DUPONT ANALYSIS OF FARMS IN V4 COUNTRIES

Jana Ladvenicová*, Zuzana Bajusová, Ľubomír Gurčík, Dávid Červený

Slovak University of Agriculture in Nitra, Slovak Republic

The paper deals with the analysis of factors that influence the change in return on equity (*ROE*) in farms of individual V4 countries – in Slovakia, Poland, Hungary and the Czech Republic. DuPont analysis denotes the decomposition of the *ROE* indicator and is classified as a basic pyramid decomposition. The pyramid system captures the relationship between indicators, where one synthetic indicator (*ROE*) is broken down into analytical indicators through linkages. In the case of a multiplicative link between indicators, the functional and logarithmic method is used. The source of data is the Farm Accountancy Data Network for the period 2009–2017. Comparing the first and last year we can conclude that the *ROE* indicator decreased in farms of all V4 countries (in Slovakia by 155%, in Czech Republic by 133%, in Hungary by 52% and in Poland by 19%). The predominantly positive or negative impact on its development was mainly influenced by two indicators: return on assets and return on sales in all countries.

Keywords: pyramid decomposition; DuPont analysis; *ROE*; farms; V4 countries

Introduction

Pyramid systems belong to modern analytical methods. They are based on a retrospective perspective and can become a verifier of the success of a company. The pyramid system of financial and economic indicators makes it possible to optimize the management of financial processes. The breakdown of financial-economic ratios contributes to a more comprehensive view of business activities in the area of financial decision-making and planning of economic activities (Kotulič and Rajčániová, 2011). As a lack of financial control is often a quick path to business failure, owners and managers often wonder how to improve return they are getting from their companies. Ratio analysis provides loads of information that is useful in this regard. *ROE* and its decomposition is one of the most appropriate measures of financial performance (Ďurišová and Myšková, 2010). The profitability analysis revealing factors influencing the profitability becomes a very helpful tool providing guidelines for managers in their short-term as well as strategic decision-making process. To take right decisions, managers need to analyse their financial situation, especially in respect to firm's profitability and the factors influencing it (Lesáková et al., 2019). Business use the DuPont model to analyse the profitability of business. This model includes three components: net profit margin, asset turnover, and financial leverage (or assets to equity). It is based on the relationships among these three components (Mishra et al., 2009). Competitiveness is defined as the ability to be profitable by effective use of available resources. The profitability indicators (*ROS*, *ROA*, *ROE* and value index) were proposed as measures of competitiveness and resources were indicated as one of the group of factors that has an impact on it (Matyja, 2016).

Material and methods

The paper is based on data from farms operating in V4 countries –Slovakia, Poland, Hungary and the Czech Republic. The data were taken from the Farm Accountancy Data Network database for the period 2009–2017. The pyramid system of indicators is used to assess the impact of changes of individual factors on the change of the pyramid peak indicator – *ROE*. In the pyramid decomposition, there is a multiplication among the indicators, thus we talk about a multiplicative bond. If there is a census between the indicators, we are talk about additive binding. In the case of multiplicative linkage, we used the functional method in both first and second row of decomposition, especially in the case of achieving a negative economic result, which was

reported in farms in Slovakia. In other countries where profit was reported, we used the logarithmic method in the case of multiplicative linkage in the second row of decomposition.
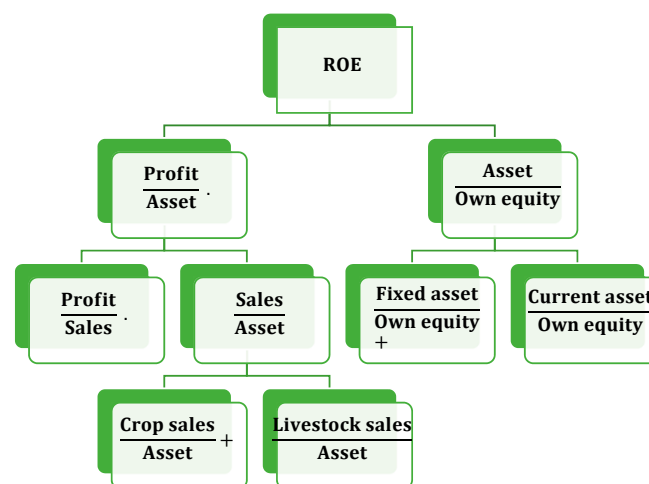

