Social Capital, Achievement, and the Welfare State in 22 Countries

A Multilevel Study

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INTRODUCTION

People face a variety of risks during the course of their lives and they sometimes need assistance from others to sustain an acceptable standard of living. In most countries, welfare state provisions cover a portion of these risks. Welfare states are a form of institutionalized solidarity (Gelissen, 2000); they are funded through taxes and apply formal rules to redistribute resources in society. Although welfare states enable *formal* solidarity within society, they are met with criticism as well, for instance because they may decrease existing levels of *informal* solidarity between citizens (Van Oorschot & Arts, 2006). Initially, people found assistance through their informal social capital. When governments formalized some of these relationships between people, the level of formal social capital increased but it crowded out informal social capital. A second and opposing view emphasizes that formal provisions may provide structures in which informal social capital can flourish.

Earlier research investigating these opposing views focused on the effects of formal solidarity provided through the welfare state on informal social capital. A common feature of these studies is that formal solidarity is the explanatory variable and informal solidarity is the response variable. Using longitudinal or international comparative data allowed researchers to infer answers to the question whether formal solidarity has negative or positive effects on the level of social capital. Although an important issue by itself, it overlooks one important aspect, the instrumental value of social capital. Researchers' interest in the topic of social capital originates from the idea that people can use their social capital to reach certain goals (Bourdieu, 1983; Coleman, 1988), and in many studies a relationship was found between social capital and achievement (Portes, 1998; Lin, 2001). People with many social ties in a favourable configuration can use them to mobilize resources and to get ahead in society.

The question we ask in this paper is whether the instrumental value of social capital is affected by formal solidarity provided through the welfare state. Instead of focusing on the direct effect of formal solidarity on informal social capital, our analysis investigates the way in which welfare states moderate the relationship between social capital and achievement. Even if formal solidarity decreases, or increases, informal social capital, it may well be that social capital is still an important means for achievement under conditions of increased formal solidarity. If the generic importance of social capital is declining because of the welfare state, there should no longer be a relationship between social capital and achievement. In this paper, we investigate the effects of two basic kinds of social capital – ties with parents and ties with friends – on achievement in 22 countries.

DATA AND METHOD

Individual level data on social capital and achievement (subjective social class) are taken from the International Social Survey Program (ISSP) and the International Labour Organisation (ILO, 2001) provided country level data on welfare state effort.

The first part of the analyses deals with the measurement of social capital using factor analysis. Based on this analysis the distinction is made between ties with parents and ties with friends.

The dependent variable achievement is measured with ***subjective social class*** (ranging from 0 to 6). Two dimensions of ***social capital*** are measured: (1) parents (consisting of contact with father and contact with mother; and (2) friends (the number of the respondent's friends). At the individual level, the following control variables are added to the multilevel regression model: ***age***, ***gender*** (0 = male; 1 = female); ***marital status*** (0 = not married; 1 = married);

educational level (1 = none, still at school; 7 = university completed); job status (using a dummy for fulltime work), and whether the respondents lives in an ***urban or rural area*** (1 = urban; 3 = rural). At the country level, the effect of welfare state effort is investigated. ***Welfare state effort*** is measured with the Total social expenditure per GDP.

The final dataset contains information about 27,542 respondents in 22 countries. Table 1 shows the countries in the study, the mean level of achievement, and the level of welfare state effort per country.

TABLE 1 ABOUT HERE

ANALYSIS

Method

The dataset contains information at the individual level (level 1) and the country level (level 2). Because of the hierarchical data structure it is not possible to use Ordinary Least Square (OLS) regression analysis (see for instance DiPrete & Foristal, 1994). Multilevel modeling is suitable to investigate such datasets. In its general form, the multilevel model has a fixed part (the linear function of the independent variables) and a random part (in this particular case the unexplained variation at the individual level and the unexplained variation between the countries) (Snijders, 2003).

