

# The Subjective Cost of Young Children: A European Comparison

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We quantify and compare the cost of children in Europe by analysing the effect of child births on parents' self-reported ability to make ends meet, which is referred to as subjective economic wellbeing.

We interpret the drop in SEW as the total subjective net cost of children that a household must bear. This total net cost is composed of direct costs and indirect costs, minus any family-related benefits that a household receives.

This study is based on EU-SILC longitudinal data for 30 European countries from 2004 to 2015, enabling comparisons between country groups of different welfare regimes. Subjective child costs are analysed for children aged zero to three.

Results show that newborns decrease SEW in all regions. In the first years after the birth, indirect costs are mostly compensated for via public transfers or increased labour income of fathers, while direct costs of children are not.

## Introduction

## Theory & Method

## Data & Descriptives

## Results

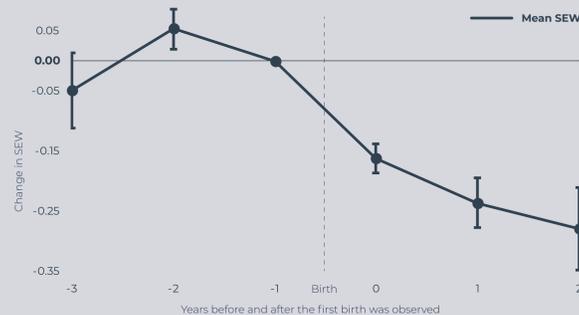
We investigate how the birth of a child relates to its parents' subjective economic wellbeing (SEW) and compare the effect between European regions.

### Subjective economic wellbeing (SEW)

"A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?"

- 1 - With great difficulty
- 2 - With difficulty
- 3 - With some difficulty
- 4 - Fairly easily
- 5 - Easily
- 6 - Very easily

### Subjective economic wellbeing before and after the birth of the first child: children are costly...



Source: EU-SILC longitudinal data 2004-2015. This graph is based on the 4,709 couples in the sample that had their first child, but no additional child, during the observed period. In total, they provided 14,639 observations. SEW is set to 0 in the year before the birth was observed, which is why the confidence intervals at time -1 are not visible. Household level weights were applied.

## Research questions

How does childbirth affect parents' SEW shortly after childbirth?

How do direct and indirect costs contribute to the change in SEW after childbirth?

How do direct and indirect costs of children differ across European regions?

Do family-related benefits compensate for the child costs occurring shortly after childbirth?

### Cost components:

Total net cost ( $T$ ) = direct costs ( $d$ ) + indirect costs ( $i$ ) - benefits ( $b$ )

<b>Direct costs (d)</b>	Higher expenses for food, diapers, a bigger house, etc.
<b>Indirect costs (i)</b>	Labour income losses (opportunity costs)
<b>Benefits (b)</b>	Birth grants, parental and maternity leave payments, tax deductions, etc.

### 1. Modelling the effect of children on SEW

$$SEW_{jt} = \beta_0 + \beta_1 CHILDREN_{jt} + \beta_2 X_{jt} + \beta_3 INCOME_{jt} + \mu_t + \alpha_j + \epsilon_{jt}$$

$CHILDREN_{jt}$ : number of children in household  $j$  at time  $t$   
 $X_{jt}$ : control variables age, age squared, and health  
 $INCOME_{jt}$ : total net household income or labour income of both partners  
 $\mu_t$ : time fixed effect  
 $\alpha_j$ : time-constant error term (individual fixed effect)  
 $\epsilon_{jt}$ : error term, varies with household and time

### 2. Disentangling direct and indirect costs of children

- $SEW_{jt} = \beta_0 + \beta_{11} CHILDREN_{jt} + \beta_2 X_{jt} + \beta_3 INCOME_{jt} + \mu_t + \alpha_j + \epsilon_{jt}$   
 $T = d + i - b$   
 $\beta_{11} = d + i - b$

