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Happiness is a matter of size

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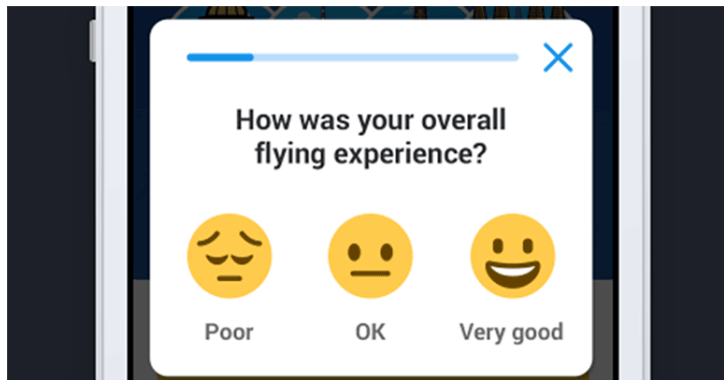
- Residents in small (Western European) countries are more satisfied with their life than others.
- It is possible to improve well-being and by promoting social capital and reducing income inequality.
- This, in turn, may contribute to a favourable business environment.

We are used to express our satisfaction

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We are used to express our satisfaction



We are used to express our satisfaction



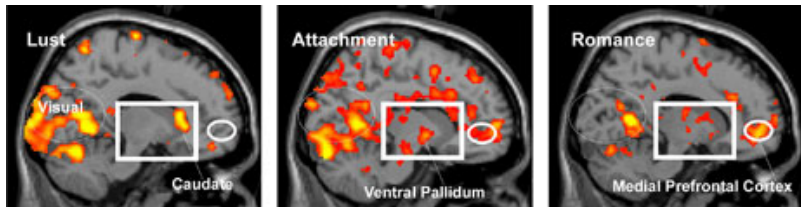
We are used to express our satisfaction

Taking all together, how satisfied or dissatisfied are you with your life as a whole these days?

1 2 3 4 5 6 7 8 9 10

Dissatisfied

Satisfied



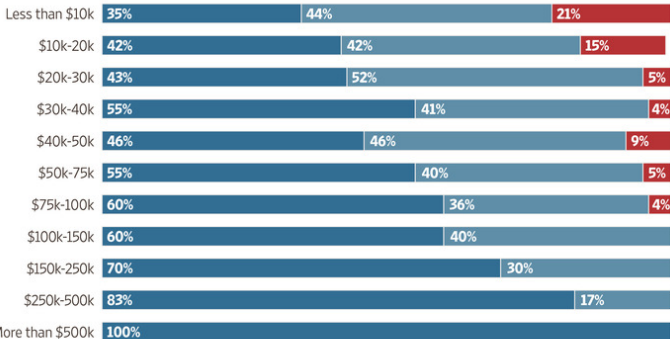
(Urry et al., 2006; Kahneman and Krueger, 2006)

The correlates of life satisfaction

How Happy Are You?

In a study by Betsey Stevenson and Justin Wolfers at the University of Michigan, the relationship between happiness and income in the U.S. was analyzed.

Happiness ■ Very happy ■ Fairly happy ■ Not too happy



Source: "Subjective Well-Being and Income: Is There Any Evidence of Satiation?" paper by Betsey Stevenson and Justin Wolfers, University of Michigan

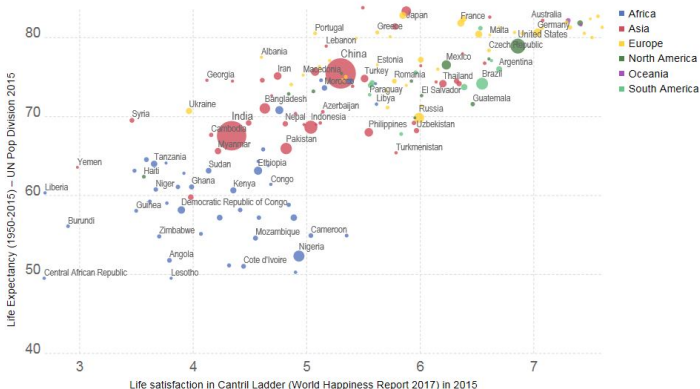
Note: Some categories may not equal 100% due to rounding.

