

Education and Social Cohesion

Lessons from a comparative international approach

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A renewed interest in the concept of social cohesion

- Regular surveys conducted in the EU and OECD countries have recorded, since the 1990s, a **feeling of 'downgrading' and 'disaffiliation' among a growing proportion of respondents** who
 - consider their professional situation to be lower in terms of status and social prestige than that enjoyed by their parents and express a declining confidence in the virtues of 'meritocracy' and the possibilities of social mobility
 - express a decline in trust, both in institutions and in fellow citizens, which is reflected in the ballot box by an increase in abstention and/or the rise of populist and radical 'anti-system' parties.
- => Fears of widening divides within our societies and a **renewed interest in the concept of social cohesion** which our societies urgently need in order to face collectively the many challenges and crises of the future (climate, migration, pandemics, growing inequalities, etc.)
- => Concern to **identify main 'drivers' of social cohesion** and, consequently, the policies to be implemented to strengthen it

What about education as a 'driver' of social cohesion?

- Education comes to mind as a natural 'driver' of social cohesion but the available empirical work has so far struggled to identify the ways in which education might affect social cohesion
- Green, Preston and Janmaat (2006) and Duru-Bellat, Véréttout and Dubet (2013) are prominent examples. They find that social cohesion correlates very weakly with average educational attainment but correlates more strongly with indicators of inequality in education.

According to these works, **inequalities in education would affect social cohesion but only indirectly**, through their effects on income inequalities or induced inequalities on the labour market (due to wage and/or employment rate differentials)

In search of a more direct effect of education on social cohesion

- In this paper, we try to identify a more direct effect of education on social cohesion.
- To put it (very) briefly, we will show that
 - more socially unequal compulsory education systems translate into less 'democratic' higher education systems (in terms of attainment of a higher education degree)
 - less 'democratic' higher education systems translate into lower intergenerational social mobility (in education)
 - lower intergenerational social mobility (in education) translates into lower social cohesion

The approach adopted in this paper

- Comparative international approach covering 24 European countries + 4 non-European Anglo-Saxon countries (USA, CA, AUS, NZL)
- For reasons to be explained later, we conduct the presentation and discussion with reference to sets of countries that constitute distinct 'cultural areas' (we also check that the conclusions remain robust at the country level)
- The first two steps of our analysis (compulsory education and the transition from compulsory education to higher education) draw on previous work (Lambert, 2019 and 2020, unfortunately published only in French) that I will briefly summarize

Starting point: inequalities in compulsory education

The PISA surveys provide relevant information about major structural characteristics of the compulsory education systems: **‘stratification’ between pupils or groups of pupils and school segregation**

- degree of **‘stratification’ between pupils or groups of pupils**
 - early tracking (before the age of 16) vs integrated approach
 - intensity of the practice of grade repetition
- degree of **school segregation**
 - either from the point of view of the social composition of the school population
 - or from the point of view of the academic performance of the pupils

Inequalities in compulsory education (cont.)

- On the basis of these data, we can identify families of education systems (or 'models') which share common structural characteristics, dividing Europe in large 'cultural areas'

I will mostly focus in this presentation on the 3 main models

- the Nordic model (Scandinavian countries)
- the Anglo-Saxon model (UK, IRL + USA, CA, AUS, NZL)
- the Continental model (FR, DE, NL, BE, AT, CH)

and devote less attention to

- Southern Europe (GR, IT, ESP, POR), which is less homogeneous and is essentially an attenuated version of the Continental model
- Eastern Europe, which, except for some Baltic countries following the Nordic model, is mostly similar to the Continental model

Inequalities in compulsory education (cont.)

- Nordic model: lowest possible stratification of the school population
 - no distinct tracks, almost no grade repetition, very little segregation, both social and academic, between schools
- Continental model: educational strategy almost the opposite of the Nordic model
- Anglo-Saxon model: closer to the Nordic model than to the Continental model
 - same as the Nordic model for tracks and grade repetition but segregation (especially social, particularly in the USA) between schools > than in the Nordic model (although < than in the Continental)

Inequalities in compulsory education (cont.)

What about the 'performance' of these various models?

- On the 'efficiency' criterion (average score achieved by students), the 3 main models perform very similarly
- On the 'equity' criterion (ability of education systems to provide the best possible equality of opportunity between advantaged and disadvantaged pupils), this is another matter
 - => **index of inequality of compulsory education systems**, we use the Δ in average score between the 25% most advantaged and the 25% most disadvantaged pupils

Inequalities in compulsory education (cont.)