Figure 1 Pyramid decomposition of *ROE*
Source: Authors own processing

1st row of decomposition:

$$\frac{profit}{own\ equity}(ROE) = \frac{profit}{asset} \cdot \frac{asset}{own\ equity}$$

We verify how is *ROE* affected in absolute and relative terms when the indicators of return on assets (*ROA*) and the share of assets in equity change (Financial leverage), through the functional method:

$$\frac{\dfrac{profit}{asset}}{\dfrac{profit_0}{asset_0}} = A \qquad \frac{\dfrac{asset}{own\ equity}}{\dfrac{asset_0}{own\ equity_0}} = B$$

$$ROE_{\frac{profit}{asset}} = A\,\frac{profit_0}{own\ equity_0}\left(1+\frac{B}{2}\right) \quad ROE_{\frac{asset}{own\ equity}} = B\,\frac{profit_0}{own\ equity_0}\left(1+\frac{A}{2}\right)$$

Relatively expression:

$$\left| \begin{array}{l} ROE_{\frac{profit}{asset}} \dots\dots\dots\dots\dots? \% \\ \Delta ROE \dots\dots (\text{Index } ROE - 1) \times 100 \end{array} \right| \quad \left| \begin{array}{l} ROE_{\frac{asset}{own\ equity}} \dots\dots\dots\dots? \% \\ \Delta ROE \dots\dots (\text{Index } ROE - 1) \times 100 \end{array} \right|$$

2nd row of decomposition:

$$\frac{profit}{asset} = \frac{profit}{sales} \cdot \frac{sales}{asset}$$

There is a multiplicative link between the indicators return on sales (*ROS*) and turnover of assets and we will use the logarithmic method in case of profit recognition to calculate the impact of changes on *ROE* change:
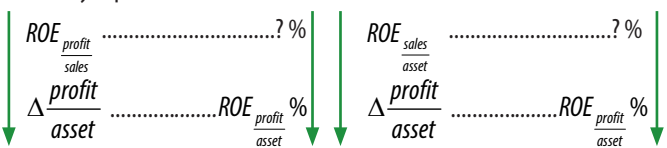
$$ROE_{\frac{sales}{asset}} = \frac{\log 1 \frac{sales}{asset}}{\log 1 \frac{profit}{asset}} \cdot ROE_{\frac{profit}{asset}} \qquad ROE_{\frac{profit}{sales}} = \frac{\log 1 \frac{profit}{sales}}{\log 1 \frac{profit}{asset}} \cdot ROE_{\frac{profit}{asset}}$$

If farms show a loss, we use the functional method:

$$\frac{\Delta \frac{profit}{sales}}{\frac{profit_0}{sales_0}} = A \qquad\qquad \frac{\Delta \frac{sales}{asset}}{\frac{sales_0}{asset_0}} = B$$

$$ROE_{\frac{profit}{sales}} = A \frac{profit_0}{asset_0}\left(1 + \frac{B}{2}\right) \qquad ROE_{\frac{sales}{asset}} = B \frac{profit_0}{asset_0}\left(1 + \frac{A}{2}\right)$$

Relatively expression:

$$\left| \begin{array}{l} ROE_{\frac{profit}{sales}} \dots\dots\dots\dots? \% \\ \Delta \frac{profit}{asset} \dots\dots ROE_{\frac{profit}{asset}} \% \end{array} \right| \quad \left| \begin{array}{l} ROE_{\frac{sales}{asset}} \dots\dots\dots\dots? \% \\ \Delta \frac{profit}{asset} \dots\dots ROE_{\frac{profit}{asset}} \% \end{array} \right|$$

