

# First pre-test evidence of the new SOEP childhood survey

Eva M. Berger, E. Bügelmayer, Jürgen Schupp and C. Katharina Spiess  
DIW Berlin und FU Berlin

Acknowledgements:

Agnes Jänsch and Nico Siegel, TNS Infratest München  
Ernst Fehr and Michel Maréchal, University of Zürich

May 16th 2008

Non-cognitive Skills: Acquisition and Economic Consequences  
ZEW Mannheim

## Outline

- Overall framework: New Research Perspectives of the SOEP
- Conceptual framework of the Pretest 2008
- First results
- Outlook

## What is “SOEP” ?

- The SOEP was started in 1984 as a household panel:  
now 24 waves available
- Longest-running longitudinal survey of private  
households **and** persons in Germany (second longest in  
the world)
- Started with 6,000 households in 1984, in 2007 about  
11,000 households and 21,000 respondents

## Recent Innovations concerning psychological measures

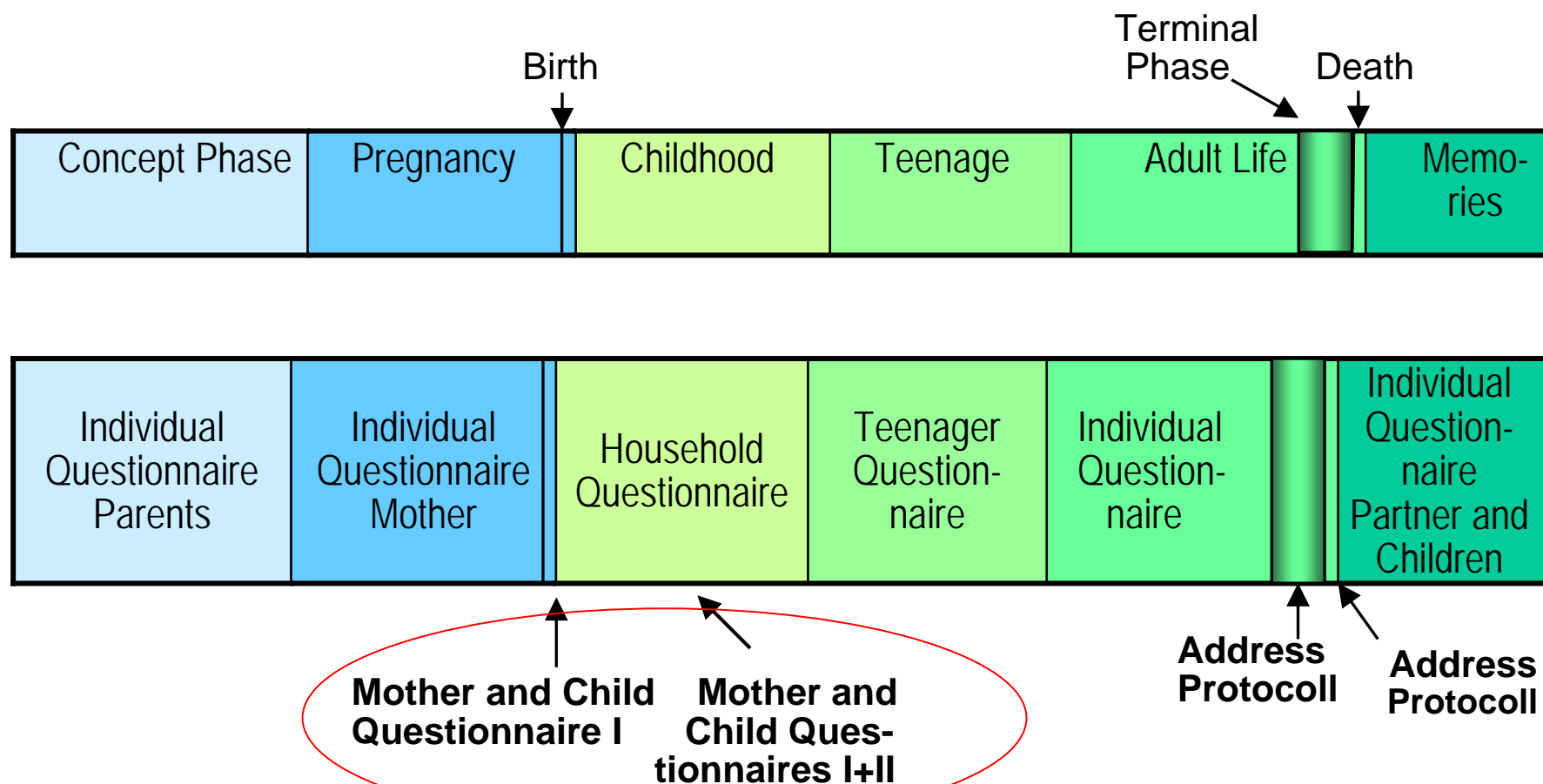
2003: Social capital (trust, fairness)  
2004: Risk Aversion  
2004: Locus of Control  
2005: Reciprocity  
2005: Personality indicators (personal traits)  
2006: Cognitive ability measure

