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HOW DOES EU COFUNDING AFFECT REGIONAL AGRICULTURAL ENVIRONMENTAL SCHEME IMPLEMENTATION COSTS?

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Keywords

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Poster Summary

Implementing agri-environmental schemes (AES) requires the expense of transaction costs (TCs) in terms of working time in Hessian agricultural county administrations (ALR). At the stage of implementation, besides *scheme-related TCs*, which comprise acquisition of farmers, selecting appropriate sites, negotiating on management agreements etc. and aim at achieving environmental goals, TCs also come up due to co-funding the AES via the CAP. These *compliance-related TCs* stem from the necessity to conduct administrative and on-site checks to verify the spatial information given by the farmers as base for the latter reimbursement, as well as reporting duties to state compliance with EU prerequisites. Moreover, ALRs are themselves subject of checks to obtain the full co-funding share (50%).

As Hesse seeks to fulfil the Habitats' Directive via voluntary scheme participation of farmers, it has to spend sufficient information and negotiation costs. On the other hand, the loss of (partial) co-funding and additional fines would affect the regional budget severely and should be avoided. Given the fix number of working hours available in each county, a tradeoff on where to focus the working time on is likely. However, a prioritizing of compliance-related tasks could result in a crowding out of scheme-related tasks, which would affect the achievement of the environmental goals.

To examine this problem, I investigate influences on working time allocation in Hessian county administrations in grassland extensification scheme (SSGES) implementation. TCs are conceptualized as weekly working time and thus as input. I use time use information in terms of average weekly working hours spent on predefined tasks obtained from 8 (of 16) ALRs in Hesse ex post for 12 months (n=96). County feature data as well as scheme performance indicators were obtained from the Agricultural Ministry of Hesse as well as official statistics. Initially conducted ANOVAs showed no significant variances between the particular months, but significant variances between the particular ALRs, which make a further investigation reasonable. As the structural characteristics of the counties are fix over 12 months, a Generalized Estimations Equation Model was used which allows regressing of correlated data. Thus, the item "county" serves as subject variable with the particular months (1-12) as within-subject variables. The working correlations matrix was chosen as "independent", as it offered the best goodness-of-fit (QIC<80). The particular percentage of working time serves as dependent variables; two separate regressions were conducted for each dependent due to the small sample size.

A multitask Principal-Agent model of moral hazard, as developed by HOLMSTROM AND MILGROM (1991) serves as theoretical foundation to explain time use allocation decisions in the ALRs. In their two-task model, the agent has to allocate his effort among two substitute tasks. His allocation decision depends (among other) on the agent's disutility of effort on both tasks and the particular incentives offered by the principal. In their formal solution they show that in the substitutes' case, increased effort on one task increases the marginal cost of effort (the agent's disutility of working) of the other task. Thus, increasing the marginal incentives

for a greater output of task 1, draws away effort from task 2. In my study, I distinguish between scheme-and compliance related tasks according to which goal their expense is aimed at. The time use allocation decision in the particular ALR can thus be perceived as result of the particular relative disutilities (“disutility indifference curves”). The disutility incurred by compliance-related tasks is assumed to be the same for all counties, as the required procedures are specified in high detail by EU regulations and little discretion in task performing is left to the ALRs. In contrast, scheme-related tasks are regulated in much less detail and thus induce more discretionary scope. The performance of scheme-related tasks might thus be subject to particular preferences of the ALR. This allows building the hypotheses on factors which are likely to lower the particular disutility of scheme-related tasks. For the first, the percentage of grassland secured by the Habitats’ Directive (FFH) serves as proxy for the importance of the environmental goal in the particular county. The general importance of agriculture in the county (UAA) as well as the percentage of smallscale famers (<100ha) were selected as proxies for farmers’ motivation in scheme participation. For the ALR features, the scope of already existent contracts (HASSGES) as well as the scope of high quality contracts (HAEVSS) also implies an interest in the environmental goal. However, also effects of saturation might occur due to a high number of contracts already existent. Finally, the resource capacity in terms of working time available (as proxy for staffing, TTLTIME) and the possibility to draw officers off from other duties (CAPACITY) may foster the performance of scheme-related tasks, in case working time is a critical factor.

		Weekly hrs.		% of total time	
		mean	sd	mean	sd
Scheme-related	Info& Acquisition	6.60	5.119	9.14	4.383
	Negotiation	18.13	15.776	23.85	13.086
Compliance-related	On/Offsite checks	29.18	18.915	40.21	17.380
	EU & CB reports and checks	11.13	8.935	15.81	12.512
	Scheme/compliance			0.77	0.776

Table 1: Descriptive results

Table 1 shows the descriptive results. It shows that compliance-related tasks require more than 50% of working time available, which implies that the incentives provided by the EU regulations are rather effective. Table 2 shows the results of the regressions. Influencing factors were distinguished in county features and ALR features.

Environmental features do not influence the expense of scheme-related costs, but the importance of agriculture in the county and presence of small-scale farming does. This corresponds to earlier findings (WEBER, 2011) that low productivity farmers tend to require ALR’s working time in order to conclude contracts with a higher payment. Reporting effort has fix costs characteristics with respect to the number of contracts, which means that ALRs with fewer contracts are more affected by EU checks. The most interesting result, however, is that the expense of working time on scheme-related costs is strongly influenced by the availability of manpower: the more time available (the better the resource capacity), the more is invested in scheme-related effort. This implies that a crowding out problem actually exists, especially in counties with little resources.

	LnINFO (Wald-Chi ²)	LnNEG (Wald-Chi ²)	LnCHECKS (Wald-Chi ²)	LnREPORT (Wald-Chi ²)	Ln RATIO (Wald-Chi ²)
Intercept	0.720 (0.143)	-10.828*** (38.178)	-1.899 (0.433)	10.500* (4.422)	-11.073*** (18.398)
LnFFH	-0.242 (0.684)	0.260 (0.731)	-0.351 (0.855)	-0.573 (0.853)	0.496 (2.026)
LnUAA	-0.401(*) (3.091)	0.886*** (21.756)	-0.002 (0.000)	-1.250* (5.157)	1.040*** (15.459)
SHSMALLSC.	6.076* (5.741)	1.688 (0.261)	2.418 (0.358)	-2.117 (0.083)	2.304 (0.486)
Intercept	-1.908*** (11.812)	-4.854(*) (3.411)	-1.353 (0.802)	8.379** (9.790)	-5.725* (4.725)
LnHASSGES	-0.694*** (10.538)	-0.296 (0.360)	1.069*** (24.543)	-1.848*** (15.836)	-0.570 (1.297)
LnHAEVSS	0.672** (8.677)	0.593* (5.579)	-1.044*** (23.578)	0.532 (1.654)	0.745*** (13.786)
LnTTLTIME	0.261* (4.705)	0.393*** (7.606)	-0.446*** (19.247)	0.384* (4.887)	0.510*** (13.031)
CAPACITY	-0.810** (9.882)	0.137 (0.273)	0.800** (5.740)	-1.161** (6.813)	-0.729** (32.090)

Table 2: Results of regressions

Literature

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