Influence of selected economic differentiation factors on successfulness of farming enterprises

Vplyv vybraných faktorov ekonomickej diferenciácie na úspešnosť poľnohospodárskeho podniku

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Abstract: The article presents results of measuring influence of the selected economic differentiation factors on successfulness of agricultural businesses. As key factors, there were selected: the size of company, legal form, allocation based on attractions of soil – climatic conditions. Regarding certain financial indicators results and the specified order of analysed companies, they were divided into groups depending on theirs successfulness. Each group was compared and analysed. At the end, the results of dividing into the groups were graphically presented.

Key words: agricultural business, economic differentiation, factors of economic differentiation

Abstrakt: Príspevok predstavuje výsledky merania vplyvu vybraných faktorov ekonomickej diferenciácie na úspešnosť poľnohospodárskych podnikov. Za kľúčové boli vybrané faktory ako veľkosť podniku, jeho právna forma, umiestnenie z hľadiska atraktívnosti pôdno-klimatických podmienok. Na základe dosiahnutých výsledkov vybraných finančno-ekonomických ukazovateľov a stanovenom poradí podnikov sa podniky zatriedili do skupín úspešnosti. Jednotlivé skupiny sa porovnávali a analyzovali. V závere sú graficky prezentované výsledky zatriedenia podnikov do skupín.

Kľúčové slová: poľnohospodársky podnik, ekonomická diferenciácia, faktor ekonomickej diferenciácie, úspešnosť podniku

INTRODUCTION

If the enterprise is a functional and working unit (technological, economic, social, …), with the prerequisites to bring utility and to make profit presently and in the future, then this is exactly what influences the successfulness of the company. In case of agricultural business, the influence on its value is mainly given by the prerequisites of the future utility, and the value is the scale of the entrepreneurship and the basic aim of entrepreneurship – ensuring of the company market value enlargement (important is, that the factor of value is in fact subjective, individual for the particular owner, coming out from expectations and the initial capital).

The question of monitoring and controlling of company assets is nowadays a composite problem with several levels and time dimensions. The basis is the detailed analysis of the actual financial year in comparison with the previous years, then the particular forecasting/budgeting for the next period.

The balance items represent the levels of controlling; their movement is shown in a properly structured P&L (income statement) with transparent steps of calculation of the EBIT (earnings before interests and taxes – profit) respectively EVA (economic value added). The mentioned time dimensions follow the current period control, compared to the last year plus to the forecast/budget.

Usually, after fulfilling the prerequisites of the developed controlling system, companies in praxis approach the benchmarking, the self-analysis of economic differentiation in comparison to companies operating in a similar branch and conditions. If we speak about agricultural businesses, a certain economic differentiation is expected, based on soil-climatical conditions, which influence the volume and quality of the output (volume of the yield and productivity of animals). These results are shown in the profitability of the entity. However, economic differentiation arises also in comparable conditions.

Analysing the factors of economic differentiation – factors influencing the variety of economic results – we can focus on analysing or comparing the "hard" factors. It means the measurable parameters (for example the allocation of the company (natural conditions), quality of the cultivated land, size of the company (land area or number of workers), legal form, structure of organization, material motivation of workers), or "soft" factors – immeasurable parameters (quality of management, style of leading, attitude of workers, non- material motivation of workers and other subjective parameters). Research of "hard" factors is exactly the subject of this article.

OBJECT AND METHODOLOGY

The object of the research is a sample of agricultural entities, including all production units dependent on income from agriculture: co-operatives, business organizations operating in agriculture.

Geographically, the selection was realized in to two different regions, Southern-West part of Slovakia, represented by Nitra district. This area is characterized by the best soil-climatic conditions, presents the highest agricultural production locality. The second region is allocated to the Central-North Slovakia, to the Žilina district. Productivity, soil-climatic conditions are specific and less favourable. [1)] Both groups are represented by the sample of 30/30 units, with various legal entities: co-operatives, joint-stock companies, limited liability company.

