



Lithuanian Institute
of Agrarian Economy

The CAP 2004-2013 direct payment scheme's impact on sustainability of agriculture in Lithuania

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Economy Versus The Environment – Competitiveness Or Complementarity

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Content of the presentation

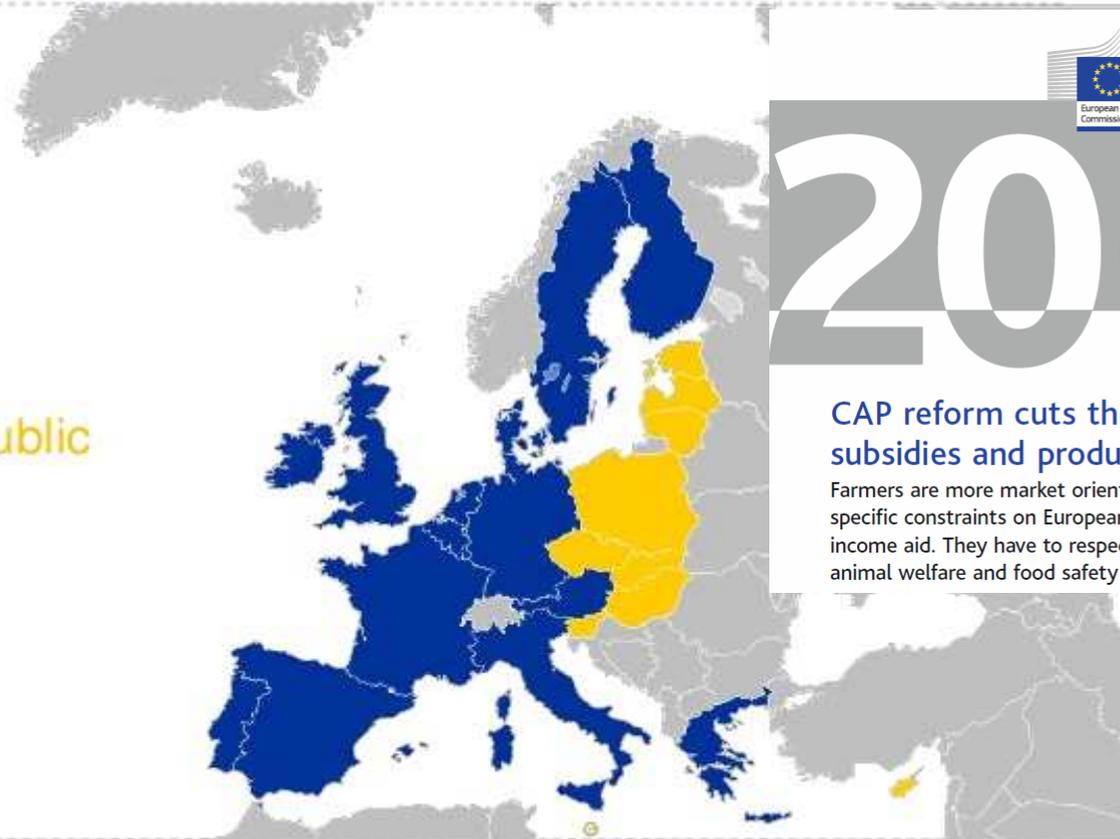
- **The CAP reform 2003 towards sustainability**
 - **Direct support scheme in Lithuania in 2004-2013**
 - **Agricultural (un)sustainability through economic attractiveness in farmers choice**
 - **Model of economic attractiveness of farmers' choice in specialization**
 - **Results and conclusions**
-

CAP reform 2003 and EU enlargement

Towards sustainability

2004 Enlargement: Expanding East

- Estonia
- Latvia
- Lithuania
- Poland
- Czech Republic
- Slovakia
- Hungary
- Slovenia
- Cyprus




2003

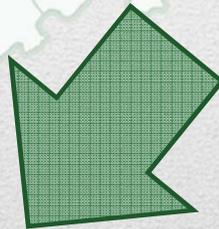
CAP reform cuts the link between subsidies and production.

Farmers are more market oriented and, in view of the specific constraints on European agriculture, they receive an income aid. They have to respect specific environmental, animal welfare and food safety standards.