Models	Index of inequality of compulsory education
Nordic	80,0
Anglo-Saxon	83,4
Continental	104,6
Southern Europe	79,0
Eastern Europe	90,8

From inequalities in compulsory education to those in HE

- Do the education systems where compulsory education is more equitable also provide a more equitable access to a HE qualification?
 - no way to say *a priori*, because of the many stages between lower secondary education and HE qualification, not to mention the barriers to entry to higher education (selection, financial conditions) which vary in severity from one country and model to another
 - in a former paper (Lambert, 2020), we conduct this investigation in a step-by-step manner, i.e. by measuring, at each stage of the pathway (upper secondary success, access to HE, successful completion of HE), the more or less (socially) egalitarian or 'democratic' character of different countries and models
(data source : surveys published in *Education at a glance*, OECD)

From inequalities in compulsory education to those in HE (cont.)

- The OECD surveys provide the outcomes of young people in a given age group, disaggregated by the educational qualification of their parents
⇒ a young person will be referred to as
 - ‘advantaged’ : at least one parent has a tertiary qualification
 - ‘disadvantaged’ : no parent has a tertiary qualification
- From these data, we construct an **OR indicator** - for *odds ratio* - which measures the **respective probabilities of an 'advantaged' and a 'disadvantaged' young person to graduate from higher education.**

This *odds ratio* $OR^{HE\ degree}$ is calculated as follows:

$$OR^{HE\ degree} = \frac{\% \text{ of 'advantaged' young people who are HE graduates}}{\% \text{ of 'disadvantaged' young people who are HE graduates}}$$

In a more 'telling' way: an 'advantaged' young person is $OR^{HE\ degree}$ times more likely to be a HE graduate than a 'disadvantaged' young person

⇒ **the lower the $OR^{HE\ degree}$, the more equitable (or 'democratic') the HE system or model** (from the point of view of graduation)

From inequalities in compulsory education to those in HE (cont.)

Models	Index of inequality of compulsory education	Index of inequality of higher education
Nordic	80,0	1,92
Anglo-Saxon	83,4	1,92
Continental	104,6	2,38
Southern Europe	79,0	2,45
Eastern Europe	90,8	2,90

From inequalities in compulsory education to those in HE (cont.)

- We observe that
 - the more egalitarian compulsory education models, Nordic and Anglo-Saxon (with the exception of the USA), emerge as more democratic in terms of HE attainment (low figure for OR)
 - the least egalitarian compulsory education model, the Continental one, emerges as less democratic in terms of HE attainment (higher figure for OR)
- Southern Europe : ‘educational backwardness’ (still a low % of young people with upper secondary education and thus a smaller pool of possible candidates for HE)
- Eastern Europe : still marked by the effects of the policies in force under the communist regime (aiming at a high rate of upper secondary graduates but more restrictive for access to HE)

From inequalities in compulsory education to those in HE (cont.)

- The correlation (between the OR^{HE degree} index and the compulsory education inequality index) highlighted at the model level is also true at the country level (corr. coeff. = 0,53 for the 20 countries for which data are available to calculate the various indicators we will use).
- This is **not a simple correlation** but it reflects a **causal link**. This is shown in Lambert (2020) where we calculate ORs for each stage of the pathway (upper secondary success, access to HE, successful completion of HE) and are able to trace back social inequality in HE to social inequality at the outset¹

From inequalities in HE to intergenerational social mobility

- The literature on social mobility highlights the 'sticky floor' and 'sticky ceiling' phenomena: the most disadvantaged, at the bottom of the social ladder (floor), find it difficult to find the resources (of all kind) necessary to escape their condition, while the most advantaged, at the top of the social ladder (ceiling) can mobilise abundant resources (of all kind) to maintain their privileged position (verified in empirical work on the various dimensions of social mobility: level of education, earnings, occupation)
- We can use OECD (2018) data for calculating an index of intergenerational social mobility (in terms of educational attainment).
 - 'floor' = people (referred here as the 'very disadvantaged') with both parents having a low level of education (below upper secondary)
 - 'ceiling' = people (referred here as the 'advantaged') with at least one parent having a high level of education (HE)

From inequalities in HE to intergenerational social mobility (cont.)

- We can calculate the intensity of adherence to the ‘sticky ceiling’ as the ratio of the probabilities (*odds ratio*), for an advantaged person, of remaining at the educational level of her parents or of being relegated to the bottom of the social ladder

$$OR_{\text{advantaged}} = \frac{\% \text{ of the 'advantaged' who are graduates of higher education}}{\% \text{ of 'advantaged' who have not gone beyond lower secondary education}}$$

and similarly for the intensity of adherence to the ‘sticky floor’, for a very disadvantaged person

$$OR_{\text{very disadvantaged}} = \frac{\% \text{ of 'very disadvantaged' who have not gone beyond lower secondary education}}{\% \text{ of the 'very disadvantaged' who are higher education graduates}}$$

- The more ‘sticky’ the ceilings and floors, the higher the OR values
=> the product of these OR provide us with an (inverted) index of the intergenerational mobility of a particular society, a lower value revealing a more socially ‘mobile’ (as opposed to ‘rigid’) society

From inequalities in HE to intergenerational social mobility (cont.)