The Wall Street Journal

The correlates of life satisfaction

Life satisfaction vs Life expectancy, 2015

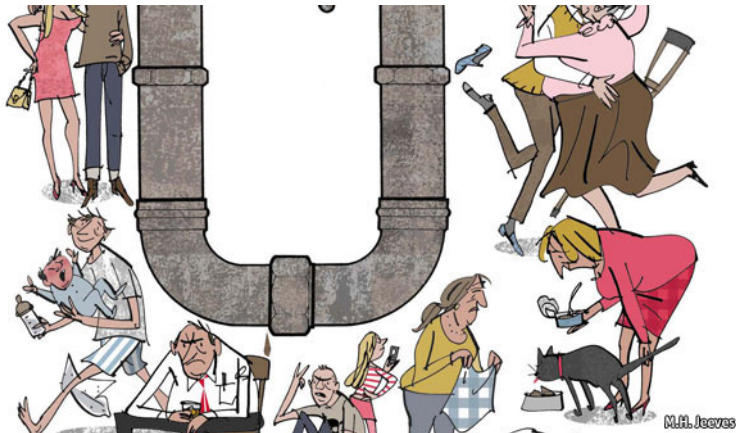
The vertical axis shows life expectancy at birth. The horizontal axis shows self-reported life satisfaction in the Cantril Ladder (0-10 point scale with higher values representing higher life satisfaction).



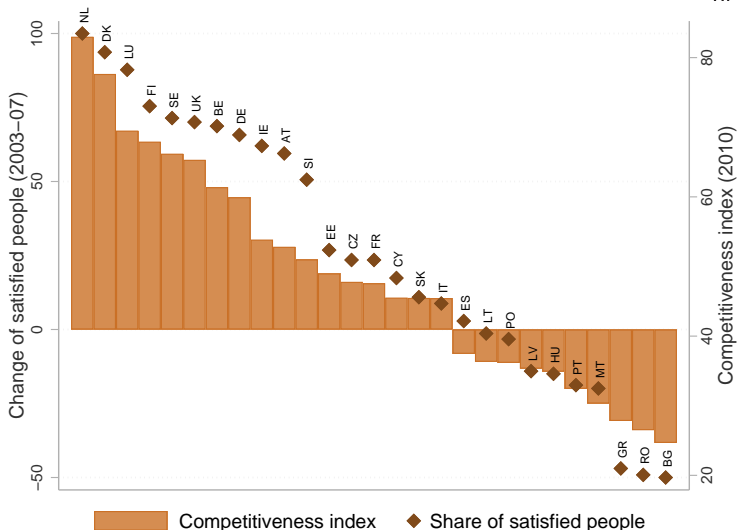
Source: World Happiness Report (2017), Life Expectancy (1950-2015) – UN Population Division (2015)
OurWorldInData.org/bonheur-et-satisfaction/ • CC BY-SA

The correlates of life satisfaction

The U-bend of life



Happier and competitive?



Note: EQLS and Joint Research Centre – DG Regional Policy data.

The Happiest Countries in Europe (2017)

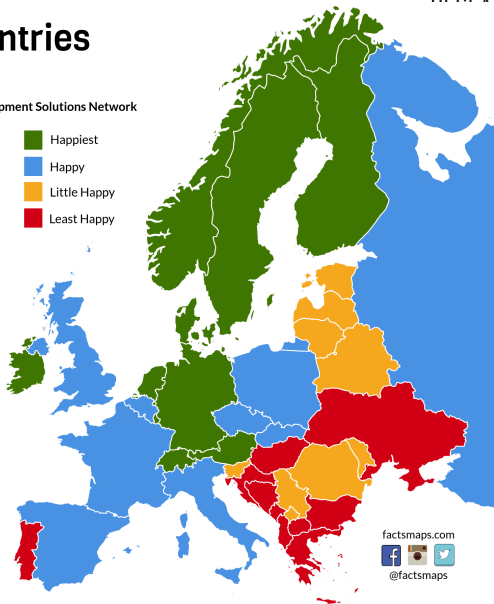
According to the United Nations Sustainable Development Solutions Network

The complex report measures well-being according to freedom to make life choices, corruption, generosity, economy.



