k entities, frequency of investments and divestments. Disadvantageous proportions between the level of costs and output were accompanied by farmer's visibly smaller tendency to invest and a greater one to divest. In the case of the selected group of farms, the percentage of those that did not invest reached as much as 43%. For comparison, out of the entire population of farms, only 29% did not make any investments during the period under analysis. Among the farms characterized by an overly high cost rate, farmers decided to divest relatively more often (23%). In the entire population, divestments were recorded on 18% of the farms. Thus, the economic situation of the farm affected the farmer's decision regarding the re-allocation of resources. From the perspective of a system dynamics one can easily observe a potential feedback loop: decisions regarding the re-allocation of the resources (with a certain delay) should contribute to changing the farm's economic condition.

As part of a detailed analysis of a selected group of farms, a division was made in view of investments and disinvestments into four separate categories. Then their resources were characterized for each category (Table 1), and remarks

were made on their output, costs and rates: COR and ACOR (Table 2) as well as the change of ACOR (Table 3).

The farms that decided to invest and/or disinvest (groups: B, C, D) were characterized by higher rates of engaging production factors in 2004 (Table 1). In the case of the farms making investments and disinvestments (group D) a clear change was visible in regard of the proportion of land being used involving the increase of the share of own land (usually by purchasing leased land). The purpose of such manifestation of the capital allocation was presumably the desire to improve the farm's potential and profitability. Regarding the groups of farms engaged in disinvestments (groups B and D), the rates indicating the engagement of labor outlay declined. Such tendency may evidence the occurrence of production specialization, restructuring or simplification (e.g. for increasing the owners' commitment to work outside their farms). However, the collected data prevented the issue from being clearly resolved.

Coming to the issue of cost analysis it should be stated that it proved difficult due to a few reasons with the most important one being the fact that the cost calculation on a farm excluded the costs of own labor. As a result, the ultimate category being an income from a farm shows a total remuneration for engagement, in the production process, of own labor, land and capital and management. That implied further complications. Namely, due to Poland's accession to the European Union, the costs of remuneration for hired labor on farms rose to a considerable degree. The calculations based on the FADN data show that an hourly rate of the remunera-

Table 1
Characteristics of resources of the study population of farms

Item	On average—by groups of farms*				On average—in total
	A	B	C	D	
2004					
Own land, ha	13.6	15.5	18.8	21.9	16.9
Leased land, ha	3.4	8.4	8.4	17.9	7.2
Total labor input, AWU	1.6	1.8	1.9	2.2	1.8
Total own capital, in PLNk	285.6	339.0	367.7	442.1	340.5
2009					
Own land, ha	13.4	12.9	22.1	23.5	18.4
Leased land, ha	5.4	5.5	10.9	7.4	8.3
Total labor input, AWU	1.6	1.5	1.9	2.0	1.7
Total own capital, in PLNk	256.7	247.7	430.3	384.0	352.0

*A – The farms which did not invest and disinvest

B – The farms engaged in disinvestments only

C – The farms engaged in investments only

D – The farms engaged in disinvestments and investments in a parallel manner

Source: own research

tion for work rose by over 100%. In the same manner, at least a proportional increase of an estimated rate for the remuneration for own labor should be taken into account.

Only the farms engaged in disinvestments (group B) were characterized by a decline of an average value of total costs and average output value (Table 2). In the case of other groups of farms (groups A, C, D) the increase of both average total costs and average output value were recorded. Overlooking own labor costs, a tendency of an improvement of the economic condition of the entities investing or disinvesting and investing in a parallel manner (groups C and D) could be discussed: the output value rose in a faster manner that

total costs in regard of such groups which contributed to desired yet slight decline of COR (Table 2). The change of the adjusted COR was less (groups C and D) or more (groups A and B) disadvantageous in all categories of farms under analysis (Table 2). Quite surprisingly the adjusted cost-output rate (ACOR) deteriorated the most in regard of a group of the farms which were engaged in disinvestments only, limiting the resources of land and/or decreasing the value of capital held (group B). A question arises why such phenomenon occurred since the most frequent objective of divestments seems to be an attempt at improving the farm's financial result (for example, by resigning from activities generating a negative

Table 2
Output and costs on the surveyed groups of farms

Item	On average—in groups of farms *				On average – in total
	A	B	C	D	
2004					
Total output, in PLNk	54.7	67.7	91.8	96.1	77.0
Total costs **, in PLNk	61.6	74.8	103.7	114.6	87.1
Estimated cost of own labor, in PLNk	17.5	19.2	18.6	19.0	18.3
COR ₂₀₀₄	1.16	1.15	1.19	1.24	1.18
ACOR ₂₀₀₄	1.67	1.59	1.63	1.62	1.64
2009					
Total output, in PLNk	68.1	64.0	132.7	113.5	103.4
Total costs **, in PLNk	68.3	63.6	129.0	119.3	101.9
Estimated cost of own labor, in PLNk	35.5	35.4	38.3	37.3	37.0
COR ₂₀₀₉	1.19	1.31	1.11	1.22	1.16
ACOR ₂₀₀₉	2.16	2.50	1.76	1.94	1.97

* marked as in table 1.

** Total costs do not include the remuneration for own labor and remuneration of other own production factors, i.e. land and capital.