Background: Research and survey focus of the SOEP –

**Explaining human behaviour on a lifespan perspective**

Source: Schupp/Spiess/Wagner (2008)

## Survey Instruments



## New Focus on children

- Since 2003: *Mother-Child-Questionnaire I* for children in their first year of life („newborns“)
- Since 2005: *Mother-Child-Questionnaire II* for children in their third and fourth year of life (2-3 years of age)
- Since 2007: *Mother-Child-Questionnaire III* for children in their sixth and seventh year of live (5-6 years of age)
- Content: Health measures, temperament and personality, care arrangements, activities with the child, development functioning, social behaviour ...

## Pretest 2007

Goal of the Pretest:

- Pretest of the Mother Child Questionnaire III
- Pretest concerning the measurement of cognitive skills – in a household survey context
- Pretest concerning experiments with children in a household survey context

Development of this pretest is based on:

Weinert et al. (2007) and Pauen et al. (2007)

## Pretest Description

291 children:

55% Males (24% School children)

Age of the child in months: Mean 73 (62-85)

Age of the mother in years: Mean 36 (24-58)



# Non-Cognitive Skills I

## Socio-emotional competence –

Strength and Difficulties Questionnaire (SDQ Scale)

Goodman (1997 and 2001)

- 1) emotional symptoms (5 items)
- 2) conduct problems (5 items)
- 3) hyperactivity/inattention (5 items)
- 4) peer relationship problems (5 items)
- 5) prosocial behaviour (5 items)

→ added together to generate a total „difficulties score“

## Core Figures of non-cognitive skill measures: SDQ

	<b>Girls</b>	<b>Boys</b>	<b>Total</b>
<b>Mean SDQ -</b>	7.10	8.33	7.77
<b>Score</b>			
<b>Std. Dev.</b>	4.99	5.36	5.22

<b>Categories</b>	<b>Girls</b>	<b>Boys</b>	<b>Total</b>	<b>Norm</b>
<b>Normal</b>	89.39%	84.91%	86.94%	81%
<b>Borderline</b>	5.30%	6.92%	6.19%	9%
<b>Abnormal</b>	5.30%	8.18%	6.87%	10%

## Non-Cognitive Skills II

### Motivational Competence – delay of gratification

Experimental design to measure children`s motivational competence

Mischel, Shoda & Rodriguez (1989), Shoda, Mischel & Peake (1990)

But so far: Only experience in a lab context, this experiment has to be redesigned for a household survey context ( → expertise of the research group of Ernst Fehr)

## Core Figures of non-cognitive skill measures: Motivational Competence

Among those who did not wait:

	Freq.	Percent
Child decided to wait and take 2 packages	230	79.04
Child did not wait	61	20.96
N	291	

	Freq.	Percent	Cum.
0 to 3 min	30	49.18	49.18
>3 to 10 min	17	27.87	77.05
> 10 min	14	21.57	100
N	61		

		Freq.	Percent
How much does your child like "gummi bears"?	very much	201	69.07
	rather much	71	24.40
	not very much	15	5.15
	not at all	4	1.37