Denmark 7.5	Lithuania 5.9
Finland 7.5	Latvia 5.8
Iceland 7.5	Moldova 5.8
Norway 7.5	Romania 5.8
Switzerland 7.5	Slovenia 5.8
Netherlands 7.4	Belarus 5.7
Sweden 7.3	Cyprus 5.6
Austria 7.0	Estonia 5.6
Germany 7.0	Serbia 5.4
Ireland 7.0	Croatia 5.3
Belgium 6.9	Hungary 5.3
Luxembourg 6.9	Kosovo 5.3
UK 6.7	Greece 5.2
Czech Rep. 6.6	Macedonia 5.2
Malta 6.5	Montenegro 5.2
France 6.4	Portugal 5.2
Spain 6.4	Bosnia Herz. 5.1
Slovakia 6.1	Bulgaria 4.7
Italy 6.0	Albania 4.6
Poland 6.0	Ukraine 4.1
Russia 6.0	

Source: worldhappiness.report

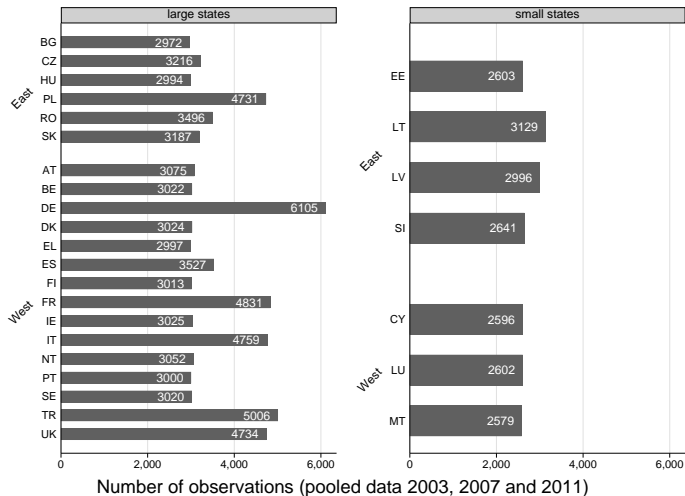


factsmaps.com

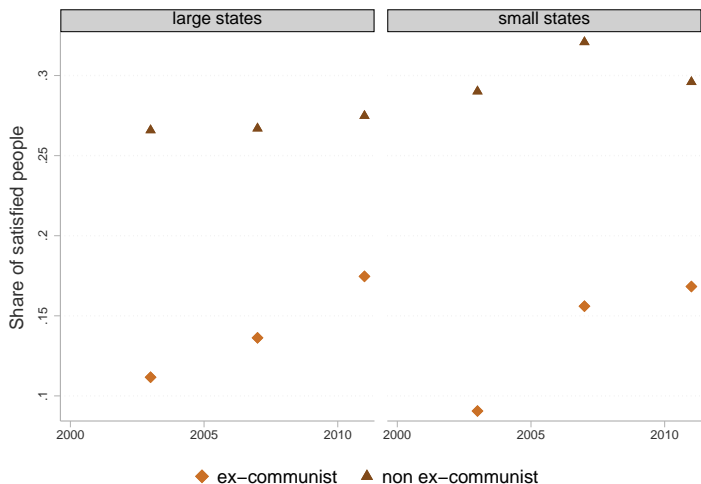


- is there a Small - Large country gap of life satisfaction?
- what does explain such gap?

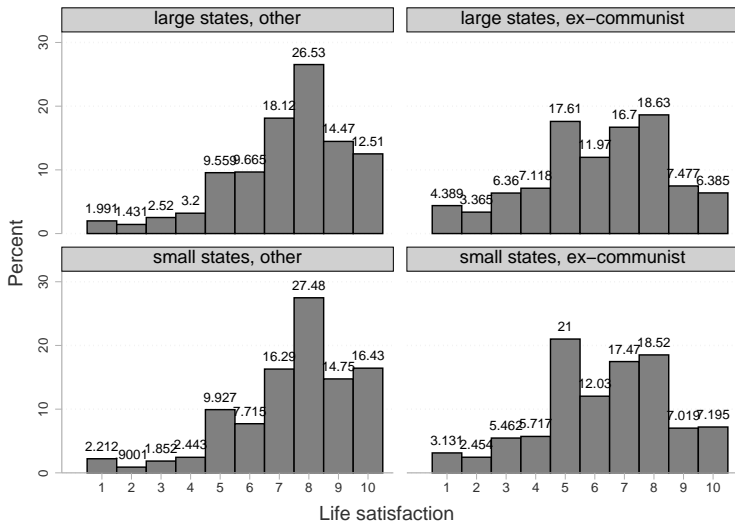
The European Quality of Life Survey



Life satisfaction by country and time



Beyond averages



- **There is a life satisfaction gap** between small and large countries.
- The gap disappears among ex-communist countries.
- The distribution of life satisfaction **within groups** and **over time** is heterogeneous.

