

<https://doi.org/10.17221/78/2019-AGRICECON>

A statistical analysis of the financial performance of organic and conventional farms in the Czech Republic with respect to their size

FILIP HAMPL*

Department of Finance, Faculty of Economics and Administration, Masaryk University, Brno, Czech Republic

*Corresponding author: filip.hampl@mail.muni.cz

The authors are fully responsible for both the content and the formal aspects of the electronic supplementary material. No editorial adjustments were made.

Electronic supplementary material

Supplementary Tables S1–3

Table S1. Results of *post hoc* Dunn's test for ROS and ROA

| Groups of farms | ROS | | | ROA | | |
|-----------------|---------|--------------|--------------|---------|--------------|--------------|
| | Z value | adj. P-value | significance | Z value | adj. P-value | significance |
| C1 vs. C2 | -1.038 | 0.408 | ns | -2.144 | 0.120 | ns |
| C1 vs. C3 | -2.339 | 0.029 | ** | -3.532 | 0.006 | *** |
| C2 vs. C3 | -0.977 | 0.411 | ns | -0.880 | 0.711 | ns |
| C1 vs. O1 | -6.198 | 0.000 | *** | -2.654 | 0.060 | * |
| C2 vs. O1 | -4.479 | 0.000 | *** | -0.247 | 1.000 | ns |
| C3 vs. O1 | -4.153 | 0.000 | *** | 0.692 | 0.815 | ns |
| C1 vs. O2 | -4.646 | 0.000 | *** | -1.875 | 0.182 | ns |
| C2 vs. O2 | -3.359 | 0.002 | *** | 0.127 | 1.000 | ns |
| C3 vs. O2 | -2.857 | 0.007 | *** | 0.966 | 0.835 | ns |
| O1 vs. O2 | 0.600 | 0.633 | ns | 0.369 | 1.000 | ns |
| C1 vs. O3 | -5.547 | 0.000 | *** | -2.262 | 0.119 | ns |
| C2 vs. O3 | -3.977 | 0.000 | *** | 0.015 | 0.988 | ns |
| C3 vs. O3 | -3.559 | 0.001 | *** | 0.956 | 0.726 | ns |
| O1 vs. O3 | 0.390 | 0.746 | ns | 0.279 | 1.000 | ns |
| O2 vs. O3 | -0.246 | 0.806 | ns | -0.118 | 0.970 | ns |

The asterisks indicate statistical significance levels at 0.1 (*), 0.05 (**) and 0.01 (***); ns – no statistical significance; C – conventional; O – organic; 1 – micro I; 2 – micro II; 3 – small; ROS – return on sales; ROA – return on assets

Source: Own calculations

<https://doi.org/10.17221/78/2019-AGRICECON>Table S2. Results of *post hoc* Dunn's test for *DR*, *OR* and *PCR*