Source: own research

Table 3
The change of the adjusted cost-output rate (ACOR)

Farms divided into groups based on their activities	The structure of farms by the change of ACOR*			
	No improvement	Slight improvement	Improvement	Considerable improvement
	%			
A	72.3	16.2	7.7	3.8
B	70.4	22.2	5.6	1.9
C	55.4	23.0	15.7	5.8
D	69.4	13.9	11.1	5.6
Total	63.3	20.1	11.8	4.8

* no improvement - ACOR₂₀₀₉/ACOR₂₀₀₄ exceeds or equals 1

slight improvement - ACOR₂₀₀₉/ACOR₂₀₀₄ is below 1 and exceeds or equals 0.8

improvement - ACOR₂₀₀₉/ACOR₂₀₀₄ is below 0.8 and exceeds or equals 0.6

considerable improvement - ACOR₂₀₀₉/ACOR₂₀₀₄ is below 0.6

Source: own research

direct surplus or re-allocating the resources to the activities that guarantee higher economic efficiency)?

The change of the cost-output rates presented in Table 2 did not make it possible to clearly determine which activities would be more efficient for the improvement of the farm's profitability: investments or divestments. The impact of the two activities (both separately and jointly) on the farm's development and profitability was not so evident and clear as expected (Table 2). Specifically, neither disinvestments nor investments did not contribute in the surveyed groups of farms to such improvement of average cost-output rates so they can be expressed using a number smaller than one (that is, so that the value of the 2009 output was higher than the related costs). On the other hand, however, it should be noted that those generally disadvantageous cost-output relations improved the most (calculated as COR) or deteriorated the least (calculated as ACOR) in the groups of farms engaged in investments or implementing both investments and disinvestments simultaneously (groups C and D).

Hence, do investments and disinvestments really have little significance as regards the improvement of the cost-output rates? Or perhaps considerable diversity of the surveyed units as well as conditions of their operations contributed to the fact that the arithmetical average turned out to be a measure whose accuracy failed short of our expectations (as there are no identical farms)? The group of farms engaged in disinvestments was characterized by such considerable diversification. The estimated standard variation of $ACOR_{2009}$ for that group reached 2.83 whereas for the entire study population the figure was 1.24. The reason for such diversity can be the variety of:

- reasons for limiting the resources of land and capital by farmers (restructuring, abandoning production and sometimes even the farm's collapse),
- the quality of a management factor (i.e. the accuracy and proper co-ordination of the disinvestments carried out by the farm).

Due to the reasons presented above a more detailed assessment of the disinvestments and investments carried out by the farmers is presented in Table 3 based on the categorized change of the adjusted cost-output rate. We can see that the adjusted cost-output rate improved on farms engaged in investments (group C). However, even in that group more than 50% of the farms experienced problems with the cost-output rate (Table 3). In the remaining groups, the situation was even worse: ACOR did not improve in regard of approximately 70% of farms on average, regardless of whether they were simultaneously engaged in investments and divestments or whether they decided to disinvest only.

A low percentage of farms where the costs ratio improved can be observed. A desired changes of COR also in that case

seems to be hardly related to the measures taken by farmers involving the re-allocation of the resources. Considerable improvement of the rate was rare (especially in the case of the group of farms, which were disinvesting only). However, a view to the effect that the re-allocation of the resources on commodity farms with the disadvantageous cost-output rate was ineffective would be unauthorized. It seems that in regard of such large percentage of farms where the said ratio did not improve, at least partially the above could be ascribed to disadvantageous changes of price relations within the period under analysis (among other things, a rapid increase of prices of mineral fertilizers and an increase of rates for remuneration for work). The analyses, which were conducted, seem to confirm theoretical considerations made by Drucker regarding a high cost of idle capacity: the worst result as regards the change of the cost-output relation was recorded in regard of a group of the farms not engaged in any changes of the resources of land and labor (group A).

Among the farms that recorded a clear improvement of the adjusted cost-output rate, the farms engaged in investments had a relatively highest share as well as those that applied the strategy of combining investments with disinvestments (groups C, D). Presumably in the case of the farms belonging to group D, the funds earned from disinvestments were most likely channeled to the areas where investments were made.

Conclusions

Clear evaluation of the efficiency and usefulness of the re-allocation of agricultural resources proves impossible to be made as part of mass observations. Perhaps better results with regard to the evaluation of divestments and investments could be produced thanks to case studies or comparisons of farms in small control groups where units could be nearly identical with regard to the resources held by them, the output's economic volume and profile. Unfortunately, such research would encounter formal limitations with regard to the use of FADN data. The protection of personal data of the farmers being the system participants imposes the necessity of aggregating the results to groups composed of at least 15 elements.

The assessment of the effectiveness and efficiency of the investments and divestments (including disinvestments) of a peculiar entity such as a farm should account for changes of own labor input of the farmer and their family members working on the farm.

Recapitulating it should also be emphasized that the long-term presence of the disadvantageous cost-output rate is an alarming phenomenon as it may lead to progressing asset decapitalization and overlooking own labor remuneration which,

sooner or later, will result in the farm's economic crash. A situation whereby positive financial performance is conditional upon obtaining external funds (subsidies, subventions) may lead to the re-evaluation of the criteria of economic activities and the occurrence of pathologic behaviors. The above is particularly dangerous in the context of planned changes to the European Union's Common Agricultural Policy. The planned reduction of farm subsidies and subventions may lead to a considerable crisis in the entire industry, as a significant portion of the entities will not be able to operate in a way that will allow generating a surplus of output over costs.

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