What does explain the gap?

hp 1: people have more than others.

hp 2: people give more importance to what matters.

What does explain the gap?

hp 1: people have more than others.

hp 2: people give more importance to what matters.

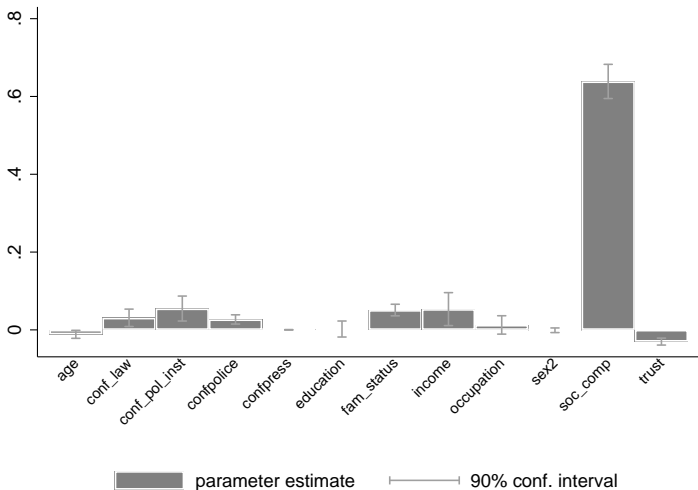
$$\Delta LS = \underbrace{[E(X_{fy}) - E(X_{iy})]' \cdot \beta^*}_{\text{explained}} + \underbrace{[E(X_{fy})' \cdot (\beta_{fy} - \beta^*) + E(X_{iy})' \cdot (\beta^* - \beta_{iy})]}_{\text{unexplained}}$$

Decomposing the gap

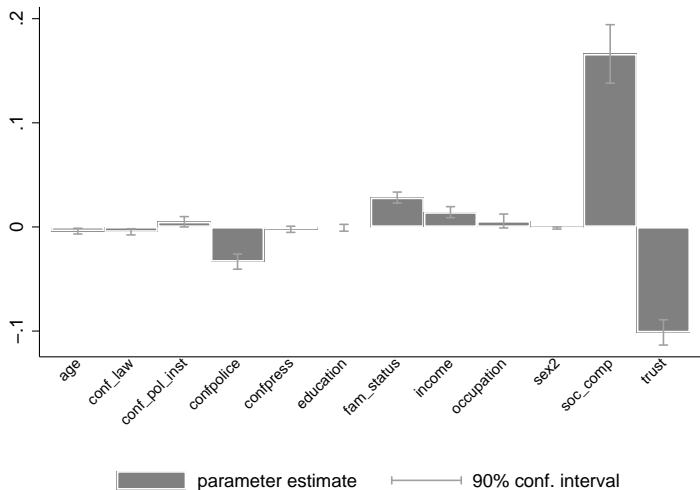
	among small states		between small and large states	
Differential				
Prediction_1	7.479***	(207.60)	7.479***	(207.61)
Prediction_2	6.503***	(231.37)	7.291***	(593.31)
Difference	0.976***	(21.36)	0.188***	(4.93)
Decomposition				
Explained	0.976***	(21.24)	0.188***	(4.92)
Unexplained	$8.18e - 14$	(0.00)	$1.43e - 15$	(0.00)
Observations	8819		31072	