The effects of the welfare state on the relationship between social capital and achievement are examined using a hierarchical linear model that consists of 1 dependent variable (achievement

measured with subjective social class), 2 independent variables at level 1 (contact with parents, contact with friends), 5 level 1 control variables (age, gender, marital statues, educational level, and urban area), and 1 level 2 independent variable (welfare state effort). The level 1 variables are group mean centered (except the dummy variables and the dependent variable) and the level 2 variable is grand mean centered (see Kreft, De Leeuw & Aiken, 1995 for an overview of centering decisions in multilevel analysis); the most basic form of centering is used because there are no theoretical reasons to do otherwise.

The multilevel analysis is performed in four steps. First an empty model is computed (Model 0). The empty model is an unconditional model without independent variables and serves as a baseline by which the other models are evaluated. The control variables are added in Model 1 (the level 1 variables) and Model 2 (welfare state effort at level 2). The final models include the cross-level interactions between welfare state effort and contact with parents (Model 3a) and between welfare state effort and contact with friends (Model 3b).

The parameters in these models are estimated by the maximum likelihood method (Goldstein, 2003), the regression coefficients are tested by Wald tests (see also Snijders, 2003). The deviance between the models is used to evaluate the fit of the different models.

Findings

Table 2 shows the correlations among the individual level variables. Achievement turns out to be positively related to social capital.

TABLE 2 ABOUT HERE

An overview of the multilevel analysis is provided in Table 3. The empty model (Model 0) shows that the achievement grand mean is 3.31. The intraclass correlation coefficient indicates that 18.08 percent of the achievement variability occurred between countries. By including the level 1 control variables (Model 1) the intraclass correlation drops to 15.34. The model improves after adding the individual level variables (Deviance = 25113.42, Df = 6). Contact with parent and contact with friends are both positively related to achievement ($b = 0.019$, $p < 0.01$ and $b = 0.014$, $p < 0.01$). Furthermore, the level of achievement is higher among older people ($b = 0.003$, $p < 0.01$), married people ($b = 0.085$, $p < 0.01$), people with a higher educational level ($b = 0.238$, $p < 0.01$), and people who have a fulltime job ($b = 0.107$, $p < 0.01$). People living in a rural area have a lower level of achievement than people living in urban areas ($b = -0.121$, $p < 0.01$). These results remain the same after the level 2 variables are added to the model.

Model 2 also includes the level 2 variable welfare state effort and improves the model slightly (Deviance = 2.90, Df = 1), the intraclass coefficient decreases to 13.40. Welfare state effort is positively related to achievement ($b = 0.024$, $p < 0.10$) and explains almost 2 percent of its variation, but its effect is moderate.

Model 3a and 3b test for the cross-level interaction between welfare state effort and social capital; Model 3a includes the interaction with contact with parents and Model 3b includes the interaction with contact with friends. For both models the conclusion holds that these interactions do not lead to better models (Deviance = 1.64, n.s. and Deviance = 0.42, n.s.) and both parameters are close to zero.

TABLE 3 ABOUT HERE

These results suggest that there is a positive association between social capital and subjective social class, regardless of welfare state effort. It is concluded that (1) the (formal) welfare state does affect subjective social class moderately (people living in countries with a higher level of spending on social welfare report a higher level of achievement); (2) (informal) social capital affect achievement positively; (3) the (formal) welfare state does not crowd out (informal) social capital; and (4) it may be speculated that a reduction of (formal) welfare state effort may decrease the level of achievement but that this reduction is countered by (informal) social capital.

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TABLES

TABLE 1
Number of respondents and descriptive statistics by country

Country	N	Subjective social class	Social expenditure/GDP
Australia	1,245	3.54	15.70
United States	1,146	2.97	16.50
Austria	954	3.85	26.20
Hungary	1,499	2.74	22.30
Italy	1,000	3.80	23.70
Norway	1,403	3.52	28.50
Czech Republic	1,137	3.19	18.80
Poland	1,181	2.88	25.10
Russia	2,000	2.74	10.40
New Zealand	1,065	4.13	19.20
Canada	1,019	3.16	17.70
Japan	1,319	3.81	14.10
Spain	1,181	3.07	22.00
Latvia	940	2.69	19.20
France	1,096	3.61	30.10
Cyprus	994	3.74	10.30
Chile	1,458	2.60	11.30
Denmark	1,196	3.69	33.00
Brazil	1,928	2.22	12.20
Finland	1,276	3.29	32.30
Germany	1,324	3.34	29.70
Israel	1,180	4.22	24.10
Total	**27,542**	**3.25**	**20.52**