In 2nd row of decomposition on the right side of pyramid decomposition is additive link:

$$\frac{asset}{own\ equity} (equity\ multiplier) = \frac{fixed\ asset}{own\ equity} + \frac{current\ asset}{own\ equity}$$

We study how the changes of *fixed asset/own equity* and *current asset/ own equity* affect the change in *ROE* in absolute and relative terms.

$$ROE_{\frac{fixed\ asset}{own\ equity}} = \frac{\Delta \frac{fixed\ asset}{own\ equity}}{\Delta \frac{asset}{own\ equity}} \cdot \frac{profit}{own\ equity}_{\frac{asset}{own\ equity}}$$

$$ROE_{\frac{current\ asset}{own\ equity}} = \frac{\Delta \frac{current\ asset}{own\ equity}}{\Delta \frac{asset}{own\ equity}} \cdot \frac{profit}{own\ equity}_{\frac{asset}{own\ equity}}$$

3rd row of decomposition is represented by additive link, where the turnover of the assets is broken down into the share of the crop and livestock sales on the total assets. We find that if the share of crop and livestock sales on asset changes how it affects the change in *ROE* in absolute and relative terms.

$$\frac{sales}{asset} (asset\ turnover) = \frac{crop\ sales}{asset} + \frac{livestock\ sales}{asset}$$

$$ROE_{\frac{crop\ sales}{asset}} = \frac{\Delta \frac{crop\ sales}{asset}}{\Delta \frac{sales}{asset}} \cdot ROE_{\frac{sales}{asset}}$$

$$ROE_{\frac{livestock\ sales}{asset}} = \frac{\Delta \frac{livestock\ sales}{asset}}{\Delta \frac{sales}{asset}} \cdot ROE_{\frac{sales}{asset}}$$

Results and discussion

Slovak republic

The total area of utilized agricultural land in 2017 was 1,910,654 ha, which is less by 19,694 ha than in 2009. In recent years, extreme drought has been affecting agricultural production and crop yields, which has plagued Slovakia. Farmers must therefore address this problem with irrigation systems. Without the sector's support, many farms would be loss-making, facing economic problems. In 2009, a loss was achieved in the agricultural sector, for the first time since Slovakia joined the EU. This unfavorable situation was mainly caused by the global economic and financial crisis, a sharp fall in commodity prices.

In 2017, the agricultural sector was profitable. In 2017; 47,700 persons worked in agriculture, which is less by 17,600 persons than in 2009. Wages in agriculture increased, with an average nominal monthly wage of 735 € in 2017 (which is more than in 2009 when it was 585 €), but there is still a disparity between wages in this sector and wages in other sectors. Plant production prevails over animal production. From the point of view of cultivated agricultural crops, cereals, oilseeds and sugar beet prevail.

From V4 countries only Slovak farms reported loss in some years. In the case of a multiplicative link between the indicators, we quantified the effects of the changes in the indicators on the *ROE* change by a functional method. *ROE* reached a negative value only in two years, namely in 2012 (decrease by 0.0296 € or 171%) and in 2017 (decrease by 0.1070 € or 91%). The decline in *ROE* was due mainly to the *ROA* and *ROS*. In the following years of the analyzed period, *ROE* reached positive values, with the highest values in 2014 (0.0441 € and 456%). *ROE* was increased by *ROA* by 437%, *ROS* by 440%, financial leverage by 19%, share of fixed asset on equity by 22%, but also *ROA* in relation to sales from livestock production by 6%.

Czech republic

In terms of economic growth, year 2009 was the worst year for the Czech Republic since 1993. The effects of the global economic and financial crisis have mitigated support for agriculture. In 2017, Czech agriculture made a profit. Plant production prevails over animal production. The area of agricultural land fund was 4,239 thousand ha and by 2017 decreased to 4,205 thousand ha. In 2009 there were approximately 120,200 persons working in the Czech agriculture, which is by 23,800 persons more than in 2017. In 2009, the average monthly wage reached CZK 17,259 (669.45 €), and by 2017 it increased to CZK 23,713 (919.79 €). From the perspective of cultivated crops, cereal cultivation prevails (wheat, barley, corn, sugar beet, oilseeds).