## Other important measures

- Cognitive skills

*Fluid intelligence:* CFT 1 - Culture Fair Intelligence Tests - Scale 1  
(Cattell, Weiß & Osterland, 1977; Weiß & Osterland, 1997)

Subtest 3 Classification from the CFT 1  
Subtest 5 Matrix from the CFT 1

*Verbal intelligence* - receptive (hearing) vocabulary  
Modified version of the German Peabody Vocabulary Test  
(Dunn & Dunn, 2007, Tietze et al. 1998)

- Personality of the child

Short version of the FFFK-K („Fünf-Faktoren-Fragebogen für Kinder“ Asendorpf/van Aken, 2003)

# First results: Standard Model

	(1)	(2)	(3)	(4)
	MC	SDQ		
	Binary Probit Model	Ordered Probit Model		OLS
	ME	ME "borderline"	ME "abnormal"	Coef.
Male	0.037	0.022	0.018	<b>1.223+</b>
<b>Age of child in months</b>	<b>0.202*</b>	<b>-0.050+</b>	<b>-0.050+</b>	-0.749
<b>Age_child_square</b>	<b>-0.001*</b>	<b>0.000+</b>	<b>0.000+</b>	0.005
Sisters/brothers (yes/no)	0.071			
1 sister/brother		0.026	0.019	0.986
<b>2 sisters/brothers</b>		<b>0.073*</b>	<b>0.068*</b>	1.483
3 or more sisters/brothers		0.028	0.020	0.613
<b>Lone parent</b>	-0.049	<b>0.052*</b>	<b>0.051*</b>	<b>2.902*</b>
Other language	-0.077	0.042	0.042	0.715
<b>Health problems</b>	-0.004	<b>0.054**</b>	<b>0.046**</b>	<b>1.743**</b>
<b>BMI child</b>	-0.015	<b>0.010**</b>	<b>0.008**</b>	0.269
Schoolchild	-0.054	0.010	0.008	0.845
<b>ln(net monthly hh income)</b>	-0.098	<b>-0.046*</b>	<b>-0.038*</b>	-0.828
Age of mother	0.002	0.010	0.008	0.149
Age_mother_squared	0.000	-0.000	-0.000	-0.003
<b>Religion</b>	0.081	<b>0.031+</b>	<b>0.024+</b>	-0.883
<b>Mother university degree</b>	0.089	<b>-0.078**</b>	<b>-0.064**</b>	-0.807
Mother vocational training	0.063	-0.031	-0.032	-0.252
Last meal < 2 hr ago	-0.098			
<b>Last meal 1-3 hrs ago</b>	<b>-0.136*</b>			
<b>Taste for gummi bears</b>	<b>-0.088+</b>			
<b>No. of obs</b>	247	247	247	247
<b>Pseudo R2</b>	0.130	0.200	0.200	
<b>R2</b>				0.173

## .... adding mother's employment status and child care arrangements

	(1)	(2)	(3)	(4)
	MC	SDQ		
	Binary Probit Model	Ordered Probit Model		OLS
	ME	ME "borderline"	ME "abnormal"	Coef.
Mother full-time employed	0.093	0.023	0.031	-0.495
Mother part-time employed	0.015	-0.008	-0.009	-0.686
<b>Mother in education</b>	-0.013	<b>-0.025**</b>	<b>-0.025**</b>	<b>-5.935**</b>
Informal child care	-0.086			
Institutional child care 1-20 hrs/week	-0.060	0.007	0.008	0.925
Institutional child care 21-30 hrs/week	-0.087	-0.019	-0.021	0.724
<b>Institutional child care &gt;31 hrs/week</b>	<b>-0.240*</b>	-0.014	-0.015	0.867
<b>No. of obs</b>	186	186	186	186
<b>Pseudo R2</b>	0.257	0.242	0.242	
<b>R2</b>				0.200

