

TESTING DIFFERENCES OF MEANS

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In Finland the profitability bookkeeping of farms has long traditions of more than 100 years. Accounting and other farm-level data are collected every year from more than 1000 voluntary farms. By suitably weighting the results with weight factors calculated individually for each farm taking into account the type of operations, economic size and location by support areas, the data is used to describe the results of all Finnish farms. The results are published on Economy Doctor online service.

On Economy Doctor online service various descriptive statistics of agricultural enterprises are reported on average-level by different classification factors. These averages may be different between groups, but user is unable to distinguish are the differences significant and which groups differ from each other. A system of analyses shall be produced that automatically analyses differences between groups and provides reporting accordingly. The aim is to develop Economy Doctor online service even more versatile and to produce concrete help for researchers, decision makers and advisers.

We compare and test the means of different variable groups - are the differences statistically significant. If statistically significant differences are found, the differences are real not random and test results can be seen in the reports of EconomyDoctor as typical statistic report ($p < 0,05$ *, $p < 0,01$ **, $p < 0,001$ ***). If the tests prove that means are different from each other statistically significant we also test differences of means pairwise.

The system is under construction. Necessary codes and logical chains including various parametric and non-parametric tests have been written in SAS. Written code first checks the number of observations and required assumptions before statistical testing. How to visually and technically report the results on Economy Doctor is under consideration.

References

EconomyDoctor Internet-service: <http://www.mtt.fi/economydoctor>