Table 1   Quantification of pyramid decomposition of *ROE* indicator in Slovakia in period 2009–2017

Indicator/year	2010	2011	2012	2013	2014	2015	2016	2017
ROE (€)	0.1068	0.0791	-0.0296	0.0026	0.0441	0.0081	0.0744	-0.107
ROE (%)	63.348	128.04	-170.85	21.261	456.12	23.538	175.02	-91.5
ROA (€)	0.1011	0.0793	-0.0295	0.0029	0.0423	0.0048	0.0700	-0.108
ROA (%)	59.971	128.311	-170.496	23.512	437.086	13.983	164.596	-92.646
Financial leverage (€)	0.0057	-0.0002	-0.0001	-0.0003	0.0018	0.0033	0.0044	0.0013
Financial leverage (%)	3.3776	-0.2708	-0.3547	-2.251	19.035	9.5554	10.427	1.1466
ROS (€)	0.1054	0.0826	-0.0295	0.0030	0.0426	0.0095	0.0674	-0.107
ROS (%)	62.478	133.687	-170.140	24.049	440.222	27.577	158.496	-91.617
Asset Turnover (€)	-0.0042	-0.0033	-0.0001	-0.0001	-0.0003	-0.0047	0.0026	-0.0012
Asset Turnover (%)	-2.5075	-5.3761	-0.3557	-0.5367	-3.1359	-13.594	6.1001	-1.0293
Fixed asset/OE (€)	0.0119	0.0001	0.0000	-0.0006	0.0021	0.0026	0.0026	0.0020
Fixed asset/OE (%)	7.0303	0.1843	-0.0223	-5.1829	21.5152	7.4307	6.1390	1.6926
Current Asset/OE (€)	-0.0062	-0.0003	-0.0001	0.0004	-0.0002	0.0007	0.0018	-0.0006
Current asset/OE (%)	-3.6527	-0.4551	-0.3324	2.9314	-2.4799	2.1248	4.2877	-0.5460
Crop sales/Asset (€)	-0.0051	-0.0053	-0.0001	-0.0005	-0.0008	-0.0019	0.0036	-0.0035
Crop sales/Asset (%)	-3.0497	-8.5116	-0.7724	-4.2126	-8.7686	-5.6358	8.5713	-2.9555
Livestock sales/Asset (€)	0.0009	0.0019	0.0001	0.0005	0.0005	-0.0027	-0.0011	0.0023
Livestock sales/Asset (%)	0.5421	3.1355	0.4167	3.6759	5.6326	-7.9585	-2.4712	1.9262

Source: Authors own calculations

Table 2   Quantification of pyramid decomposition of *ROE* indicator in Czech Republic in period 2009–2017