Sources: ISSP2001; ILO (2001)

TABLE 2
Correlations individual level

	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.
1. Subjective social class	3.250	1.232								
2. Parents	5.768	4.731	0.091 **							
3. Friends	6.6358	5.560	0.129 **	0.072 **						
4. Age	45.66	17.095	-0.034 **	-0.698 **	-0.059 **					
5. Gender	0.530	0.499	0.013 *	-0.029 **	-0.032 **	0.006				
6. Marital status	0.400	0.490	0.089 **	0.205 **	-0.005	-0.184 **	0.053 **			
7. Educational level	4.580	1.654	0.351 **	0.119 **	0.033 **	-0.146 **	0.001	-0.072 **		
8. Job status	0.335	0.472	0.114 **	0.029 **	-0.008	-0.163 **	0.141 **	-0.404 **	0.173 **	
9. Urban – rural	1.740	0.823	-0.082 **	-0.022 **	0.035 **	0.051 **	-0.001	-0.074 **	-0.031 **	0.031 **

N = 27,542 respondents.
Sources: ISSP2001; ILO (2001).
† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$

TABLE 3
Results of regression analysis of Achievement (Subjective Social Class)

	(0)	(1)	(2)	(3a)	(3b)
COUNTRY LEVEL					
Social Expenditure/GDP (1)			0.024†	0.025†	0.024†
			(0.014)	(0.013)	(0.014)
INDIVIDUAL LEVEL					
SOCIAL CAPITAL					
Parents (2)		0.019**	0.019**	0.018**	0.019**
		(0.002)	(0.002)	(0.004)	(0.002)
Friends (3)		0.014**	0.014**	0.014**	0.014**
		(0.001)	(0.001)	(0.001)	(0.001)
Interactions					
(1)*(2)				0.001	
				(0.001)	
(1)*(3)					-0.000
					(0.000)
CONTROL VARIABLES					
Age		0.003**	0.003**	0.003**	0.003**
		(0.001)	(0.001)	(0.001)	(0.001)
Gender		0.016	0.016	0.017	0.016
(0 = male; 1 = female)		(0.015)	(0.015)	(0.015)	(0.015)
Marital status		0.085**	0.085**	0.086**	0.085**
(0 = not married; 1 = married)		(0.017)	(0.017)	(0.017)	(0.017)
Educational level		0.238**	0.238**	0.240**	0.238**
		(0.006)	(0.006)	(0.006)	(0.006)
Job status		0.107**	0.107**	0.101**	0.107**
(0 = not fulltime; 1 = fulltime)		(0.018)	(0.018)	(0.018)	(0.018)
Urban – Rural		-0.121**	-0.121**	-0.121**	-0.121**
		(0.010)	(0.010)	(0.009)	(0.010)
Intercept	3.310**	3.494**	3.490**	3.490**	3.491**
	(0.111)	(0.108)	(0.101)	(0.099)	(0.102)
-2loglikelihood	85007.694	59894.279	59891.383	59889.746	59890.964
Deviance		25113.415**	2.896†	1.637	0.419
Residual	1.223**	1.060**	1.060**	1.053**	1.060**
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Intercept variance	0.270**	0.192**	0.164**	0.160**	0.164**
	(0.082)	(0.062)	(0.054)	(0.052)	(0.054)
Intraclass correlation	18.08	15.34	13.40	13.19	13.40

N = 27,542 respondents in 22 countries. Unstandardized regression coefficients are reported; standard errors are in parentheses.
Sources: ISSP2001; ILO (2001).
† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$