t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

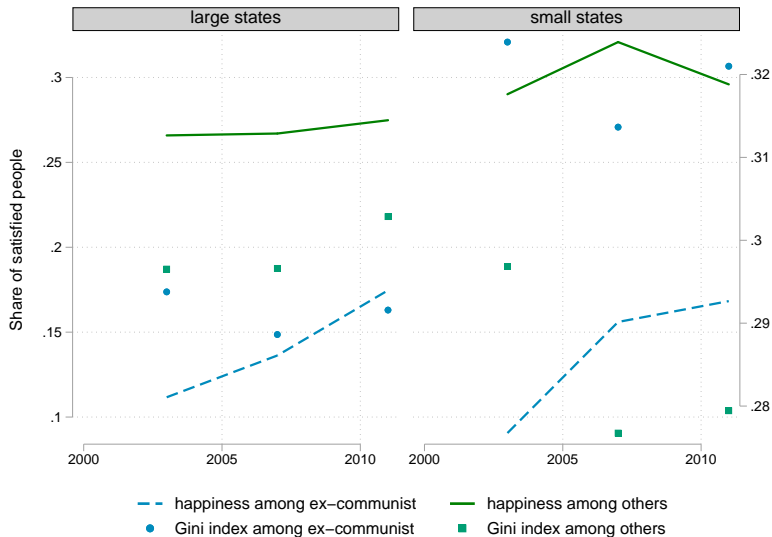
Explained part of the small-small gap



Explained part of the small-large gap



Inequality and life satisfaction



Residents in small western countries are:

- richer;
- more satisfied with their standard of living;
- more confident in institutions;
- more active on the labor market.

Small western countries could:

- promote higher education;
- care for trust between people;
- pay attention at confidence in institutions.

Reducing income inequality and promoting vertical and horizontal trust are important policy targets to improve well-being.

Thank you!

Francesco.Sarracino@statec.etat.lu

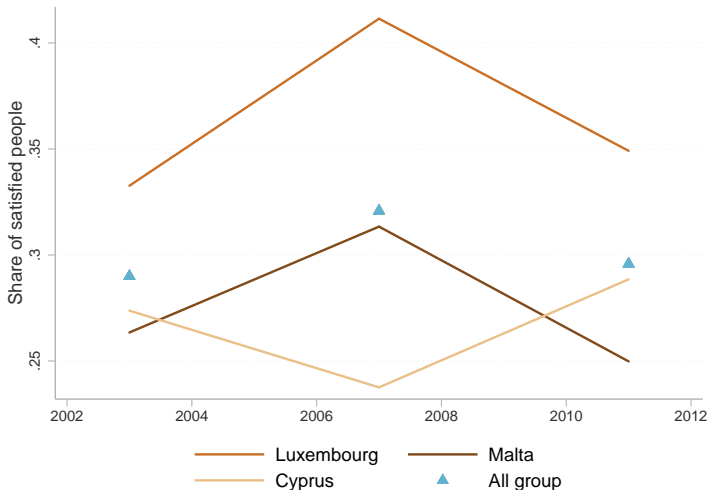
Variable	mean	sd	min	max	obs	missing(%)
life satisfaction	6.922	2.171	1	10	95932	0.00521
age==25-34	0.155	0.362	0	1	96434	0
age==35-49	0.268	0.443	0	1	96434	0
age==50-64	0.252	0.434	0	1	96434	0
age==65+	0.230	0.421	0	1	96434	0
women	0.575	0.494	0	1	96434	0
Married or living with partner	0.607	0.488	0	1	95755	0.00704
Separated or divorced and not living with	0.0983	0.298	0	1	95755	0.00704
Widowed and not living with partner	0.122	0.327	0	1	95755	0.00704
Unemployed	0.0608	0.239	0	1	96434	0
Disabled	0.0226	0.149	0	1	96434	0
Retired	0.290	0.454	0	1	96434	0
Homemaker	0.0962	0.295	0	1	96434	0
Student	0.0505	0.219	0	1	96434	0
Other	0.0156	0.124	0	1	96434	0
Secondary education	0.644	0.479	0	1	69323	0.281
Tertiary education	0.209	0.407	0	1	69323	0.281
log of OECD equivalised household income (euro in PPP)	6.604	0.881	-3.127	11.63	71446	0.259
dissatisfaction with standard of living	4.294	2.325	1	10	95833	0.00623
trust in others	5.159	2.438	1	10	94921	0.0157
confidence in parliament	4.460	2.611	1	10	67898	0.296
confidence in the legal system	5.033	2.612	1	10	67616	0.299
confidence in the press	4.637	2.270	1	10	68448	0.290
confidence in the police	6.012	2.489	1	10	68967	0.285
confidence in the government	4.508	2.674	1	10	68459	0.290
year	--	--	2003	2011	96434	0
country	--	--	1	28	96434	0