Indicator/year	2010	2011	2012	2013	2014	2015	2016	2017
ROE (€)	0.0226	0.0365	-0.0019	-0.0027	0.0573	-0.0438	-0.0071	0.0040
ROE (%)	138.4698	93.7882	-2.5535	-3.7391	81.0445	-34.2502	-8.4345	5.1797
ROA (€)	0.0226	0.0362	-0.0032	-0.0008	0.0472	-0.0440	-0.0078	0.0037
ROA (%)	138.5044	93.2114	-4.2081	-1.0562	66.8048	-34.3609	-9.2578	4.8249
Financial leverage (€)	0.0000	0.0002	0.0012	-0.0020	0.0101	0.0001	0.0007	0.0003
Financial leverage (%)	-0.0345	0.5768	1.6546	-2.6829	14.2397	0.1107	0.8233	0.3548
ROS (€)	0.0213	0.0361	-0.0018	0.0041	0.0271	-0.0352	-0.0041	0.0049
ROS (%)	130.9588	92.8059	-2.4344	5.5340	38.2835	-27.4836	-4.8746	6.3838
Asset Turnover (€)	0.0012	0.0002	-0.0013	-0.0048	0.0202	-0.0088	-0.0037	-0.0012
Asset Turnover (%)	7.5456	0.4055	-1.7737	-6.5902	28.5214	-6.8773	-4.3832	-1.5589
Fixed asset/OE (€)	0.0000	-0.0003	0.0013	-0.0011	-0.0020	0.0007	0.0009	0.0007
Fixed asset/OE (%)	0.0959	-0.8117	1.6660	-1.4896	-2.8950	0.5241	1.0905	0.8900
Current Asset/OE (€)	0.0000	0.0005	0.0000	-0.0009	0.0121	-0.0005	-0.0002	-0.0004
Current asset/OE (%)	-0.1304	1.3886	-0.0114	-1.1934	17.1347	-0.4134	-0.2672	-0.5352
Crop sales/Asset (€)	0.0010	0.0036	-0.0003	-0.0023	0.0166	-0.0045	-0.0012	-0.0053
Crop sales/Asset (%)	6.3481	9.2475	-0.4375	-3.1172	23.4757	-3.5082	-1.4665	-6.8298
Livestock sales/Asset (€)	0.0002	-0.0034	-0.0010	-0.0025	0.0036	-0.0043	-0.0025	0.0041
Livestock sales/Asset (%)	1.1975	-8.8420	-1.3362	-3.4730	5.0457	-3.3691	-2.9167	5.2709

Source: Authors own calculations

Czech farms made a profit in each analyzed year. *ROE* decreased by 0.0186 € in 2017 compared to 2010. Negative values were reached in *ROE* in 2012, 2013, 2015 and 2016. In 2015, *ROE* was mainly decreased by *ROA* (by 34%), *ROS* (by 27%), turnover of assets by 7%, the share of current assets in equity (by 0.41%), turnover of assets in relation to crop and livestock sales. *ROE* reached its highest value in 2010, at the beginning of the analyzed period. The *ROE* growth was due to *ROA*, which increased it by 0.0226 €, respectively by 139%, *ROS*, which increased it by 0.0213 €, resp. by 131%. In this year, was *ROE* decreased only by financial leverage by a small 0.03% and the share of current assets in equity by -0.13%

Hungary

Hungary's location compared to other V4 countries has favourable climatic conditions for the development of agricultural production. It lies the southernmost. The area of agricultural land in 2009 was 5,783,3 thousand ha and subsequently to 2017 decreased to 5,352.3 thousand ha. The sector employed 174,900 people in 2009 and subsequently increased to 220,000 by 2017. The average gross wage in the agro sector was 143,861 HUF (431.19 €), before rising to 230,638 HUF (691.28 €). Plant and livestock production are widespread. In terms of plant production, the cultivation of cereals (wheat, maize), sugar beet, oilseeds, tobacco, vegetables prevail. Animal production is dominated by pigs, cattle, horses, sheep and poultry.

When we compare last and first year of analysed period *ROE* in Hungarian farms decreased by 0.0358 €, resp. 52%. The highest value of *ROE* was reached in 2010. *ROE* mainly increased by *ROA* by 0.0433 €, resp. 61%, *ROS* by 0.044 €, resp. 62%, and also the turnover of assets in relation to crop sales by 0.0018 €, resp. by 2.5%. Other indicators decreased *ROE*. *ROE* showed the most unfavorable value in 2015. The decline in *ROE* was caused mainly

due to *ROA*, *ROS*, but also all other indicators, except for the share of fixed assets in equity, which increased *ROE* by 0.0003 €, resp. by 0.19%.

Poland

The agricultural sector plays an important role in Poland's national economy. It is the main source of living for many people. Polish agriculture is characterized by great fragmentation. The area of agricultural land in Poland reached 15,503 thousand ha and then to 2017 decreased to 14,620.3 thousand ha. In 2017, 2,386 thousand people worked in agricultural sector, while in 2009 it was approximately 2,376 thousand people. The average gross wage in this sector was 4,597.51 Zł (1,061.14 €) in 2017, which increased by 1,630.61 Zł (376.36 €) compared to 2009. The plant production is dominated by cereals (basic cereals with cereal mixtures, barley, oats, corn, buckwheat, millet), but also potatoes, sugar beet, oilseeds, ground vegetables. For livestock production the most common are cattle, pigs and poultry.