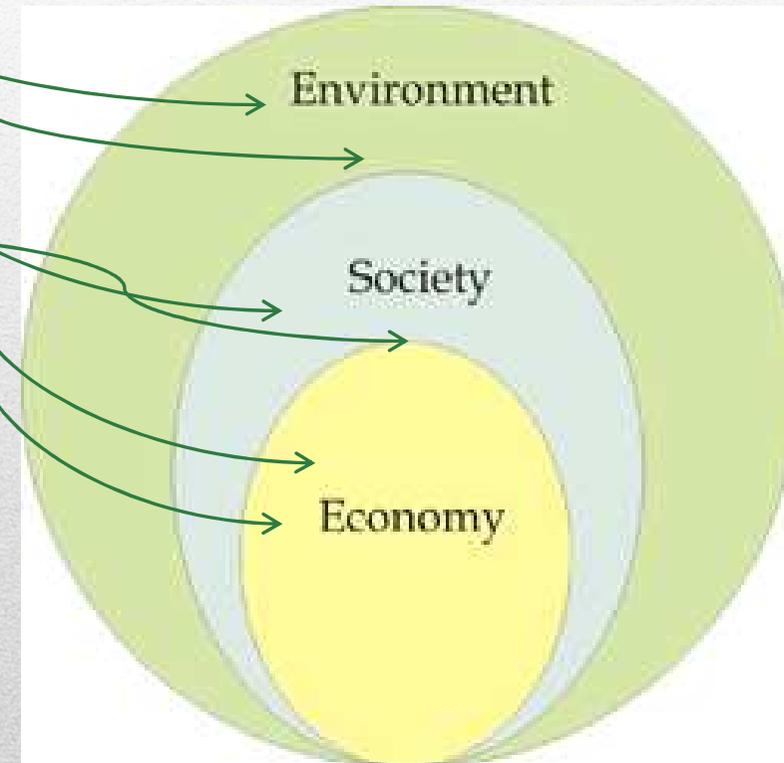
Towards sustainability via CAP direct payments from 2003 reform

SPS (or SAPS)

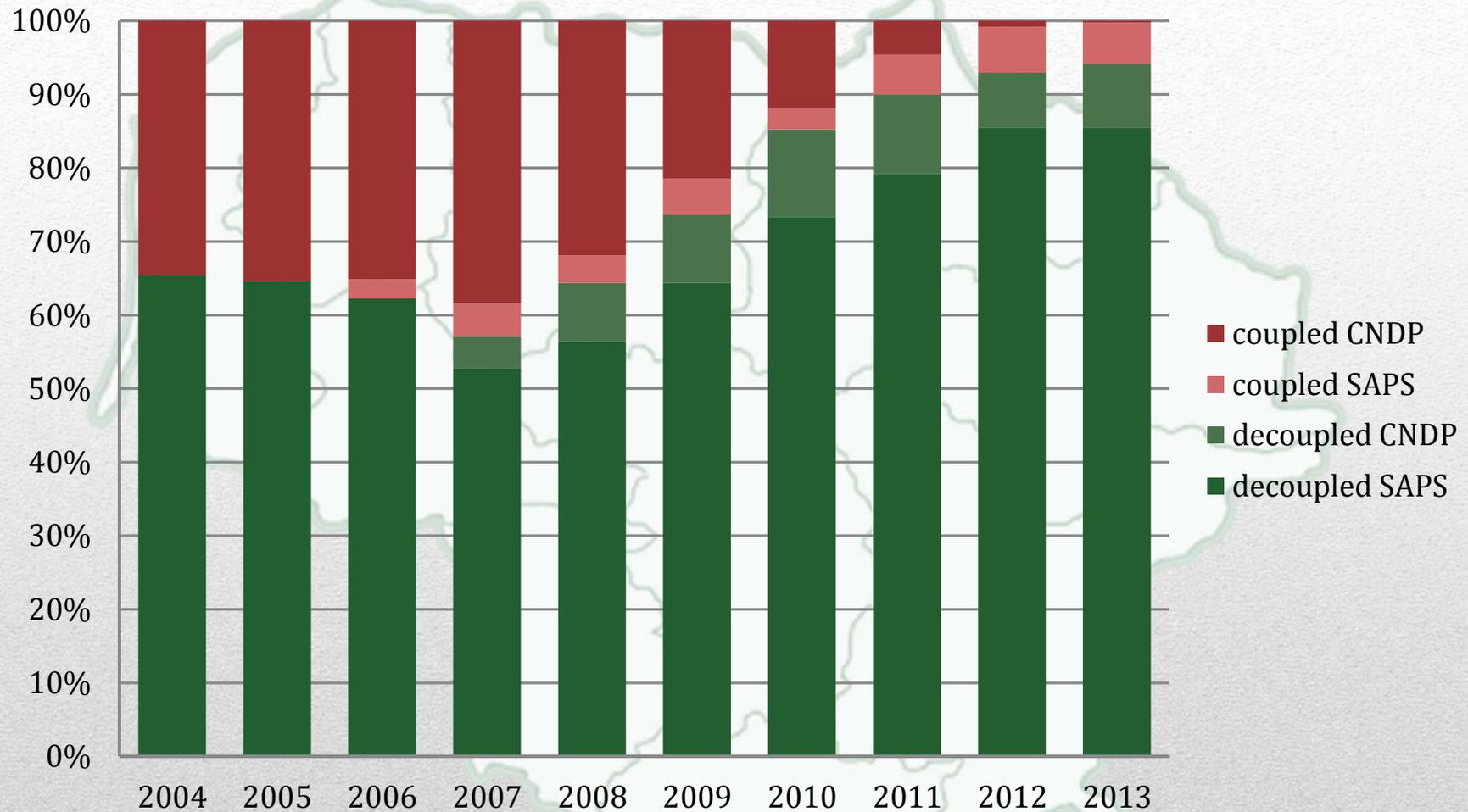
- maintenance of environmental standards;
- food safety ,
- animal welfare,
- competitiveness,
- market orientation,
- income stability for farmers



