

# The long road to university? School social composition and the transition to higher education in Ireland

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## *Introduction*

There has been a long-standing debate internationally about whether the social composition of the school influences student outcomes. However, these studies have tended to look at the social mix of students at one stage of schooling rather than the potentially cumulative effect of the primary and secondary school attended (for an exception, see Langenkamp and Caronbaro, 2018). This paper addresses this gap by looking at the effects of the social mix of the primary and secondary school attended on the likelihood of making the transition to higher education in Ireland. In doing so, it uses Growing Up in Ireland longitudinal data, which provide rich information on young people, their families and schools from nine to 20 years of age.

## *Previous research on higher education transitions*

There is a large body of research which documents the relationship between different dimensions of individual social background and the likelihood of reaching tertiary education (see, for example, Shavit et al., 2007). However, less attention has been paid to the role of the school, and specifically the social composition of the school, in shaping post-school transition pathways.

Research in a number of European countries (Iannelli 2004; Pustjens et al. 2004) has indicated a ‘school effect’ in entry to higher education, that is, that schools differ in the proportion of students going on to university, even controlling for factors such as gender, social background and prior academic performance. The social mix of the secondary school attended has been found to influence higher education intentions, even controlling for individual social background (Smyth, 1999; Dupriez et al., 2012). The concept of institutional habitus, that is, the way in which social class becomes embedded into the school organisation and culture over time, has evolved from socio-cultural reproduction theory and provides a fruitful direction for looking at the classed nature of school effects. In a study of four US high schools, McDonough (1997) indicated that school habitus is manifest through curricular offers, that is, providing the kinds of subjects which facilitate college entry, and through guidance facilities, with more middle-class schools offering more advanced-level courses and providing more hours of

guidance counsellor input. These more advantaged schools are found to provide more extensive guidance counselling and support through the college application process (Mullen, 2009). However, studies have tended to neglect the potential role of the primary school attended in enhancing skill development and promoting later school engagement. An exception is a study by Langenkamp and Carbonaro (2018) who find that the socioeconomic composition of the primary school attended has an effect on Maths achievement net of the middle school social composition.

On this basis, we hypothesise that:

- Students attending more disadvantaged schools for the whole of their educational career will have the lowest rates of transition to higher education. This will largely reflect more negative attitudes to school developed at both primary and secondary levels as well as lower test scores and grades at both levels. However, a gap in HE entry may also remain because of secondary school orientation to HE.
- Students who transition from a more disadvantaged setting to a socially mixed school will have lower rates of HE entry than those who were in a socially mixed school throughout. This will largely reflect lower foundational (reading) skills on transfer.
- Students who move into a more disadvantaged school will have better early skill development but will be subject to influence from the broader social and academic climate at secondary level, resulting in lower HE entry.
- Going on to HE will have a 'taken for granted' nature in fee-paying schools (Smyth, Banks, 2012) so their HE entry rates will be the highest.

### *The Irish context*

Ireland represents an interesting case-study for two reasons. First, very active school choice, especially at secondary level, means that around half of students do not attend school in their local area, resulting in differentiation between schools in their social and ability mix. Thus, the Irish system combines a lack of tracking with significant between-school differences in social composition resulting from school choice and residential segregation patterns. Second, rates of transition to higher education are relatively high in Ireland. From the perspective of maximally maintained inequality (Raftery and Hout, 1993), mass higher education might be expected to lead to less differentiation in individual background and school social mix.

In Ireland, entry to higher education is based on ‘points’ achieved in the high-stakes upper secondary examination, the Leaving Certificates. These points are calculated on the basis of the grade achieved and subject level taken (higher or ordinary). Between-school differences in transition pathways will therefore reflect the academic climate of the school, including access to higher level subjects, teacher expectations about the level taken and the pace of instruction within class.