Sample size and composition

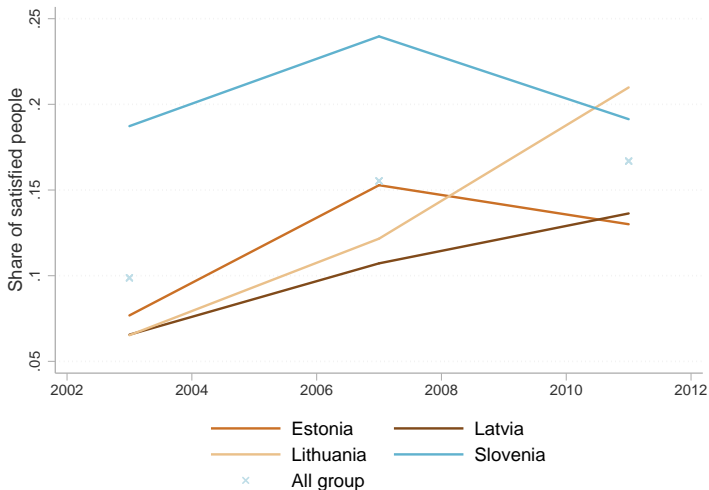
	Other	Ex-communist	Total
large states	56,190	20,596	76,786
small states	7,777	11,369	19,146
Total	63,967	31,965	95,932

Note: sample size by subgroups. Pooled data 2009 - 2015.

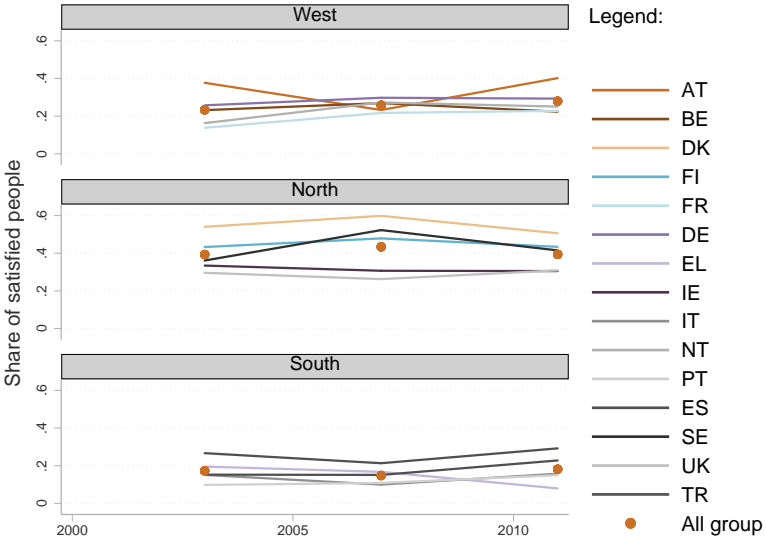
A close-up on the first group



and on small ex-communist countries



Life satisfaction in large western countries



The gap ceteris paribus

Variables	baseline		small country dummy	
age==25-34	-0.180***	(-7.07)	-0.180***	(-7.07)
age==35-49	-0.299***	(-8.72)	-0.299***	(-8.72)
age==50-64	-0.304***	(-7.51)	-0.304***	(-7.51)
age==65+	-0.189***	(-4.24)	-0.189***	(-4.24)
women	0.0161	(1.40)	0.0161	(1.40)
Married or living with partner	0.237***	(9.71)	0.237***	(9.71)
Separated or divorced and not living with partner	-0.0951***	(-3.13)	-0.0951***	(-3.13)
Widowed and not living with partner	-0.0138	(-0.42)	-0.0138	(-0.42)
Unemployed	-0.420***	(-9.33)	-0.420***	(-9.33)
Disabled	-0.489***	(-8.07)	-0.489***	(-8.07)
Retired	0.00954	(0.45)	0.00954	(0.45)
Homemaker	-0.0313	(-1.49)	-0.0313	(-1.49)
Student	0.0932**	(2.15)	0.0932**	(2.15)
Other	-0.0247	(-0.56)	-0.0247	(-0.56)
Secondary education	0.101***	(3.59)	0.101***	(3.59)
Tertiary education	0.148***	(4.46)	0.148***	(4.46)
ln of OECD equivalised household income (euro in PPP)	0.184***	(9.33)	0.184***	(9.33)
trust in others	0.0678***	(17.14)	0.0678***	(17.14)
confidence in parliament	0.0205***	(3.99)	0.0205***	(3.99)
confidence in the legal system	0.0173***	(3.79)	0.0173***	(3.79)
confidence in the press	-0.00540	(-1.54)	-0.00540	(-1.54)
confidence in the police	0.0543***	(12.91)	0.0543***	(12.91)
confidence in the government	0.0202***	(4.65)	0.0202***	(4.65)
idc			0.422***	(3.52)
cut1	1.056***	(5.68)	1.478***	(10.28)
cut2	2.703***	(14.72)	3.125***	(21.33)
Observations	46671		46671	
Pseudo R ²	0.118		0.118	

t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table: X and β coefficients from the decomposition.