- *reduction of income inequality among farmers*
- *reduction of unemployment rate in rural area*
- *land use extensification*
- *reduction of fertilizer use*
- *biodiversity conservation*
- *reduction of monoculture farms*
- *etc.*



SAPS payments and CNDP in Lithuania 2004-2013



SAPS + CNDP+ Decoupling ————— **towards** ————— **Sustainability ?**

Source: own elaboration, based on MoA, 2015

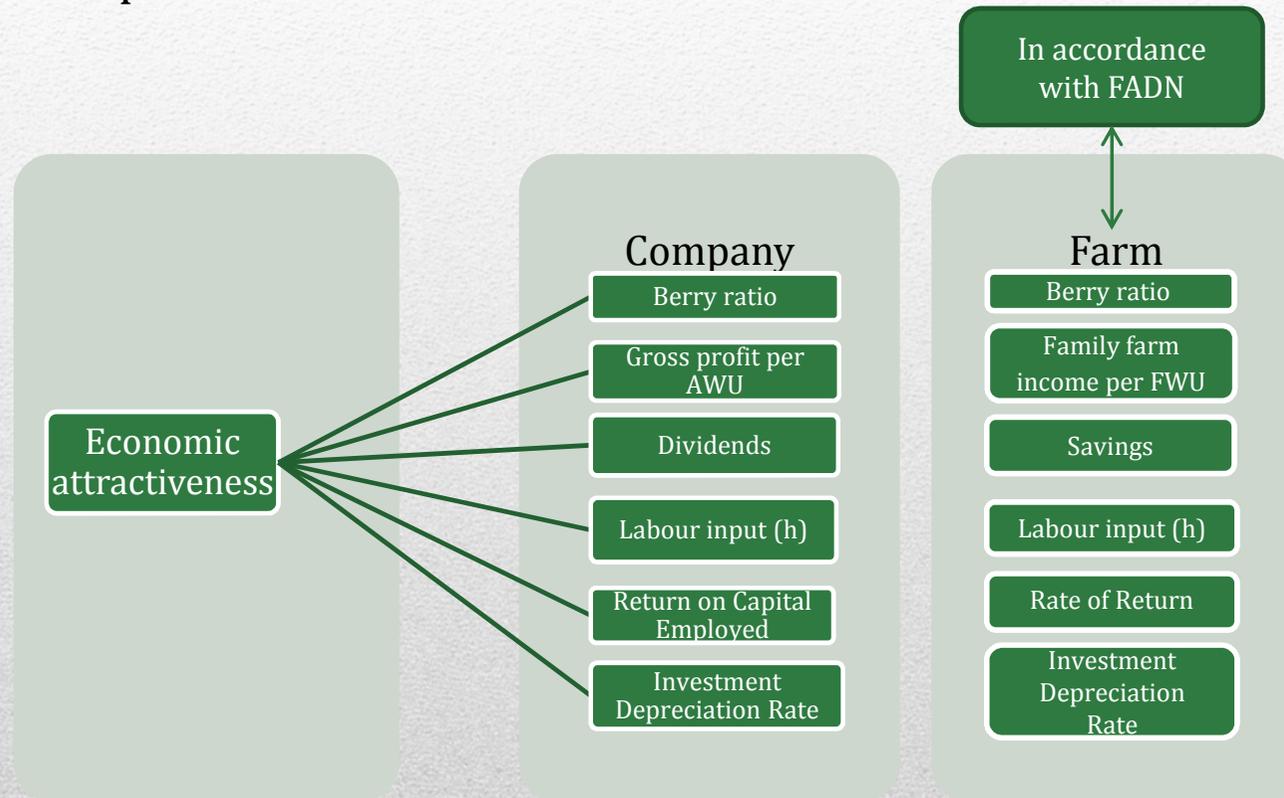
How did DP scheme work in Lithuania?

