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Stefan Bojnec, Laure Latruffe

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Determinants of technical efficiency of Slovenian farms

Štefan Bojnec * and Laure Latruffe **



* University of Primorska, ** INRA Rennes



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

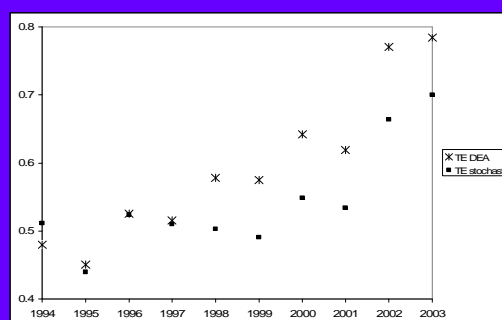
Methods: Farm performance is studied from the point of view of technical efficiency
Calculated with stochastic frontier and non-parametric Data Envelopment Analysis (DEA)

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 inefficiency calculated with stochastic frontier		Determinants of technical efficiency 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