

## APPENDIX 1

### to Driving factors behind subjective resilience on organic dairy sheep farms

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#### Overview of the statistical analysis

##### Initial dataset:

The following table presents the structure of the initial dataset. Each row contains the values for each variable, for each period identified on each farm.

Farm code	Years	Period	Var1	Var2	...	OverallSat
F1		CP				
F1		IP1				
F1		IP2				
F1		FP				
F2		CP				
F2		FP				
...						
F36		CP				
F36		FP				

Table 1: Structure of the initial dataset. CP = Conversion Period, IP = Intermediate Period, SP = Survey Period, Var = Variable, OverallSat = Overall Satisfaction

### Calculation of slope and intercept values:

By running a linear regression (`lm()` function from *stats* package in R) throughout the stable periods available for each farm, the initial dataset is used to calculate the slope and intercept values for each variable and for each farm (i.e. 'Ev.+variable name' for slopes and 'I.+variable name' for intercepts).

These values are compiled in a table similar to the table below:

Values at the final period							Slopes			Intercepts		
Farm code	Year	Period	Var1	Var2	...	OverallSat	Ev.Var1	...	Ev.OverallSat	I.Var1	...	I.OverallSat
F1		FP										
F2		FP										
F3		FP										
...		FP										
F35		FP										
F36		FP										

Table 2: Dataset with final values slopes and intercepts for all variables. Var = Variable

### PLS and sPLS rounds

The dataset with final values, slopes and intercepts is used for performing several rounds of PLS and SPLS using the *mixOmics* package in R (R code available in Appendix B).

PLS enables explaining and predicting response variable(s) (in our case variables illustrating farmers' satisfaction) from explanatory variables (in our case variables regarding farm structure and agricultural practices).

sPLS is always performed after one PLS to improve the model quality which is assessed through the Q2 value.