The CAP direct support policy (SAPS) influenced structural change in agriculture in Lithuania, in particular, changed farmers' behavior and force them to reconsider their participation in agricultural production, farm exits and reorientation towards production of grains.

- **The problem of the research** – in order to understand if SAPS worked towards sustainable developing of agriculture in Lithuania, it was useful to examine the extent to which the CAP 2004-2013 direct support model contributed to the increase/reduce of economic attractiveness towards different types of farming in Lithuania
 - **The objective of the research** is to carry out the selection of indicators that characterize the economic attractiveness to different types of farming and evaluate the impact of CAP 2004-2013 direct support to these aggregated indicators.
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Indicators for TOPSIS

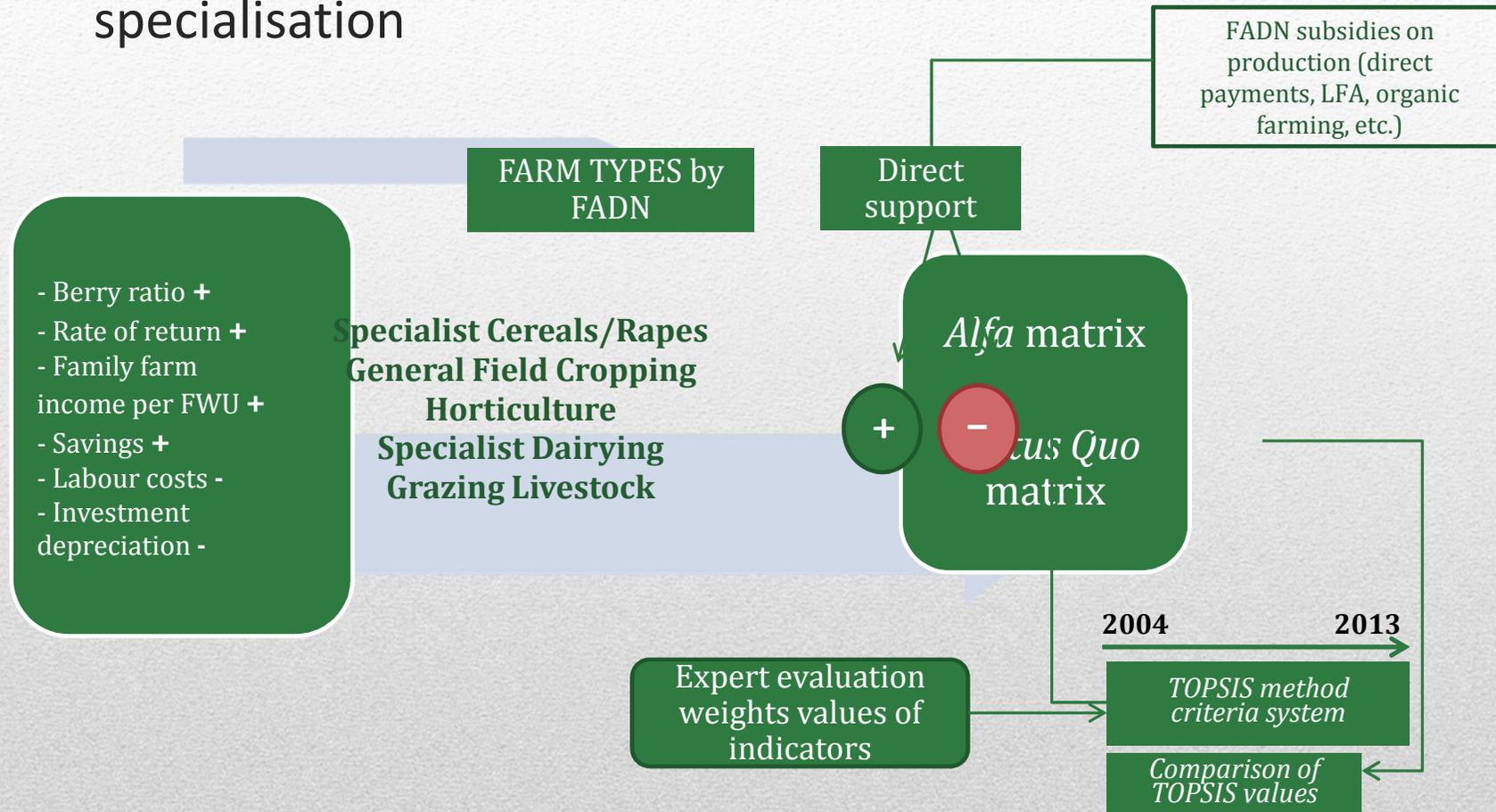
System of indicators to measure economic attractiveness of farmers' choice in specialization



