

SUPPLEMENTARY MATERIAL

Descriptive Statistics and Linear Mixed Models (LMM) fit comparisons

Descriptive statistics for municipality characteristics ($n = 253$)

Variables	Years					
	2009		2013		2018	
	Statistics					
	M (<i>SD</i>)	Min-Max	M (<i>SD</i>)	Min-Max	M (<i>SD</i>)	Min-Max
SII	4.92 (2.80)	0.80-17.70	3.43 (1.93)	0.60-12.40	2.79 (1.72)	0.50-11.90
Unemployment rate	6.83 (2.00)	2.60-14.00	9.79 (2.33)	5.20-18.20	5.30 (1.98)	2.40-11.50
Women's rate with tertiary education ^a	11.46 (4.77)	3.80-31.80	---	---	---	---
Annual rate of investment in culture and sports	11.28 (5.86)	1.20-39.70	9.85 (6.09)	0.80-45.00	11.13 (4.89)	2.30-28.80
Average number of students per computer	3.81 (1.84)	0.70-10.40	2.48 (1.26)	0.70-7.90	3.67 (1.63)	0.60-12.20
Preschool enrollment rate	88.75 (12.40)	44.10-100	92.42 (9.45)	58.80-100	92.55 (8.50)	56.90-100
Secondary school enrollment rate	61.81 (20.98)	1.30-100	65.44 (20.38)	1.00-100	69.99 (19.63)	5.40-100
Permanent teachers' rate	72.47 (9.19)	45.30-92.90	78.21 (11.76)	15.40-96.40	77.07 (8.79)	28.60-93.00
Conclusion rate by the end of secondary school	69.72 (11.16)	26.70-100	66.70 (10.58)	38.30-100	76.71 (9.12)	40.00-100

a. Indicator only available for 2011 (last national census)

Note. SII = Social inclusion income.

Descriptive statistics by type of municipality and mean comparisons between low- and high-density municipalities

Variables	Years														
	2009 – Low density		2009 – High density			2013 – Low density		2013 – High density			2018 – Low density		2018 – High density		
	Statistics														
	M (SD)	Min- Max	M (SD)	Min- Max	F ANOVA	M (SD)	Min- Max	M (SD)	Min- Max	F ANOVA	M (SD)	Min- Max	M (SD)	Min- Max	F ANOVA
SII	5.37 (2.91)	0.80- 17.70	4.37 (2.56)	1.20- 13.60	8.09***	3.66 (2.05)	0.60- 12.40	3.15 (1.74)	0.70- 10.40	4.46*	3.16 (1.84)	0.60- 11.90	2.32 (1.43)	0.50- 9.60	15.78***
Unemployment rate	6.76 (2.01)	2.60- 13.20	6.92 (2.00)	3.50- 14.00	.93	9.82 (2.36)	5.20- 18.20	9.76 (2.29)	5.80- 16.80	.04	5.88 (2.10)	2.60- 11.50	4.59 (1.55)	2.40- 10.10	29.58***
Women's rate with tertiary education ^a	9.35 (3.30)	3.80- 22.30	14.07 (5.03)	3.80- 31.80	80.09***	---	---	---	---	---	---	---	---	---	---
Annual rate of investment in culture and sports	11.14 (5.95)	1.40- 39.70	11.45 (5.78)	1.20- 33.30	.18	9.84 (5.39)	0.90- 32.80	9.85 (6.88)	0.80- 45.00	.00	11.34 (5.00)	2.60- 28.80	10.88 (4.76)	2.30- 23.80	.56
Average number of students per computer	3.26 (1.70)	0.70- 10.40	4.50 (1.78)	1.60- 10.30	31.50***	2.14 (1.18)	0.70- 7.60	2.90 (1.23)	1.20- 7.90	25.20***	3.05 (1.48)	0.60- 12.20	4.43 (1.47)	1.90-10- 10	54.62***
Preschool enrollment rate	94.04 (8.03)	67.80- 100	82.19 (13.70)	44.10- 100	73.58***	96.27 (5.87)	76.60- 100	87.65 (10.80)	58.80- 100	65.38***	94.45 (6.45)	67.00- 100	90.19 (10.03)	56.90- 100	16.64***
Secondary school enrollment rate	59.92 (21.14)	1.30- 100	64.14 (20.63)	3.90- 100	2.54	64.17 (20.43)	1.00- 100	67.01 (20.29)	16.90- 100	1.21	68.95 (19.71)	5.40- 100	71.28 (19.55)	17.40- 100	.88
Permanent teachers' rate	71.72 (9.83)	45.30- 92.90	73.39 (8.28)	48.00- 90.00	2.09	75.62 (12.98)	15.40- 96.40	81.41 (9.11)	47.90- 96.30	16.09***	75.33 (10.60)	28.60- 93.00	79.24 (5.09)	65.30- 91.30	13.00***
Conclusion rate by the end of secondary school	69.43 (13.10)	26.70- 100	70.09 (8.18)	45.30- 90.20	.22	68.25 (11.49)	38.30- 100	64.78 (9.00)	42.50- 94.70	6.91**	77.69 (9.82)	40-100	75.49 (8.04)	57.50- 91.70	3.68

a. Indicator only available for 2011 (last national census)

Note. SII = Social inclusion income.

