

EconomyDoctor - reporting of differences of means

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Background (FADN data)



- The Farm Accountancy Data Network (FADN) is an instrument for evaluating the income of agricultural holdings and the impacts of the Common Agricultural Policy¹.
- FADN data is collected every year from a sample of the agricultural holdings in the European Union.
- Natural Resources Institute Finland (Luke) is responsible of organizing the delivery of survey results to the EU from Finland.
- Every year microeconomic data is collected from approximately 900 voluntary agricultural holdings.
- Using the weight factors the data are used to describe the results of all Finnish farms.

¹ CAP at glance: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

Background (Economy Doctor)



- Economy Doctor¹ is a reporting service for publishing time series of business activities and income of Finnish agricultural holdings.
- Due to data confidentiality decrees the results are published at average level by region, economic size and type of holding.
- Year-to-year changes are often of interest when studying economic performance and comparing the previous results present situation.
- To calculate the changes it may be needed to gather information from various sources and then subtract the results.

¹ Economy Doctor: www.luke.fi/economydoctor

Objectives



























- We developed a new feature in Economy Doctor internet reporting service.
- A routine programmed in Economy Doctor calculates for any economic report the differences between selected years of interest.
- The objective of this project was to implement automated calculation routines for more effective utilization of sample survey results without compromising data privacy.
- The overall target is to develop Economy Doctor reporting service to produce more concrete help for researchers, decision makers and the public audience.

Economy Doctor Internet-service www.luke.fi/economydoctor



Language selection: [Suomeksi](#) [På svenska](#) [In English](#)

-  **FADN Standard Results (SO)** ▶
Results of EU member countries 2004-2016p
Results updated 20.08.2018
-  **FADN Advanced Results (SO)** ▶
Key ratios calculated of EU results by member countries 2004-2016p
Results updated 02.07.2018
-  **FADN Standard Results (SGM)** ▶
Results of EU member countries 1989-2009
Results updated 20.08.2018
-  **FADN Advanced Results (SGM)** ▶
Key ratios calculated of EU results by member countries 1989-2009
Results updated 02.07.2018
-  **Reindeer farming** ▶
Results 2016/17 published 06.07.2018
-  **Unit cost of the reindeer husbandry** ▶
Results 2016/17 published 06.07.2018
-  **Beekeeping** ▶
Results 2015 published 30.06.2017
-  **Unit Costs of Beekeeping** ▶
Results 2015 published 05.09.2017
-  **Fur farming** ▶
Results of accounting year 2006
-  **Coastal Fishing** ▶
Results 2015 updated 22.06.2017
Results 2016 published 30.11.2017
-  **Marine Fishery** ▶
Results 2016 published 12.09.2018
-  **Aquaculture** ▶
Service published 07.10.2016
Results 2015 published 05.10.2017
-  **Fish processing and fish trade** ▶
Results 2016 published 12.09.2018

-  **Agriculture and horticulture** ▶
Forecasts 2017E updated 14.08.2018
Forecasts 2018E updated 14.08.2018
-  **Total Calculation** ▶
Results 2016 published 23.02.2018
-  **Unit costs of agricultural products** ▶
Service published 19.12.2014
Results updated 19.01.2015
-  **Farm Productivity** ▶
To be published ...
-  **Direct selling** ▶
To be published ...
-  **The Structural Development of Agriculture** ▶
Structure Development 2000-2016
Results updated 23.02.2018
-  **Production Structure** ▶
To be published ...
-  **Concentration of Production** ▶
To be published ...
-  **Forecast of Structural Development** ▶
Structure Development 2000-2025E
Results updated 22.02.2018
-  **Soil class information** ▶
Results published 11.03.2014
Results updated 10.04.2017
-  **Greenhouse gas emission** ▶
Results published 13.08.2018
Results updated 12.09.2018

← [Greenhouse gas emissions from agricultural enterprises have fallen relative to production – Luke's new greenhouse gas emission calculation service now open](#)

06.07.18 [Small increase in the profitability of reindeer herding](#)

02.03.18 [Agricultural profits continue to decline in 2016](#)

30.11.17 [Profitability of coastal fishing remained unchanged](#)

17.10.17 [Fishery industry income took a downward turn after a long while](#)

16.10.17 [Rain washes out the profitability of agriculture](#)

06.06.17 [Profitability of reindeer meat falls](#)

15.02.17 [The profitability of agriculture continued to decline in 2015](#)

15.02.17 [Organic production is more profitable than conventional agricultural production](#)

