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# Determinants of technical efficiency of Slovenian farms

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**Motivation:** To shed light on how farm performance might evolve and on which farms will possibly survive the international competition post-accession

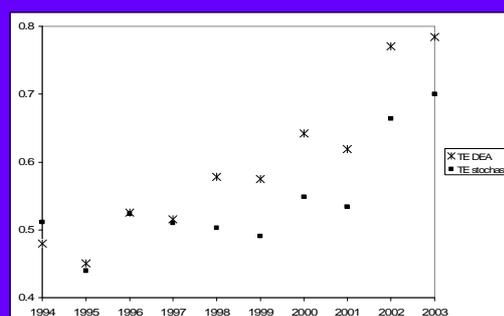
**Methods:** Farm performance is studied from the point of view of technical efficiency  
Calculated with stochastic frontier and non-parametric Data Envelopment Analysis (DEA)

**Data:** FADN, 1994-2003, family farms

## Results:

- both methods give consistent results
- initial large inefficiencies (degree of technical efficiency increased from 0.5 to 0.8)
- a jump in efficiency prior the EU accession
- farm specialisation is a crucial determinant for increasing technical efficiency
- negative impact of farm commercialisation due to intra-farm intermediary consumption in livestock production
- negative influence of public support

**Figure:** Evolution of technical efficiency calculated with DEA (TE DEA) and with stochastic frontier (TE stochastic)



	Determinants of technical <b>inefficiency</b> calculated with stochastic frontier		Determinants of technical <b>efficiency</b> calculated with DEA	
	coefficient	significance	coefficient	significance
Constant	-0.110	***	0.870	***
Share of hired labour	-0.298		0.002	
Share of rented land	-0.178		0.001	**
Share of marketed output	0.225	***	-0.006	**
Herfindahl specialisation index	-0.263	*	0.206	***
Production subsidy to revenue ratio	0.214	***	-1.090	***
Time trend	-0.472	***	0.032	***
Log likelihood	25.60		134.05	

\*\*\* 1 percent level of significance; \*\* 5 percent level of significance; \* 10 percent level of significance

**Conclusions:** technical efficiency growth might slow down after accession due to increased support; but positive influence of public support can be expected on technological change, and thus on farm productivity

**Future research:** impact of the EU accession on farm productivity