	b_{SC-OTH}	b_{SC-EXC}	b_{ref}	X_{SC-OTH}	X_{SC-EXC}
age==25-34	0.045	-0.110	-0.045	0.150	0.151
age==35-49	-0.028	-0.326	-0.215	0.279	0.229
age==50-64	-0.132	-0.459	-0.347	0.300	0.250
age==65+	0.005	-0.294	-0.225	0.206	0.279
women	-0.028	0.056	0.010	0.518	0.613
married or living with partner	0.253	0.113	0.194	0.715	0.531
separated or divorced and not living with partner	-0.430	-0.085	-0.152	0.074	0.138
widowed and not living with partner	-0.530	0.084	-0.053	0.070	0.174
unemployed	-0.829	-0.162	-0.324	0.034	0.073
disabled	-0.937	-0.451	-0.578	0.020	0.028
retired	0.164	-0.160	-0.041	0.243	0.348
homemaker	-0.061	0.066	-0.031	0.168	0.020
student	0.060	0.131	0.171	0.022	0.049
other	-0.321	0.205	0.029	0.008	0.011
secondary education	0.105	0.076	-0.003	0.585	0.721
tertiary education	-0.065	0.106	-0.056	0.202	0.234
ln of OECD equivalised household income (euro in PPP)	0.024	0.102	0.071	7.101	6.353
dissatisfaction with standard of living	-0.408	-0.498	-0.473	3.545	4.895
trust in others	0.065	0.067	0.069	4.289	4.726
confidence in parliament	0.027	0.007	0.014	5.099	3.416
confidence in the legal system	0.006	0.036	0.026	5.413	4.200
confidence in the press	-0.020	0.024	0.005	4.931	4.902
confidence in the police	0.054	0.030	0.042	6.015	5.375
confidence in the government	0.005	0.027	0.019	5.415	3.784
country dummies			included		
Constant	8.072	7.530	7.680	1.000	1.000

Table: X and β coefficients from the decomposition.

	b_{SC}	b_{LC}	b_{ref}	X_{SC}	X_{LC}
age==25-34	0.045	-0.080	-0.068	0.150	0.159
age==35-49	-0.028	-0.228	-0.208	0.279	0.288
age==50-64	-0.132	-0.187	-0.181	0.300	0.250
age==65+	0.005	-0.147	-0.134	0.206	0.225
women	-0.028	0.055	0.046	0.518	0.541
married or living with partner	0.253	0.244	0.250	0.715	0.624
separated or divorced and not living with partner	-0.430	-0.044	-0.069	0.074	0.112
widowed and not living with partner	-0.530	-0.064	-0.100	0.070	0.099
unemployed	-0.829	-0.444	-0.472	0.034	0.059
disabled	-0.937	-0.725	-0.746	0.020	0.021
retired	0.164	0.056	0.068	0.243	0.277
homemaker	-0.061	-0.058	-0.061	0.168	0.105
student	0.060	0.078	0.077	0.022	0.042
other	-0.321	-0.076	-0.094	0.008	0.013
secondary education	0.105	0.115	0.110	0.585	0.583
tertiary education	-0.065	0.035	0.020	0.202	0.250
ln of OECD equivalised household income (euro in PPP)	0.024	0.079	0.074	7.101	6.910
dissatisfaction with standard of living	-0.408	-0.438	-0.435	3.545	3.927
trust in others	0.065	0.083	0.082	4.289	5.531
confidence in parliament	0.027	0.011	0.013	5.099	5.086
confidence in the legal system	0.006	0.021	0.019	5.413	5.657
confidence in the press	-0.020	-0.006	-0.007	4.931	4.621
confidence in the police	0.054	0.062	0.061	6.015	6.558
confidence in the government	0.005	0.012	0.011	5.415	4.975
country dummies			included		
Constant	8.072	7.526	7.502	1.000	1.000