Models	Index of inequality of compulsory education	Index of inequality of higher education	Inverted index of intergenerational social mobility (in education)
Nordic	80,0	1,92	6,6
Anglo-Saxon	83,4	1,92	16,8
Continental	104,6	2,38	21,9
Southern Europe	79,0	2,45	46,5
Eastern Europe	90,8	2,90	92,5

From inequalities in HE to intergenerational social mobility (cont.)

Let us consider the Table and remember

- for the 1st column (compulsory education): the higher the figure, the more unequal the compulsory education system
 - same for the 2nd column (HE): the higher the figure, the more unequal (or less “democratic”) the HE system
 - and for the 3rd column (inverted intergenerational social mobility): the higher the figure, the less socially mobile (or more ‘rigid’) the society
- We find the same ranking as before between the 3 main models: the Nordic exhibits the highest intergenerational social mobility, followed by the Anglo-Saxon and only then by the Continental
(with Southern Europe and Eastern Europe exhibiting very low intergenerational social mobility)

From inequalities in HE to intergenerational social mobility (cont.)

- The correlation (between the inverted intergenerational social mobility index and the OR^{HE degree} index) highlighted at the model level is also true at the country level (corr. coeff. = 0,83)
- Analysing, for all countries, the evolution of intergenerational social mobility (considering separately the generations born in 1950, 1955, 1960, ... up to 1985), the OECD (2018) finds that this intergenerational social mobility initially improved over the past century before running out of steam, then deteriorating from the end of the 1990s (i.e. for the generations born after 1975), the gap widening again between the prospects of the 'advantaged' (at the ceiling) and the 'very disadvantaged' (at the floor)

From intergenerational social mobility to social cohesion

- That social cohesion may be affected by the degree of intergenerational social mobility seems highly likely because
 - in a 'rigid' society where the floor and ceiling are 'sticky', people at the bottom of the social ladder (at the floor), perceiving that they and their children have very little prospect of social advancement, will feel 'on the margins' of this society which, in a way, 'puts them under house arrest'
 - conversely, in a more "fluid" society where the floor and ceiling are not very "sticky", people at the bottom of the social ladder, perceiving that despite their initial disability they and their children still have real prospects for social advancement, will feel little or no rejection by society, in which they maintain their confidence

From intergenerational social mobility to social cohesion (cont.)

- We test this hypothesis by comparing an index of social cohesion with our index of intergenerational social mobility. We use the social cohesion index calculated, on a sound methodological approach, by Dragolov *et al.* (2013) on behalf of the Bertelsmann Foundation

To calculate their index, the authors use the results of regular international surveys that ask citizens about their perceptions, attitudes and behaviours on a variety of dimensions deemed to constitute social cohesion. Among the dimensions retained, the three main ones, considered "central", are trust in others, trust in institutions and the perception of society as being fair. But the authors also include participation in associative or political life, the intensity of social relations, the degree of acceptance of diversity, respect for laws and regulations and attachment to the country. A sub-index is calculated for each of these 9 dimensions and the overall social cohesion index is the arithmetic average of these sub-indices

From intergenerational social mobility to social cohesion (cont.)

Models	Index of inequality of compulsory education	Index of inequality of higher education	Inverted index of intergenerational social mobility (in education)	Index of social cohesion
Nordic	80,0	1,92	6,6	1,15
Anglo-Saxon	83,4	1,92	16,8	0,67
Continental	104,6	2,38	21,9	0,24
Southern Europe	79,0	2,45	46,5	-0,30
Eastern Europe	90,8	2,90	92,5	-0,44

From intergenerational social mobility to social cohesion (cont.)

Warning: the index of social cohesion is constructed in such a way that higher figures reflect a more socially cohesive society (while the other 3 indexes are constructed the other way, with higher figures reflecting more unequal education systems or more ‘rigidity’ in intergenerational social mobility => we should expect a negative correlation between the 4th column and the first 3 columns

- **We observe indeed that the higher intergenerational social mobility, the higher the social cohesion**

And **the direction of causality is clear**, as social cohesion is measured by surveys of the adult population in the early 2010s, while our index of intergenerational social mobility reflects the mobilities actually experienced by many generations in the preceding decades

- The correlation (between the social cohesion index and the intergenerational social mobility index) highlighted at the model level is also true at the country level (corr. coeff. = - 0,69)

From intergenerational social mobility to social cohesion (cont.)

- We also test the robustness of this finding by conducting a **multiple regression analysis** aimed at assessing the possible impact on social cohesion of variables other than intergenerational social mobility alone.