ROE in Polish farms reached a downward trend until 2017 compared to 2010, decreased by 0.0109 € respectively by 18.54%. The highest *ROE* value was reached in 2010. The increase in *ROE* was attributable to *ROA*, *ROS*, share of current assets in equity, turnover of assets in relation to revenues from crop production, other indicators decreased *ROE* year. Unfavorable and very similar values were recorded in the development of *ROE* in 2013, 2014 and 2015. The decrease in *ROE* in 2013 was caused by *ROA*, which decreased it by 0.0095 €, resp. by 13%, but also *ROS*, which reduced *ROE* by € 0.0051, resp. 7%, turnover of assets (decrease of *ROE* by 0.0045 € or 6%), as well as share of current assets in equity, turnover of assets in relation to both analyzed sales. In 2014, *ROE* was mainly decreased by asset turnover by € 0.1077 respectively by 171% and after that *ROE* was reduced by both, asset turnover by 1.3% in relation to sales of crop production, but mainly in relation to sales of animal production

Table 3 Quantification of pyramid decomposition of *ROE* indicator in Hungary in 2009–2017

Indicator/year	2010	2011	2012	2013	2014	2015	2016	2017
ROE (€)	0.0392	0.0476	-0.0252	-0.0142	0.0242	-0.0309	0.0101	0.0034
ROE (%)	54.8754	43.0293	-15.9527	-10.674	20.3496	-21.6275	9.0378	2.7634
ROA (€)	0.0433	0.0480	-0.0192	-0.0136	0.0236	-0.0309	0.0126	0.0036
ROA (%)	60.6459	43.4049	-12.145	-10.222	19.8569	-21.622	11.219	2,9398
Financial leverage (€)	-0.0041	-0.0004	-0.006	-0.001	0.0006	0.000	-0.002	-0.000
Financial leverage (%)	-5.7706	-0.3756	-3.8075	-0.452	0.4927	-0.0051	-2.181	-0.176
ROS (€)	0.0440	0.0582	-0.0178	-0.010	0.1758	-0.0261	0.0243	0.004
ROS (%)	61.6665	52.6168	-11.229	-7.788	148.014	-18.2699	21.721	3.5225
Asset Turnover (€)	-0.0007	-0.0102	-0.0015	-0.003	-0.1522	-0.0048	-0.012	-0.001
Asset Turnover (%)	-1.0206	-9.2119	-0.9167	-2.434	-128.16	-3.3525	-10.50	-0.583
Fixed asset/OE (€)	-0.0038	-0.0041	-0.0030	-0.001	0.0039	0.0003	-0.004	0,0007
Fixed asset/OE (%)	-5.3515	-3.6897	-1.9019	-0.4797	3.2766	0.1913	-3.231	0.5979
Current Asset/OE (€)	-0.0003	0.0037	-0.0030	0.0000	-0.0033	-0.0003	0.001	-0.001
Current asset/OE (%)	-0.4200	3.3141	-1.9061	0.0279	-2.7839	-0.1964	1.05	-0.775
Crop sales/Asset (€)	0.0018	0.0042	-0.0025	-0.002	0.0014	-0.0042	-0.002	-0.005
Crop sales/Asset (%)	2.4957	3.7580	-1.5499	-1.579	1.1615	-2.9182	-1.308	-4.342
Livestock sales/Asset (€)	-0.0025	-0.0143	0.0010	-0.001	-0.1536	-0.0006	-0.010	0.005
Livestock sales/Asset (%)	-3.5162	-12.97	0.6331	-0.855	-129.31	-0.4343	-9.195	3.7596

Source: Authors own calculations

Table 4 Quantification of pyramid decomposition of *ROE* indicator in Poland in period 2009–2017