Source: own elaboration, 2015.

Alfa and Status Quo indicators systems

Model of economic attractiveness of farmers' choice in specialisation



Source: own elaboration, 2015

Interim results

Normalized TOPSIS values C_{jt}^* of *Alfa* matrix (indicators' value system) in 2004-2013

C_{jt}^*	Selected FADN farm types					
Years	Specialist Cereals/Rapes	General Field Cropping	Horticulture	Specialist Dairying	Grazing livestock	$\sum_{j=1}^5 C_{jt}^*$
2004	0,126	0,194	0,454	0,128	0,097	1
2005	0,084	0,190	0,370	0,233	0,123	1
2006	0,038	0,124	0,421	0,247	0,170	1
2007	0,192	0,157	0,401	0,179	0,071	1
2008	0,169	0,262	0,312	0,156	0,102	1
2009	0,061	0,225	0,379	0,201	0,134	1
2010	0,152	0,242	0,323	0,175	0,108	1
2011	0,195	0,204	0,335	0,177	0,089	1
2012	0,333	0,216	0,298	0,103	0,052	1
2013	0,146	0,246	0,291	0,199	0,119	1

Source: own elaboration, 2015

Results (I)

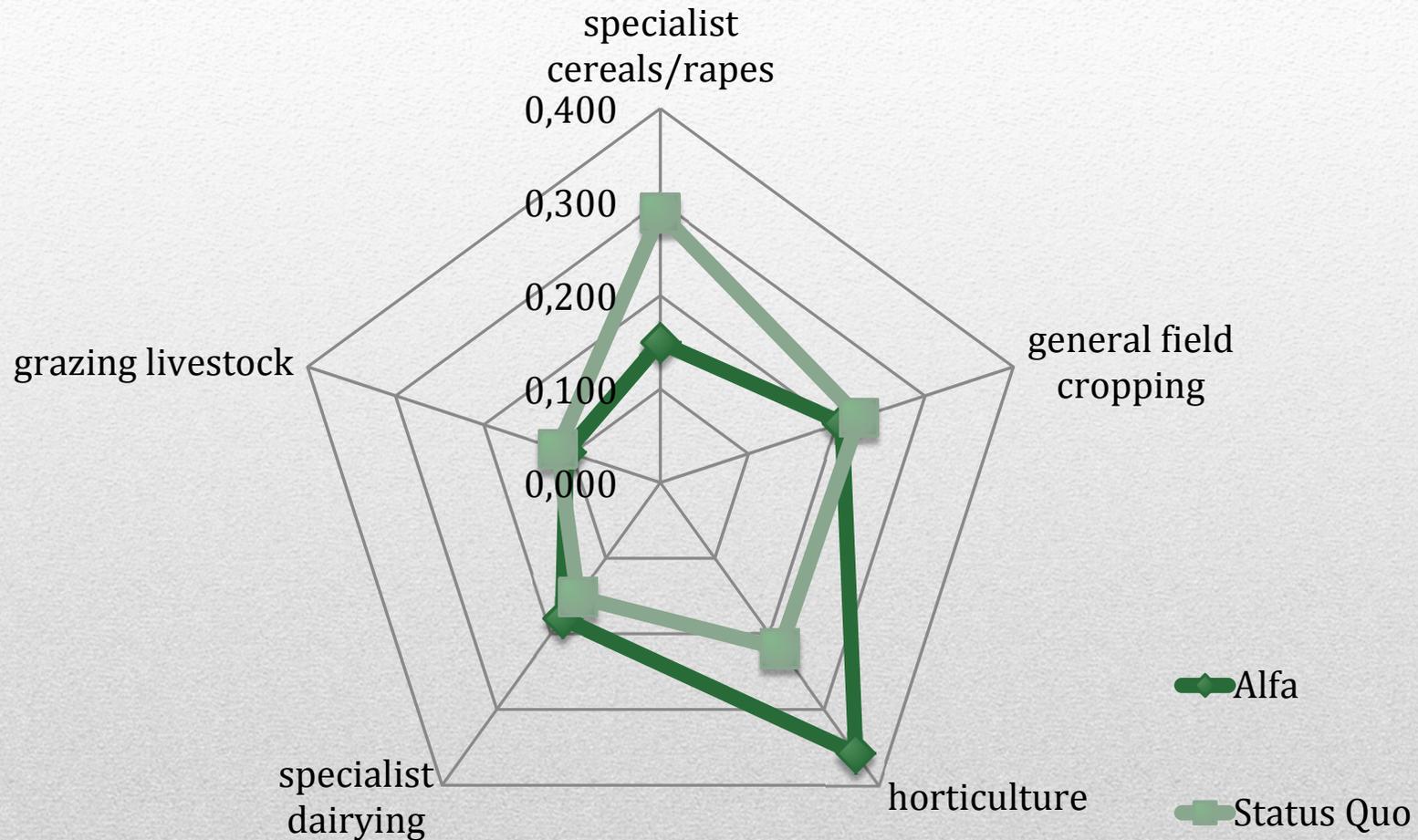
2004-2013 *Alfa* and *Status Quo* systems' average C_{jt}^* TOPSIS values

$\overline{C_{jt}^*}$	Farm types				
Indicator systems	Specialist Cereals/Rapes	General Field Cropping	Horticulture	Specialist Dairying	Grazing livestock
<i>Alfa</i>	0,150	0,206	0,358	0,180	0,107
Position by <i>Alfa</i>	IV	II	I	III	V
<i>Status Quo</i>	0,288	0,225	0,219	0,151	0,116
Position by <i>Status Quo</i>	I	II	III	IV	V
Difference by attractiveness (<i>Status Quo</i> via <i>Alfa</i>)	+93%	+9%	-39%	-16%	+9%

Source: own elaboration, 2015

Results (II)