As other potential explanatory variables, we retain various possible 'drivers' of social cohesion proposed in the empirical literature: GDP/capita, 'social' public spending as a % of GDP¹, the unemployment rate, the Gini coefficient of the distribution of income after taxes and transfers, the extent of income redistribution², the average level of education of the population (measured by the proportion of the population aged 25-64 with higher education qualifications), etc.

- Several of these variables do not appear to have a significant impact. The next Table presents the best performing model, estimated respectively on all 20 countries and on the subset of 14 countries belonging to the Nordic, Anglo-Saxon and Continental models

From intergenerational social mobility to social cohesion (cont.)

Model estimated on all countries
(20 countries)

Model estimated on all countries
except Southern and Eastern Europe
(14 countries)

Dependent variable: Overall social cohesion index

	Coefficients (standardised)	Student t value	Coefficients (standardised)	Student t value
<u>Driving variables</u>				
• Intergenerational Social Mobility	-0,45 ***	-2,71	-0,51***	-2,46
• GDP/capita	0,53 ***	3,31	0,39 **	1,86
• Gini (after tax)	-0,22 *	-1,59	/	/
	R ² value = 0,73		R ² value = 0,51	

***, **, *: coefficients significantly ≠ of 0 with probabilities of 95%, 90% and 85% respectively.

From intergenerational social mobility to social cohesion (cont.)

Comments on the regression model

- The two main 'drivers' of social cohesion turn out to be intergenerational social mobility (in education) and the average level of wealth of the country (GDP/capita), since the equality of the distribution of net incomes (Gini after taxes and transfers) only appears to be significant (and even then, weakly) for all countries

Intergenerational social mobility emerges as the more 'robust' of these two 'drivers', since it is the only one to remain highly significant (with an even greater weight, to the detriment of GDP/capita) in the model estimated for the 14 'richer' countries

- As a further test of the robustness of our results, we also tested the same model (same explanatory variables), this time taking as the dependent variable the 'core' index of social cohesion made up of the three sub-indices considered as 'central' by Dragolov *et al.* (2013). The weight of intergenerational social mobility is further increased, to the point where it clearly outweighs that of GDP/capita

Conclusion

- The research carried out so far struggled to detect a direct effect of education on social cohesion, the only effects highlighted being indirect, via the distribution of income or induced inequalities on the labour market.
- We have identified a more direct effect of education on social cohesion
 - as we have shown, intergenerational social mobility (in education) is directly affected by inequalities in compulsory education
 - and it emerges as the main 'driver' of social cohesion, outweighing other determinants
- A causal link between more unequal compulsory education => weaker intergenerational social mobility => weaker social cohesion seems to be eligible as a robust conclusion

Some additional comments

Educational models are deeply rooted in the culture of the different countries, as suggested by our expression “cultural areas”

An illuminating perspective comes from work on social protection systems¹ which identifies a number of social protection 'regimes' that divide Europe into distinct cultural areas in which the weight of history, combined with the dominant social and political forces (of the social democratic, liberal or Christian democratic tradition), has produced social protection systems that share common features. They show that the structural features of each of these welfare regimes reflect the core value of the societies concerned: equality for the first regime (labelled as 'social democratic'), freedom for the second (labelled as 'liberal'), and concern for maintaining social order – “everyone in their rightful place” - for the third (labelled as 'conservative')².

Some additional comments (cont.)

- The interest - for our subject - of this work lies in the following observation: the division of Europe according to welfare regimes turns out to be identical to the one made according to compulsory education models:
 - the 'social democratic' welfare regime ↔ the Nordic educational model
 - the 'liberal' regime ↔ the Anglo-Saxon educational model
 - the 'conservative' regime ↔ the Continental educational model
 - One can also verify that the educational strategies of the different compulsory education models, as described earlier, correspond to the same core values of the cultural areas concerned. For example, the educational strategy of the Continental model, based on the sorting and grouping of pupils into homogeneous groups, corresponds to the "everyone in their rightful place" dictated by the concern to maintain social order¹
- => our comparative analysis finally leads us to a cruelly ironic observation: it is those societies whose compulsory education most clearly integrates the objective of maintaining social order that *ultimately* prove to be the most vulnerable to the risk of social cohesion crumbling

References

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Thank you for your attention

Models estimated on the 'core' index of social cohesion

Model estimated on all countries
(20 countries)

Model estimated on all countries
except Southern and Eastern Europe
(14 countries)

Dependent variable: Core index of social cohesion¹

	Coefficients (standardised)	Student t value	Coefficients (standardised)	Student t value
<u>Driving variables</u>				
• Inter-generational Social Mobility	-0,69 ***	-4,84	-0,70***	-3,87
• GDP/capita	0,33 ***	2,42	0,30 *	1,63
• Gini (after tax)	-0,39 ***	-3,32	/	/
	R ² value = 0,81		R ² value = 0,65	

***, **, *: coefficients significantly ≠ of 0 with probabilities of 95%, 90% and 85% respectively.