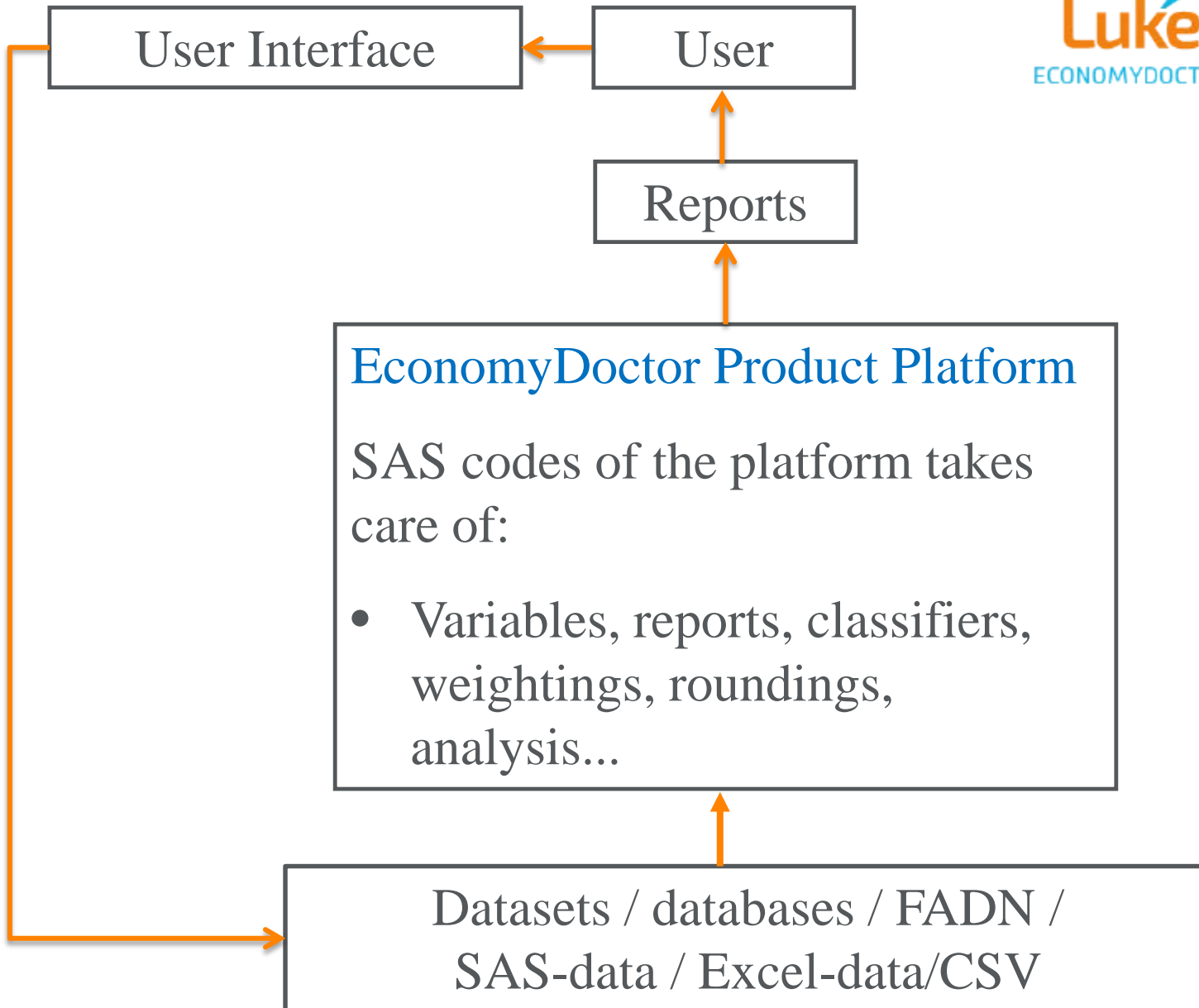
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Reporting tool in Economy Doctor



- A new feature to calculate the differences in Economy Doctor Agriculture and horticulture services was programmed.
- User can get reports between any selected years by classes of interest.
- The system produces automatically the differences reported in table format.
- Before the result table presented to user the system calculates first weighted annual averages and further differences between years.
- It is not obligatory to study consecutive years, but any period of change can be reported.
- The results are calculated in real time by automated calculation routine.

The EconomyDoctor Analysis service



Reporting tool and results

| Production Costs | Dairy Farms | | | | |
|-----------------------------|---------------|---------------|--------------|---------------|--------------|
| | 2011_2010 | 2012_2011 | 2013_2012 | 2014_2013 | 2015_2014 |
| Farms represented | 9 520 | 8 950 | 8 430 | 8 040 | 7 680 |
| Farms in sample | 330<n<340 | 320<n<330 | 310<n<320 | 300<n<310 | 280<n<290 |
| Arable land | 3,1 | 4,5 | 0,5 | 3,6 | 3,8 |
| Livestock Units | 1,6 | 4,2 | 1 | 3,2 | 3,1 |
| PRODUCTION COSTS | 18 056 | 39 255 | 8 036 | 14 275 | 6 868 |
| Material costs | 8 175 | 9 668 | 4 246 | 1 893 | 1 813 |
| Fertilizer. Lime | 504 | 1 627 | 162 | 1 006 | -486 |
| Other crop production costs | 776 | 914 | 226 | 583 | 528 |
| Fuel and lubricants | 1 465 | 1 784 | 70 | -286 | -170 |
| Electricity | 710 | 481 | 66 | -13 | 381 |
| Forage costs | 4 721 | 4 862 | 3 723 | 603 | 1 560 |
| Farm use | 5 052 | 9 153 | 1 131 | -107 | 1 559 |
| Livestock costs | 388 | 2 328 | 78 | 1 113 | 809 |
| Livestock purchasing | -313 | 603 | -329 | -154 | 32 |
| Other livestock costs | 701 | 1 725 | 407 | 1 267 | 777 |
| Machinery cost | 3 287 | 3 924 | 2 332 | 3 893 | 411 |
| Depreciation of machines | 1 169 | 1 235 | 674 | 919 | 934 |
| Other machinery costs | 2 118 | 2 688 | 1 658 | 2 975 | -523 |
| Buildings costs | 594 | 1 603 | 898 | 2 018 | -423 |
| Depreciation of Buildings | 287 | 1 373 | 1 042 | 746 | 595 |
| Other buildings costs | 308 | 230 | -145 | 1 272 | -1 018 |

- Example printout:
- differences for the dairy farms' production costs in 2010–2015

Conclusion

- The utilization of collected datasets can be promoted by automated calculation routines without compromising the data privacy.
- The aim is to develop Economy Doctor online portal even more user-friendly and to offer more versatile possibilities to study key indicators and economic results based on the need of users.
- Future work is to add a visual reporting environment.

Thank you!

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