Bivariate correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Municipality type ^a	---									
2.SII	-.17**	---								
3. Unemployment rate	-.07*	.47**	---							
4. Women's rate with tertiary education	.42**	-.01	-.01	---						
5. Annual rate of investment in culture and sports	-.01	.02	-.14**	.03	---					
6. Average number of students per computer	.33**	.07	-.17**	.14**	.01	---				
7. Preschool enrollment rate	-.39**	-.14**	-.01	-.22**	.06	-.24**	---			
8. Secondary school enrollment rate	.07*	-.06	.02	.26**	.02	.05	.22**	---		
9. Permanent teachers' rate	.19**	-.30**	-.09*	.27**	.04	-.06	.03	.19**	---	
10. Secondary school completion rate	.06	-.14**	-.23**	-.08*	.08*	.05	.14**	.05	-.06	---

* $p < .05$; ** $p < .01$

a. Variable coded as 0 = Low density and 1 = High density

Note. SII = Social inclusion income

Models with SSI as baseline factor (Baseline Model 1)

	Stat.
Baseline Model 1	
AIC	5741.62
BIC	5764.74
Model 1	
AIC	5700.79
BIC	5728.62
Model 2	
AIC	5742.74
BIC	5770.48
Model 3	
AIC	5740.81
BIC	5773.8
Model 4	
AIC	5739.81
BIC	5767.55
Model 5	
AIC	5733.96
BIC	5761.70
Model 6	
AIC	5731.08
BIC	5763.44
Model 7	
AIC	5739.86
BIC	5767.70
Model 8	
AIC	5740.68
BIC	5773.05
Model 9	
AIC	5733.84
BIC	5770.83
Model 10	
AIC	5727.18
BIC	5768.79

Notes

Model 1 - SSI; municipality type; unemployment rate

Model 2 - municipality type; SSI; rate of women with tertiary education.

Model 3 - municipality type; SSI; rate of women with tertiary education.; % of investment in culture and sports;

Model 4 - municipality type; SSI; % of investment in culture and sports;

Model 5 - municipality type; SSI; average of students by computer;

Model 6 - municipality type; SSI; average of students by computer; % of enrollement in early school;

Model 7 - municipality type; SSI; % of enrollement in early school;

Model 8 - municipality type; SSI; % of enrollement in early school; % of enrollement in secondary school;

Model 9 - municipality type; SSI; % of enrollement in early school; % of enrollement in secondary school; % of permanent teachers.

Model 10 - municipality type; SSI; average of students by computer; % of enrollement in early school; % of enrollement in secondary school; % of permanent teachers.

Models with unemployment as key factor (baseline model 2)

	Stat.
Baseline Model 2	
AIC	5702.01
BIC	5725.13
Model 11	
AIC	5700.79
BIC	5728.62
Model 12	
AIC	5703.33
BIC	5731.08
Model 13	
AIC	5704.88
BIC	5737.18
Model 14	
AIC	5703.52
BIC	5731.27
Model 15	
AIC	5703.39
BIC	5731.13
Model 16	
AIC	5698.34
BIC	5730.71
Model 17	
AIC	5697.84
BIC	5725.59
Model 18	
AIC	5697.84
BIC	5730.20
Model 19	
AIC	5695.29
BIC	5732.30
Model 20	
AIC	5696.60
BIC	5738.22

Notes

Model 11 - SSI; municipality type; unemployment rate

Model 12 - municipality type; unemployment rate; rate of women with tertiary education.

Model 13 - municipality type; unemployment rate; rate of women with tertiary education.; % of investment in culture and sports;

Model 14 - municipality type; unemployment rate; % of investment in culture and sports;

Model 15 - municipality type; unemployment rate; average of students by computer;

Model 16 - municipality type; unemployment rate; average of students by computer; % of enrollement in early school;

Model 17 - municipality type; unemployment rate; % of enrollement in early school;

Model 18 - municipality type; unemployment rate; % of enrollement in early school; % of enrollement in secondary school;

Model 19 - municipality type; unemployment rate; % of enrollement in early school; % of enrollement in secondary school; % of permanent teachers.

Model 20 - municipality type; unemployment rate; average of students by computer; % of enrollement in early school; % of enrollement in secondary school; % of permanent teachers.

In bold: selected model

Models with SSI and unemployment as key factor (baseline model)	Stat.
Baseline Model 3	
AIC	5741.62
BIC	5764.74
Model 31	
AIC	5700.79
BIC	5728.62
Model 32	
AIC	5702.32
BIC	5734.7
Model 33	
AIC	5703.62
BIC	5740.61
Model 34	
AIC	5702.22
BIC	5734.58
Model 35	
AIC	5701.26
BIC	5733.63
Model 36	
AIC	5698.57
BIC	5735.40
Model 37	
AIC	5698.63
BIC	5731.00
Model 38	
AIC	5698.61
BIC	5735.61
Model 39	
AIC	5694.25
BIC	5735.87
Model 40	
AIC	5694.87
BIC	5741.62

Notes

Model 31 - SSI; municipality type; unemployment rate

Model 32 - SSI; municipality type; unemployment rate; rate of women with tertiary education.

Model 33 - SSI; municipality type; unemployment rate; rate of women with tertiary education.; % of investment in culture and sports;

Model 34 - SSI; municipality type; unemployment rate; % of investment in culture and sports;

Model 35 - SSI; municipality type; unemployment rate; average of students by computer;

Model 36 - SSI; municipality type; unemployment rate; average of students by computer; % of enrollement in early school;

Model 37 - SSI; municipality type; unemployment rate; % of enrollement in early school;

Model 38 - SSI; municipality type; unemployment rate; % of enrollement in early school; % of enrollement in secondary school;

Model 39 - SSI; municipality type; unemployment rate; % of enrollement in early school; % of enrollement in secondary school; % of permanent teachers.

Model 40 - SSI; municipality type; unemployment rate; average of students by computer; % of enrollement in early school; % of enrollement in secondary school; % of permanent teachers.