### *Data and methods*

The Growing Up in Ireland study is a longitudinal study of two cohorts of children and seeks to explore all the domains of their lives, including education, health, socioemotional well-being and relationships, as a basis for informing policy development. This article draws on data from Cohort '98, the sample for whom was generated through the primary school system in 2007/8, when the children involved were nine years of age. A nationally representative sample of 1,105 schools was selected from the total of 3,326 primary schools in Ireland at that time. Just over 82 per cent of schools were successfully recruited into the survey. The sample of children and their families was then randomly generated from within those schools. The response rate at the family level was 57 per cent, yielding information on a total of 8,568 study children, their primary and secondary caregivers, their school principals and teachers. This cohort was followed up at 13, 17 and 20 years of age, with the latter wave taking place in 2018/19 and responses from 61 per cent of those who took part in wave one (McNamara et al., 2021). Weights are therefore used to adjust for differential non-response and attrition between the waves. Analyses in this article relate to 5,984 young adults who had attended 610 different secondary schools and 810 different primary schools.

The outcome measure, participation in higher education, was based on self-reported responses at age 20 on take-up of different types of courses over the period since leaving school. It includes all those who have taken any higher (tertiary) education course even if they left the course before completion.

The GUI survey collected information on a rich set of family characteristics which allows for a multidimensional approach to analysing the effect of social background. To explore the potential impact of these background measures throughout their schooling career, most measures were based on those collected in the wave one survey (when the children were nine years old). Social class was measured using the classification used for the Irish Census of

Population. In two-parent families, where both partners were in paid employment, a dominance approach was used (see Erikson, 1984) whereby the family's social class group was assigned on the basis of the higher of the two occupations. In addition, an economically inactive group ('never employed') is identified; this group refers to families where neither the mother nor father has held a job from which social class can be classified and tends to be highly disadvantaged in profile. Mother's education is categorised into five groups: lower secondary (Junior Certificate or equivalent) or less, upper secondary (Leaving Certificate), post-secondary, degree and postgraduate degree. Equivalised net household income when the young person was 17 years old is divided into quintiles. A family was defined as being a migrant family if both parents were born outside Ireland or, in the case of lone-parent families, if that parent was born outside Ireland. Lone-parent families are identified on the basis of family status at the time of the wave three survey (that is, when the young person was 17 years of age). In terms of individual characteristics, the analyses take account of gender and whether the young person has a disability or special educational need (as reported by their mother when they were aged 13). The analyses also distinguish between urban and rural areas.

The number of students per school in the GUI sample is too small to facilitate the creation of aggregate measures of school composition. School social mix is therefore based on a proxy measure regarding involvement in the DEIS (Delivering Equality of Opportunity in Schools) programme, a government scheme designed to target additional resources towards schools serving socio-economically disadvantaged populations (DES, 2017). At primary level, the scheme distinguishes between DEIS Urban Band 1 schools (the most disadvantaged), DEIS Urban Band 2 schools, Rural DEIS schools and non-DEIS schools. However, at secondary level, there is only a distinction between DEIS and non-DEIS schools. In addition, those who attend fee-paying (private) secondary schools are identified separately as a proxy for schools with a concentration of middle-class young people. Previous Irish research has shown that participation in the DEIS programme is a valid measure of school composition (McCoy et al., 2014).

As well as looking at differences by primary and secondary school social mix in the transition to higher education, the analyses explore whether these effects are due to attitudes to school and earlier skill development. At primary level, the models take account of attitudes to school (as reported by the child) and reading test scores at the age of nine. Lower secondary experiences are captured using attitudes to school at age 13, a scale of the frequency of positive

interaction (praise, positive feedback) with teachers, a scale of the frequency of negative interaction (reprimand) with teachers and performance in the lower secondary State examination, the Junior Certificate.

Active school choice at secondary level in Ireland means that there is no simple mapping between the primary and secondary school attended. Students from one primary school may move on to several different secondary schools while secondary schools may draw on several ‘feeder’ primary schools. Because there is no simple hierarchy, cross-classified multilevel models are used to take account of both the primary and secondary school attended. These models produce two sets of estimates: fixed effects, which can be interpreted in the same way as traditional regression coefficients, that is, as representing the relationship between an explanatory variable and the outcome of interest; and random effects, that is, estimates of the degree of variation between primary and secondary schools neighbourhoods when other factors are taken into account.

### Results

Figure 1 shows the patterns of movement between primary and secondary schools with different social compositions. The majority attended socially mixed schools at both levels while 8 per cent attended a fee-paying secondary school (having attended a private or socially mixed primary school). Twenty-eight per cent had attended a school with a concentration of socio-economically disadvantaged students at either and/or both primary and secondary level.