Comparison of 2004-2013 average TOPSIS values in *Alfa* and *Status Quo* systems

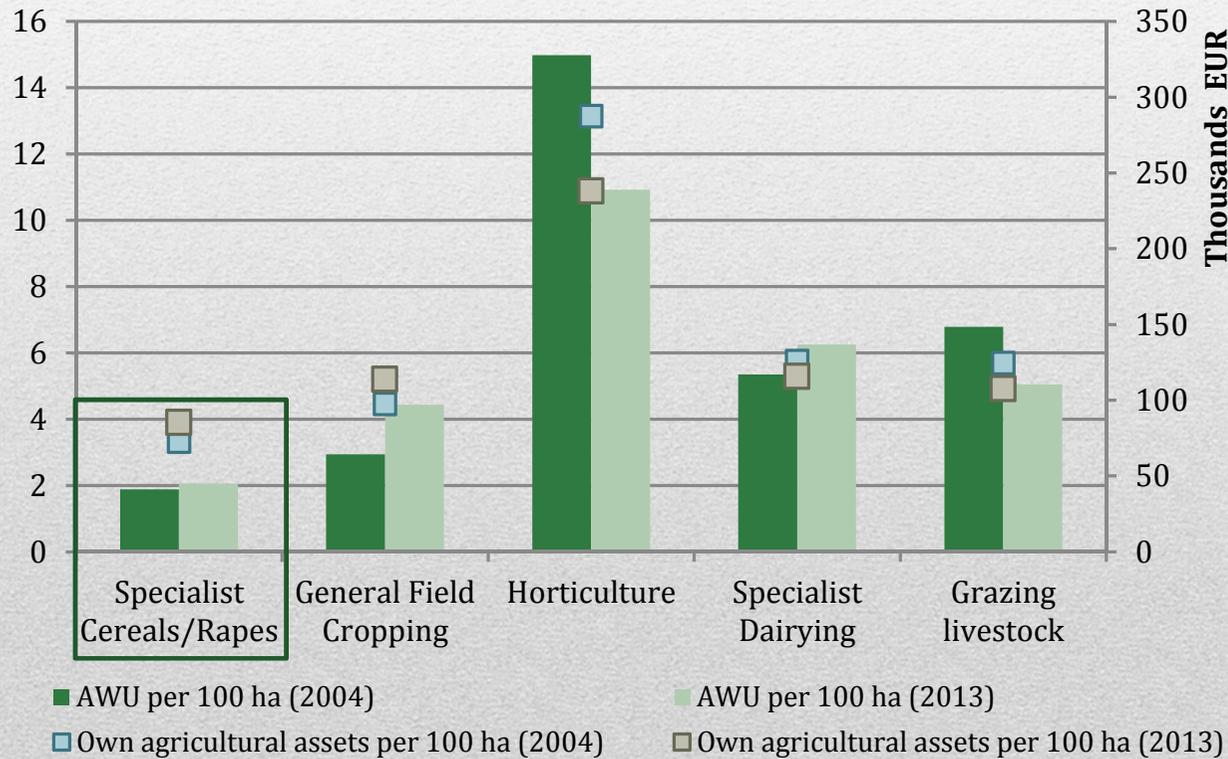


Source: own elaboration, 2015

Conclusions (I)

The results of model of economic attractiveness of farmers' choice in specialization essentially replicate structural changes in Lithuanian agriculture in 2004-2013:

- cereals sown areas in Lithuania increased by more than 27% from 2005 to 2013 and already accounted for about 45% of all utilized agricultural area (UAA) in 2013
- fruit and vegetable production areas decreased by 36.3% and 23.4% respectively during the same period



The application of direct support model (SAPS) in Lithuania had a huge impact on farm production structure. Nevertheless, SAPS application has been decoupled from production, but indirectly through the area payments it was coupled with the specific production (in Lithuania's case with production of cereals/rapes), which need less resources for the same production volume. The greater amount of support was for those farms that produce products requiring more land resources, low labor force (per ha) and low agricultural assets (per ha).

Source: own elaboration, based on FADN, 2015

Conclusions (II)

The assessment of 2004 - 2013 CAP direct support model's (which was based on the SAPS and CNDP) sustainability in Lithuania showed that in economic terms (at national level) sub-economic sustainability was partly reached. However,

- In terms of social viability (at farm level), the disparities among farms income increased. Particularly sharp increase of size of farms (in terms of area) led to the depopulation of rural areas.
- In terms of production a huge cereals/rapes surplus (more than twice as big as of 2004) was created, albeit successfully realized, but only as a raw material not as high value added products. Meanwhile, local self-sufficiency in fruit and vegetables has declined significantly.
- In terms of environmental sustainability, indirect intensive promotion actually of an only specialization stimulated the linkage to monoculture farming, which in turn contributed to soil degradation and a need to use more intensive fertilization. Ploughing down of natural meadows and pastures contributed to an already weak livestock sector's decline (the UAA per head of cattle escalated to as many as 112% in 2013 in comparison with 2004).

The direction of CAP measures towards the sustainability had contributed to the aimed objectives throughout EU in 2004-2013, especially in those EU states that were covered by the Single Payment Scheme. However, in case of Lithuania, SAPS has become economically attractive niche for farmers' strong orientation towards financial support and basically repositioning the major part of the risk on direct payments, which was proved by *Alfa* system case results – without direct support cereals/rape sector would be less economically attractive and in terms of agricultural sustainability in Lithuania would be more relevant ...?!



Thank you

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