The methodology is based on a parallel system of indicators. The mentioned indicators are placed broadly beside each other; they are organized into groups by the signs of similarity. Based on the available literature and recommendations of renowned writers, we decided to select the common indicators (#26) of liquidity, indicators of asset management, indicators of indebtedness and profitability. Calculations are realized according to the balances and the profit and loss accounts.[1)]

Table 1. Sample distribution according to legal form of companies (share %)

Legal form	Nitra region	Žilina region	Total
Cooperatives	70	67	68
Limited liability	23	30	27
Joint-stock	7	3	5

Source: own calculations

Based on the mentioned matrix of calculated indicators, there the order of companies is set. Used methods were: method of simple order, method of evaluation by points, method of normative variable, method of distance from a fictional enterprise, method of comparison with the best enterprise. After setting the order of companies, they were sorted into the groups of successfulness by quartiles. Quartiles are statistic characteristics that are very resistant to extreme values. Their distance from the beginning of division characterizes quartiles and this distance is in per cent to be independent on the number of enterprises in the group. For the needs of dividing, usually the quartiles for 25%, 50% and 75% of distance are used. [1)]

RESULTS AND DISCUSSION

General characteristic of the sample

As was already mentioned, businesses are alocated in 2 regions, in the Žilina region, characterized by the average soil price category from 1 to 8. Second is the Nitra region with soil quality rated in groups 14 to 20. It is obvious that in the Southern part, there is a higher quality soil and the overall conditions for intensive agriculture are better as well (climate, terrain, etc.).

Most of the sample was represented by cooperatives (68%), what is slightly more than is officially claimed for the whole agricultural sector in Slovakia. Table 1 represents the proportions of legal forms in the sample.

Table 2 describes the simple distribution according to size of the cultivated land and legal form.

The sample is operating on 109 140.7 ha of agricultural land; out of it, companies in the South-West Slovakia operate 55.7%. It means 60 804.5 ha, the rest of 48 336.1 ha

Table 2. Sample distribution according to legal form and size of company

Size group (operated land)	Share of cooperatives (%)	Share of limited liability companies (%)	Share of joint-stock companies (%)	Share of the sample (%)
up to 1 000 ha	69	26	5	32
1 001–2 000 ha	65	35	0	33
2 001–3 000 ha	70	20	10	17
3 001 ha and more	73	18	9	18

Source: own calculations

Table 3. Average acreage per company according to legal form

Legal form	Cooperatives	Limited liability companies	Joint-stock companies	Sample total
Average acreage (ha)	1 888.0	1 533.3	2 399.3	1 819.0

Source: own calculations

[1] The detailed methodology is in the dissertation of the author: Factors of economical differentiation of Slovak agricultural businesses, Ing. Veronika Beňová Jančíková, Slovenská poľnohospodárska univerzita, Nitra, 2003

Table 4. Volume of profit/loss in the sample

	Measure unit	Volume of profit	Volume of loss	Total result	Average result
Nitra region	TSKK	40 597	–36 151	4 446	148
Žilina region	TSKK	32 074	–25 794	6 280	209
Sample total	TSKK	72 671	–61 945	10 726	179

Source: own calculations

Footnotes: TSKS – thousands of Slovak crowns

Table 5. Share of profit/loss making companies in the sample

	% share of profit	
	profit makers	loss makers
Nitra region	58	41
Žilina region	42	59
Sample total	100	100

Source: own calculations

is operated by the Žilina district sample. The average acreage of a company in the sample is 1 611.2 ha, in the South-West, it is by 20% more, 2 026.8 ha per company. The average acreage of the businesses is documented in Table 3.

The basic characteristic of the company is, besides its legal form or size, the profitability. In the sample, there are 33 companies with positive result. Generally, we cannot assign better or worse results to first or second group. 58% companies with positive result are allocated in the Nitra region (Table 5); they produced bigger volume of profit. On the other hand, there is also bigger volume of loss (Table 4). If we speak about profit per unit, in the better conditions (Nitra region) it is only 148 TSKK (thousands of Slovak crowns), in worse conditions (Žilina region) 209 TSKK. About 59% of the whole sample profit was produced in worse natural conditions.

Analysing profitability in relationship to the legal form, we got the following results (Table 6). Noticeable differences within the sample exist in each region. Interesting is that co-operatives reach better profitability per hectare in worse conditions. On the contrary, in case of limited liability companies, there is a noticeable difference, better results are reached in better conditions, as we expected.

Division of companies into groups by quartiles

The folloving Table 7 and graphs depict the generalized outcomes of sorting of companies by selected methods. There were several methods used to fulfil this aim: method of simple order, pointing method, method of standardized variable, method of distance from fictive company, method of comparison to the best company. After gaining results by computing the ranking of businesses from best to worst, three groups were made out of them. First group was the first quartile, including companies from to the amount of 25% of the sample, starting with the best company (and following first quarter of companies). Medium companies, including 50% of companies, comprised second group. The last group was made out of the worst 25% of companies in the sample.