- $SEW_{jt} = \beta_0 + \beta_{12} CHILDREN_{jt} + \beta_2 X_{jt} + \beta_3 HOUSEHOLD INC._{jt} + \mu_t + \alpha_j + \epsilon_{jt}$   
 $\beta_{12} = d$

- $SEW_{jt} = \beta_0 + \beta_{13} CHILDREN_{jt} + \beta_2 X_{jt} + \beta_3 LABOUR INC._{jt} + \mu_t + \alpha_j + \epsilon_{jt}$   
 $\beta_{13} = d - b$

- $T = d + i - b$   
 $i = T - (d - b)$   
 $i = \beta_{11} - \beta_{13}$

**Estimation methods:** Linear fixed effects model with OLS and "Blow-up and cluster" estimator for ordered outcomes (Baetschmann et al. 2011)

The analysis utilises longitudinal data from the **European Union Statistics of Income and Living Conditions (EU-SILC)**. Its panel design facilitates observing SEW before and after the birth, permitting a distinct identification of the impact that young children have on SEW.

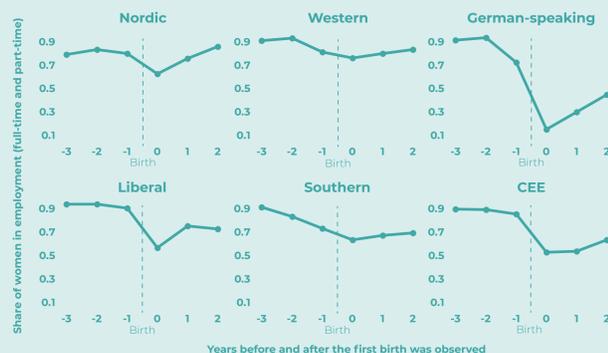
- EU-SILC longitudinal microdata for 30 countries
- 260,000+ observations from 125,000+ households
- Only couples living without additional adults
- Couples with and without children
- 2004 - 2015
- Women aged 16-40, men aged  $\geq 16$
- Maximum of four waves per couple



**Country groups:** Cost components vary by country due to different foci in family policies, and due to differences in norms, institutions, and macroeconomic conditions

<b>Nordic:</b>	Denmark, Finland, Iceland, Norway, Sweden
<b>Western:</b>	Belgium, France, Netherlands
<b>German-speaking:</b>	Austria, Switzerland
<b>Liberal:</b>	Ireland, UK
<b>Southern:</b>	Cyprus, Greece, Spain, Italy, Malta, Portugal
<b>CEE:</b>	Bulgaria, Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Poland, Romania, Serbia, Slovenia, Slovakia

### Varying cost components: Share of women in employment before and after the birth of their first child



Source: EU-SILC longitudinal data 2004-2015. This graph is based on the 4,709 couples in the sample that had their first child, but no additional child, during the observed period. In total, they provided 14,638 observations.

The drop in SEW is mainly caused by increased expenses due to the birth of a child (direct costs), which are largest in high-income regions. Immediate labour income losses of mothers (indirect costs) are less important in explaining the decrease. These income losses are closely related to the employment patterns of mothers and are highest in regions where women take extensive parental leave. Our results are relevant for both policymakers and potential parents, since the cost of raising children is likely to affect fertility and labour supply decisions.

	Total net cost	Direct costs	Indirect costs
	$\beta_{11}$	$\beta_{12}$	$\beta_{11} - \beta_{13}$
<b>Nordic</b>	0.232	0.225	0.081
<b>Western</b>	0.231	0.233	0.002
<b>German speaking</b>	0.190	0.182	0.034
<b>Liberal</b>	0.198	--	--
<b>Southern</b>	0.152	0.155	0.011
<b>CEE</b>	0.179	0.178	0.039

## Limitations

- Self-selection into parenthood cannot be accounted for. If some couples decide not to become parents because they expect a drop in SEW due to children, the costs of children are underestimated.
- Long-term effects of children on SEW cannot be analysed. Consequently, long-term indirect costs of children cannot be observed, and neither can adaptations to the costs of children in the long run.
- It cannot be observed whether expectations or general well-being change with the birth of a child.