## ...adding activities of the mother with the child

	(1)	(2)	(3)	(4)
	MC	SDQ		
	Binary Probit Model	Ordered Probit Model		OLS
	ME	ME "borderline"	ME "abnormal"	Coef.
Watch TV with mother several times a week	<b>0.104+</b>	0.006	0.004	0.690
Computer games with mother several times a week	0.025	-0.028	-0.020	0.459
Index "activities with mother"	0.010	-0.004	-0.003	<b>- 0.41**</b>
No. of obs	220	220	220	220
Pseudo R2	0.164	0.231	0.231	
R2				0.220



## ...adding child's personality

	(1) MC	(2)	(3) SDQ	(4)
	Binary Probit Model	Ordered Probit Model		OLS
	ME	ME "borderline"	ME "abnormal"	Coef.
quiet (vs. talkative)	-0.011	-0.001*	<b>-0.000*</b>	<b>-0.281*</b>
orderly (vs. disorderly)	0.016	-0.000	-0.000	<b>-0.163+</b>
touchy (vs. good-natured)	<b>-0.040**</b>	0.000	0.000	<b>0.259*</b>
interested (vs. uninterested)	0.009	<b>-0.001*</b>	<b>-0.000*</b>	-0.126
insecure (vs. self-assertive)	-0.010	0.001	0.000	<b>0.531**</b>
sociable (vs. withdrawn)	0.022	<b>-0.003**</b>	<b>-0.000**</b>	<b>-0.260+</b>
easily distractible (vs. able to concentrate)	-0.002	<b>0.005**</b>	<b>0.000**</b>	<b>0.842**</b>
obedient (vs. defiant)	-0.019	<b>-0.001*</b>	<b>-0.000*</b>	<b>-0.352**</b>
needs more time (vs. keen perception)	0.002	<b>-0.002**</b>	<b>-0.000**</b>	-0.040
not anxious (vs. anxious)	<b>-0.026*</b>	-0.000	-0.000	-0.091
No. of obs	247	247	247	247
Pseudo R2	0.230	0.574	0.574	
R2				0.682

## ... adding mother's personality

	(1)	(2)	(3)	(4)
	MC	SDQ		
	Binary Probit Model	Ordered Probit Model		OLS
	ME	ME "borderline"	ME "abnormal"	Coef.
Patience_m	<b>0.020+</b>	-0.004	-0.003	<b>-0.399**</b>
Impulsiv_m	0.009	<b>0.007+</b>	<b>0.005+</b>	0.106
Satisfied_m	0.002	<b>-0.013**</b>	<b>-0.009**</b>	<b>-0.729**</b>
No. of obs	247	247	247	247
Pseudo R2	0.143	0.243	0.243	0.260

## ...adding cognitive test scores

	(1) MC	(2)	(3) SDQ	(4)
	Binary Probit Model	Ordered Probit Model		OLS
	ME	ME "borderline"	ME "abnormal"	Coef.
CFT 1 Classification	-0.009	-0.001	-0.000	-0.251
CFT 1 Matrix	-0.003	0.004	0.003	0.135
<b>PPVT</b>	<b>0.009*</b>	0.000	0.000	-0.079
<b>No. of obs</b>	247	247	247	247
<b>Pseudo R2</b>	0.152	0.207	0.207	
<b>R2</b>				0.196

## ...adding educational aspiration of mother

	(1) MC	(2)	(3) SDQ	(4)
	Binary Probit Model	Ordered Probit Model		OLS
	ME	ME "borderline"	ME "abnormal"	Coef.
<b>Degree from "Hauptschule" is ideal</b>	<b>-0.365**</b>	0.004	0.004	2.045
Degree from "Realschule" is ideal	-0.002	-0.004	-0.004	0.254
<b>No. of obs</b>	247	247	247	247
<b>Pseudo R2</b>	0.159	0.200	0.200	
<b>R2</b>				0.178

## Outlook

### Current Pretest:

- Deeper and more multivariate analysis
- Additional focus on intergenerational links in non-cognitive skills
- ...

### Future Plans:

- Additional pretests in a daycare setting with more experiments on risk aversion, social behaviour, etc.
- More information on institutional childcare settings (for instance, daycare center quality)
- ...