Figure 1: Movement between different types of primary and secondary school

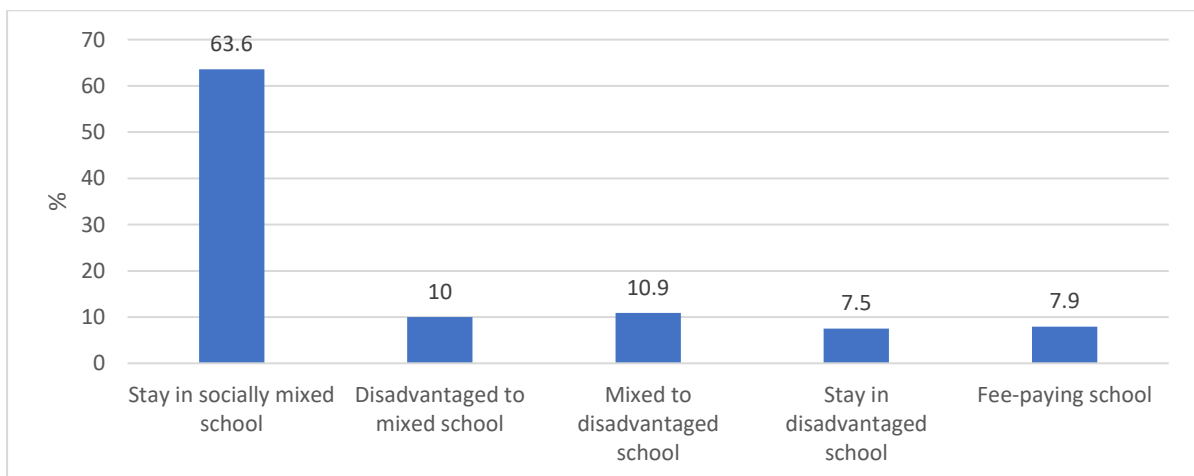


Table 1 shows the results of a series of cross-classified multilevel logistic regression models of the factors associated with participating in higher education. Model 2 shows substantial raw differences between those who attended a disadvantaged school at primary and/or secondary level and all others. The lowest rates of HE entry are found among those who were in a disadvantaged school at both primary and secondary level (stayers), though there is a sizeable penalty even among those who transfer into or out of a disadvantaged school (movers) when transitioning across levels. Those who attended a fee-paying school are much more likely to go on to HE.

Model 3 includes individual social background characteristics and therefore allows us to separate out context and composition. Even taking account of a range of background characteristics, school social mix makes a sizeable difference to HE participation levels. The analyses show the value of adopting a multidimensional approach to analysing educational inequality, with social class, maternal education, income and family structure all having independent associations with HE entry. Maternal education emerges as having the strongest effect, with those whose mothers have postgraduate degrees 2.6 times as likely to enter HE as those whose mothers have lower secondary education. Being the child of a migrant has no significant effect on HE entry. Entry rates are higher among females and lower among those with a disability and those living in urban areas.

Those who ‘never’ liked school at the age of nine are much less likely to go on to HE than those who sometimes or always liked it. Rates of entry to HE are much higher among those with higher reading scores at nine years of age (Model 4). The coefficients for school social mix reduce slightly in size when primary school factors are taken into account but only the effect for fee-paying school becomes non-significant (at the  $p < .05$  level). In other words, the higher HE entry rates among leavers from fee-paying schools is due to the more selective academic profile of the group entering these secondary schools.

Having more negative attitudes to school at the age of 13 is significantly related to lower chances of entering HE five to six years later, a relationship that is only partly mediated by lower secondary performance (compare Models 5 and 6). Having more frequent positive interaction with teachers makes no difference to HE participation but entry rates are lower among those who were frequently reprimanded by their teachers, again only partly explained by lower performance among this group. Not surprisingly, given its strong correlation with

upper secondary performance, lower secondary performance is highly predictive of later HE entry. The effect for movers (into or out of disadvantaged schools) is found to be related to lower exam performance among these groups. However, stayers (those in disadvantaged schools at both levels) are 0.7 times as likely to enter HE as those in socially mixed schools, even taking account of a range of background factors and school experiences.