| Groups of farms | <i>DR</i> | | | <i>OR</i> | | | <i>PCR</i> | | |
|-----------------|-----------|----------------------|-------|-----------|----------------------|-------|------------|----------------------|-------|
| | Z value | adj. <i>P</i> -value | sign. | Z value | adj. <i>P</i> -value | sign. | Z value | adj. <i>P</i> -value | sign. |
| C1 vs. C2 | 2.160 | 0.092 | * | 0.731 | 0.537 | ns | 1.577 | 0.157 | ns |
| C1 vs. C3 | 3.427 | 0.005 | *** | 1.233 | 0.272 | ns | 2.987 | 0.005 | *** |
| C2 vs. C3 | 0.772 | 0.508 | ns | 0.326 | 0.798 | ns | 0.988 | 0.404 | ns |
| C1 vs. O1 | 0.859 | 0.533 | ns | -7.629 | 0.000 | *** | -3.144 | 0.004 | *** |
| C2 vs. O1 | -1.362 | 0.325 | ns | -7.488 | 0.000 | *** | -4.340 | 0.000 | *** |
| C3 vs. O1 | -2.455 | 0.053 | * | -9.129 | 0.000 | *** | -6.183 | 0.000 | *** |
| C1 vs. O2 | 1.147 | 0.377 | ns | -3.538 | 0.001 | *** | -2.143 | 0.048 | ** |
| C2 vs. O2 | -0.807 | 0.525 | ns | -3.866 | 0.000 | *** | -3.316 | 0.002 | *** |
| C3 vs. O2 | -1.628 | 0.222 | ns | -4.645 | 0.000 | *** | -4.648 | 0.000 | *** |
| O1 vs. O2 | 0.413 | 0.680 | ns | 2.887 | 0.005 | *** | 0.515 | 0.650 | ns |
| C1 vs. O3 | 3.620 | 0.004 | *** | -4.253 | 0.000 | *** | -3.080 | 0.004 | *** |
| C2 vs. O3 | 1.186 | 0.393 | ns | -4.501 | 0.000 | *** | -4.256 | 0.000 | *** |
| C3 vs. O3 | 0.548 | 0.625 | ns | -5.555 | 0.000 | *** | -5.979 | 0.000 | *** |
| O1 vs. O3 | 2.743 | 0.031 | ** | 3.007 | 0.004 | *** | -0.063 | 0.950 | ns |
| O2 vs. O3 | 1.963 | 0.124 | ns | -0.212 | 0.832 | ns | -0.555 | 0.668 | ns |

The asterisks indicate statistical significance levels at 0.1 (*), 0.05 (**) and 0.01 (***); ns – no statistical significance; C – conventional; O – organic; 1 – micro I; 2 – micro II; 3 – small; *OR* – operating ratio; *PCR* – personnel cost ratio; *DR* – debt ratio

Source: Own calculations

Table S3. Results of *post hoc* Dunn's test for *CR* and *ATR*

| Groups of farms | <i>CR</i> | | | <i>ATR</i> | | |
|-----------------|-----------|----------------------|--------------|------------|----------------------|--------------|
| | Z value | adj. <i>P</i> -value | significance | Z value | adj. <i>P</i> -value | significance |
| C1 vs. C2 | 0.309 | 0.812 | ns | -0.860 | 0.585 | ns |
| C1 vs. C3 | -1.003 | 0.474 | ns | -0.562 | 0.717 | ns |
| C2 vs. C3 | -1.196 | 0.434 | ns | 0.395 | 0.800 | ns |
| C1 vs. O1 | 1.285 | 0.497 | ns | 6.168 | 0.000 | *** |
| C2 vs. O1 | 0.837 | 0.549 | ns | 6.319 | 0.000 | *** |
| C3 vs. O1 | 2.314 | 0.155 | ns | 6.956 | 0.000 | *** |
| C1 vs. O2 | 1.649 | 0.298 | ns | 4.557 | 0.000 | *** |
| C2 vs. O2 | 1.243 | 0.458 | ns | 4.909 | 0.000 | *** |
| C3 vs. O2 | 2.515 | 0.178 | ns | 5.142 | 0.000 | *** |
| O1 vs. O2 | 0.551 | 0.671 | ns | -0.663 | 0.692 | ns |
| C1 vs. O3 | -0.804 | 0.527 | ns | 5.596 | 0.000 | *** |
| C2 vs. O3 | -1.013 | 0.519 | ns | 5.826 | 0.000 | *** |
| C3 vs. O3 | 0.105 | 0.917 | ns | 6.319 | 0.000 | *** |
| O1 vs. O3 | -1.997 | 0.172 | ns | -0.315 | 0.753 | ns |
| O2 vs. O3 | -2.256 | 0.120 | ns | 0.372 | 0.761 | ns |

The asterisks indicate statistical significance levels at 0.1 (*), 0.05 (**) and 0.01 (***); ns – no statistical significance; C – conventional; O – organic; 1 – micro I; 2 – micro II; 3 – small; *CR* – current ratio; *ATR* – asset turnover ratio

Source: Own calculations