From the reversed point of view, if we analyse the placement of each region in quartiles, as it is shown in Figure 1, in the first (the best companies) quartile, there are only 19% of the Nitra region companies, the main number of these companies is in the second quartile. The Žilina region is divided more equally. Although the number of the above-average plus average companies is lower than in the Nitra region, we expected a bigger number of the Nitra region companies in the above-average group. The Nitra region companies are mostly on average.

Analysing the successfulness by legal form, we can see that co-operatives run to average or below-average results. Only 19% of co-operatives reach above-average

Table 6. Volume of profit per unit; volume of profit per hectare by legal form and allocation

	Measure unit	Nitra region		Žilina region		Sample total	
		profit/unit	profit/hectare	profit/unit	profit/hectare	profit/unit	profit/hectare
Cooperatives	TSKK/SKK	–560	–267	136	81	–221	–117
Limited liability companies	TSKK/SKK	1 512	1 018	411	262	893	582
Joint-stock companies	TSKK/SKK	2 809	882	–132	–159	1 828	762
Sample total	TSKK/SKK	148	73	209	130	179	98

Source: own calculations

Table 7. Structure of quartiles based on aggregated results (%)

	Above-average	Average	Below-average
Nitra region	33	67	33
Žilina region	67	33	67
Total	100	100	100
Cooperatives	47	67	93
Limited liability companies	53	23	7
Joint-stock companies	0	10	0
Total	100	100	100
up to 1000 ha	47	27	27
1001–2000 ha	27	33	40
2001–3000 ha	20	13	20
3001 ha and more	7	27	13
Total	100	100	100

Source: own calculations

results. Different is the status with the limited liability companies. Up to 89% limited companies are on the above average or average level. Joint-stock companies reach rather average values (Figure 2).

Since there is agricultural economics as a specified field of economics, one of the most discussed questions, often with a political drift, is whether larger businesses are better off than small, rather family-type companies. There is no clear answer in the real world, partially due to the non uniform position of the different sized companies. It often happens that some political regime prefers some type of business, by legal form or by its size. This was also an important question of the ongoing negotiations with the European Union, when the EU prefers small family based farms and most of the candidates to the EU had agriculture with a significant ratio of companies cultivating large acreages. However, this discussion takes into account also the non-production function of agriculture, i.e. environmental, esthetical, etc. From the economic point of view, a