Indicator/year	2010	2011	2012	2013	2014	2015	2016	2017
ROE €	0.0190	0.0044	-0.0059	-0.0084	-0.0081	-0.0061	0.0003	0.0081
ROE (%)	35.1797	6.0147	-7.6694	-11.8012	-12.9217	-11.2197	0.6283	16.6386
ROA €	0.0191	0.0045	-0.0045	-0.0095	-0.0081	-0.0062	0.0004	0.0082
ROA (%)	35.4057	6.1767	-5.7897	-13.3770	-12.8741	-11.2357	0.8976	16.7961
Financial leverage €	-0.0001	-0.0001	-0.0015	0.0011	0.0000	0.0000	-0.0001	-0.0001
Financial leverage (%)	-0.226	-0.162	-1.88	1.5758	-0.048	0.016	-0.269	-0.158
ROS €	0.0238	0.0059	-0.0019	-0.0051	0.0996	-0.0041	0.0030	0.0063
ROS (%)	44.2051	8.1475	-2.5112	-7.1035	158.3243	-7.4168	6.2169	12.8660
Asset Turnover €	-0.0047	-0.0014	-0.0025	-0.0045	-0.1077	-0.0021	-0.0026	0.0019
Asset Turnover (%)	-8.7995	-1.9708	-3.2785	-6.2735	-171.1983	-3.8189	-5.3192	3.9301
Fixed asset/OE €	-0.0006	-0.0008	-0.0015	0.0013	0.0011	0.0000	-0.0003	-0.0002
Fixed asset/OE (%)	-1.0595	-1.0740	-1.9828	1.7958	1.7734	0.0388	-0.7028	-0.4232
Current Asset/OE €	0.0004	0.0007	0.0001	-0.0002	-0.0011	0.0000	0.0002	0.0001
Current asset/OE (%)	0.8334	0.9120	0.1031	-0.2200	-1.8210	-0.0228	0.4335	0.2657
Crop sales/Asset €	0.0008	0.0004	0.0002	-0.0008	-0.0008	-0.0004	-0.0007	0.0001
Crop sales/Asset (%)	1.4757	0.5197	0.3033	-1.1823	-1.2733	-0.8061	-1.4301	0.1809
Livestock sales/Asset €	-0.0055	-0.0018	-0.0028	-0.0036	-0.1069	-0.0017	-0.0019	0.0018
Livestock sales/Asset (%)	-10.275	-2.491	-3.582	-5.0912	-169.925	-3.013	-3.889	3.7491

Source: Authors own calculations

by 170%. In 2015, *ROE* was reduced by all indicators except for leverage, the share of fixed assets in equity.

Conclusion

Agriculture is an important sector in all V4 countries. The area of agricultural land decreases in each country. The number of people working in the agro sector decreased between 2009 and 2017 in the Czech Republic and also in Slovakia. In Poland and Hungary, there is a growing interest in working in an agro sector. Average wages in this sector increased until 2017 in the V4 countries. In terms of quantification of pyramid decomposition of *ROE*, it decreased in the farms of all V4 countries in comparison over the years 2017–2010; the most in Slovakia by 155% and in Czech farms by 0.0186 €, resp. by 133%. The average value of *ROE* in the period under review was the highest in farms in the Slovak Republic at the level of 0.0223 €, resp. 76% and the lowest in farms in Poland, where the average *ROE* was 0.0004 € respectively 1.86%. In this period, *ROE* was decreased by the profitability of assets (on Slovak farms by 153%, Czech farms by 134%, farms in Hungary by 58% and farms in Poland by 19%), but also by the profitability of sales significantly (on Slovak farms by 154%, farms in the Czech Republic by 125%, farms in Hungary by 58% and farms in Poland by 31%).

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Contact address:

Ing. Jana Ladvenicová, PhD., Slovak University of Agriculture in Nitra, Faculty of Economics and Management, Department of Economics, Tr. Andreja Hlinku 2, 949 76 Nitra, Slovakia, tel.+421/37/641 45 94; e-mail: jana.ladvenicova@uniag.sk,