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Daniela Weible  
Doreen Buergelt  
Inken B. Christoph  
Guenter Peter  
Petra Salamon

# Economic background of families – is it vital for food decisions?

## A case study of school milk orders in Germany

### Background

- milk products are an important part of a balanced diet, especially during childhood
- the EU School Milk Scheme was developed to support milk consumption
  - subsidy (4.4 cents) for 250 ml school milk per pupil and school day
- milk consumption declines steadily
- research project by the BMELV in North Rhine Westphalia, Germany, to quantify influencing factors
- results show that pupils' decision to order school milk depends on individual and contextual factors

→ The impact of the economic background is analysed in more detail:  
**„To what extent do influencing factors vary across income groups?“**

- three groups of monthly net income per household...
    - low income:** below 2000 € (share: 32 %)
    - middle income:** between 2000 and 3000 € (share: 40 %)
    - high income:** from 3000 € and more (share: 28 %)
- (1 € ≈ 1,3 \$)

### Data

- school milk orders on individual level (for each pupil)
- data collection restricted to grades 2, 3 and 4 (age 8-10)
- written questionnaires given to pupils, parents, class teachers, school principals, school milk managers
- total sample of 7,336 pupils from 101 schools

### Method

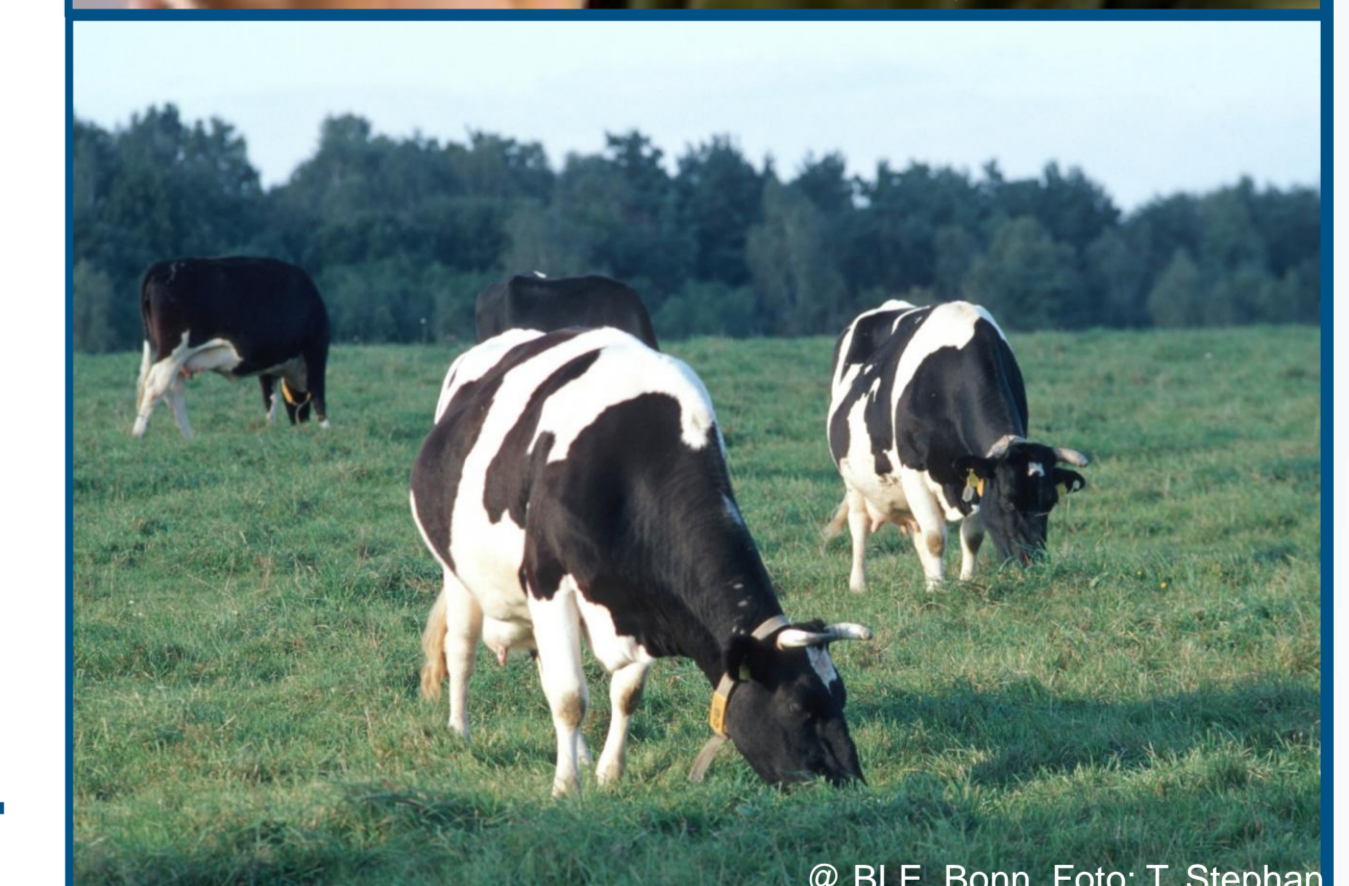
- observations are nested in identifiable contexts: hierarchical data structure
- logistic multilevel analysis (random-intercept model)
- estimation for each income group

### Selected results for income groups

Parameter	low	middle	high
<b>price (level-1)</b>			
school milk price	-0.41 *	-0.38 *	-
<b>pupils (level-2)</b>			
reason for (not) drinking school milk:			
<i>milk tastes good</i>	2.18 ***	2.29 ***	2.86 ***
<i>milk is healthy</i>	0.36 *	0.55 **	0.76 **
positive image of milk (yes=1)	-	0.54 **	0.57 *
age	-0.26 **	-	-0.36 **
gender (girls=1)	-0.48 **	-0.55 ***	-0.48 **
<b>parents (level-2)</b>			
parents like to drink milk and/or eat milk products	2.95 **	-	-
“I feel good if my child drinks school milk during breaks”			
<i>I agree</i>	1.02 ***	1.04 ***	1.18 ***
<i>I disagree</i>	-	-0.68 **	-
“School milk facilitates a sufficient milk supply for children”			
<i>I agree</i>	0.36 *	-	-
<b>class teachers (level-3)</b>			
teacher drinks milk with the pupils during morning break	-	0.50 *	-

\* Significant at the 10 percent level; \*\* significant at the 5 percent level, \*\*\*significant at the 1 percent level. Calculations with STATA.

→ **dependent variable:**  
 binary outcome variable  
 = 1 if pupils order school milk  
 = 0 if pupils not order



### Conclusion

- income-specific influencing factors, although the expenditure for school milk is negligible
- targeted programs for low-income groups