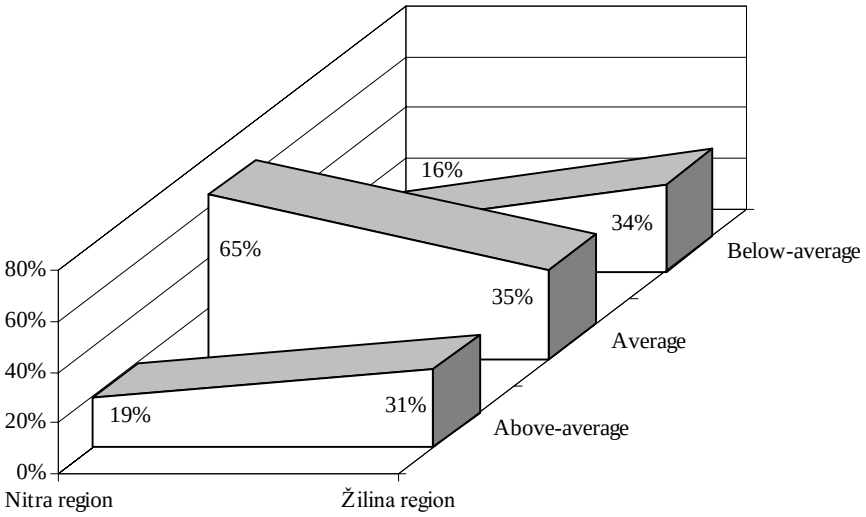

Figure 1. Position of companies by successfulness and allocation

Source: own calculations

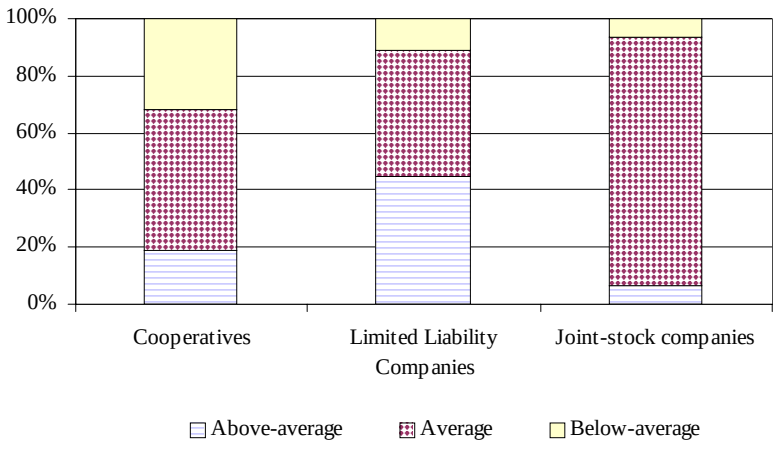

Figure 2. Position of companies by successfulness and legal form

Source: own calculations

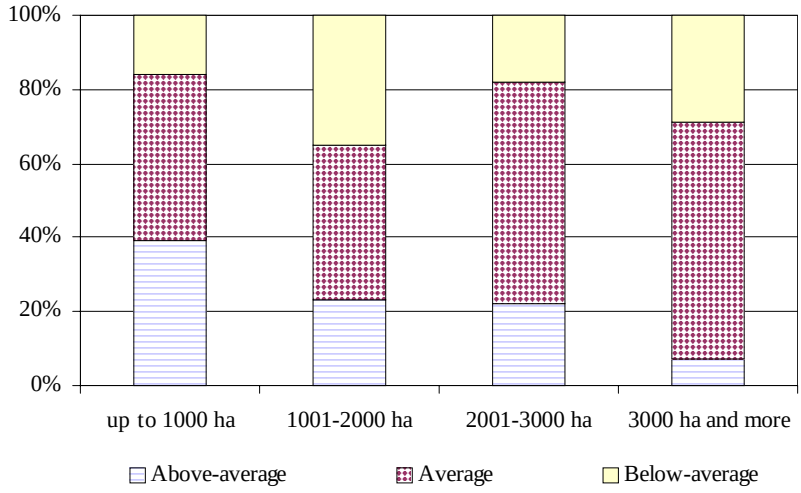

Figure 3. Position of companies by successfulness and size
Source: own calculations

larger company has positive returns to scale, can produce a wider range of products and thus better diversify the risk, and also it has a better access to credits. On the other hand, a larger company needs more management, and the larger the management, the lower the efficiency. Smaller businesses could gain by producing high quality products, and very specified products.

Figure 3 presents companies divided into the groups of size. Regarding to our research, between the best companies, there are mostly companies operating on not more than 1000 hectares. With growth of the size, the number of above-average companies is decreasing. Mostly below-average or average companies characterize the bigger size-group. As it is shown in the graph, the most successful companies operate on less than 1 000 hectares. The second best group is the 2 000–3 000 hectares group.

CONCLUSION

Considering profit and related indicators of financial analysis as the most significant criterion of economic efficiency, it might be said, that it is relevant only since year 1989 in Slovakia. During the times of centrally planned economy (before 1989), the most important task was to achieve the highest possible level of production intensity. The fulfilment of this task created the ground of differentiation of agricultural enterprises.

The transformation process in economy brought changes also into the problems of differentiation. The criterion of intensity was no more the most monitored one; the focus aimed at evaluating methods based on financial and economical analysis. These methods made it possible to classify each individual business into categories and to determine the order of the enterprises by their efficiency.

Until year 1989, the quality of soil and climate conditions were assumed to be the most important factors of efficiency of agricultural enterprises and their profitability. There was meant to be a positive correlation. One of the conclusions of this research points out that nowadays there is no such positive correlation between the profitability ratio and good climatic and soil conditions; on the contrary, the results show that recently Slovak agriculture suffers from inverse effects, when enterprises in worse climatic and soil condition reach better economical results than those producing in better conditions. Profit-making enterprises farming in better conditions reached in average the profit of 148 thousands SKK, while the profit making enterprises operating in worse conditions were having the average profit 209 thousands SKK. However, the criteria of financial and economical analysis indicating activity are showing better results in the group of enterprises farming in better conditions and their trade and production process is more dynamic (shorter turnover period of stocks, shorter liability maturity period).

Another statement resulting from this research shows that by far the best results are achieved by enterprises of the legal status of limited liability companies (having profit of 582 SKK per ha of agricultural land in average), co-operatives could be found on the other end of this scale (having loss of 117 SKK per ha of agricultural land in average).

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