These analyses have regarded stayers as a homogenous group. However, this group has differed in the intensity of disadvantage in their primary school. Sensitivity analyses were conducted to explore whether this distinction made a difference (Table 2). The HE entry gap for stayers is actually due to those who transfer from an Urban Band 1 school (the most disadvantaged in profile) to a DEIS secondary school, with no significant deficit accruing to those who had attended Band 2 or rural DEIS schools.

### *Conclusions*

Students who attend urban primary schools with a concentration of disadvantage are more likely to transition to disadvantaged secondary schools but there is a good deal of movement out of the other school types over the transition to secondary education. Cross-classified multilevel models are used to provide precise estimates of the relative impact of the social mix of the primary and secondary school attended. Even controlling for several measures of individual social background (social class, mother's education, income, migrant status, gender and disability/special educational needs), remaining in a more disadvantaged school setting is linked to lower rates of higher education entry while even those moving out of disadvantaged settings experience a penalty relative to those who attended socially mixed schools throughout their school career.

Poorer literacy skill development and more negative attitudes to school at primary level are linked to lower rates of higher education entry but these patterns only partly account for the influence of school composition. Similarly, at secondary level, negative attitudes to school, more negative interaction with teachers (being reprimanded frequently) and lower exam grades are associated with lower rates of higher education transition. However, these factors do not fully account for variation in higher education entry by school social mix. The paper provides new insights into the cumulative impact of school composition over the life-course and

suggests that current supports are not sufficient to bridge the gap between schools in post-school transition pathways.

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Table 1: Cross-classified logistic regression models of higher education participation (odds ratios)

	M1	M2	M3	M4	M5	M6
Constant	1.573	1.842	0.780	1.037	1.093	1.025
School social mix: Move out of disadvantage		0.547***	0.682***	0.746**	0.748**	0.857+
Stay in disadvantage		0.239***	0.407***	0.466***	0.468***	0.692*
Move into disadvantage		0.518***	0.651***	0.718***	0.714**	0.842+
Fee-paying school (Ref. Socially mixed at both levels)		1.682***	1.283*	1.186+	1.182+	1.171+
Female			1.113*	1.184**	1.115*	0.977
Social class:						
Professional			1.777***	1.520***	1.496***	1.240+
Managerial			1.343**	1.210*	1.208+	1.113
Nonmanual			1.047	0.954	0.922	0.850
Skilled manual			0.943	0.882	0.885	0.899
Non-employed (Ref. Semi/unskilled manual)			0.903	0.847	0.838	0.801*
Maternal education:						
Upper secondary			1.689***	1.570***	1.551***	1.370***
Post-secondary			2.134***	1.925***	1.912***	1.547***
Degree			2.337***	1.876***	1.874***	1.511***
Postgraduate degree (Ref. Lower secondary)			2.563***	2.028***	2.010***	1.565***
Household income:						
Quintile 2			0.982	0.906	0.900	0.864
Q3			1.281**	1.146	1.131	1.037
Q4			1.155+	1.013	0.994	0.890
Highest quintile (Ref. Lowest quintile)			1.412**	1.237*	1.226*	1.068
Lone-parent family			0.668***	0.666***	0.699***	0.805**
Migrant family			0.979	1.023	1.009	0.948
Disability/special educational need			0.697***	0.844*	0.868*	1.081
Urban area			0.857*	0.852**	0.863**	0.889*
Primary experiences						

Attitudes to school at 9: Sometimes like Never like (Ref. Always like)				0.993 0.578***	1.065 0.653**	1.040 0.681**
Reading test score at 9				1.034***	1.033***	1.013***
Lower secondary experiences Attitudes to school: Like quite a bit Like a bit Don't like/hate (Ref. Like very much)					1.036 0.887+ 0.646***	1.089 0.976 0.750**
Positive interaction with teachers					1.015	0.923
Negative interaction with teachers					0.803***	0.909*
Lower secondary exam grades						1.800***
Random coefficients						
Secondary school variance	0.166***	0.055*	0.039	0.025	0.035	0.13
Primary school variance	0.047**	0.028	0.023+	0.008	0.031	0.033+
N secondary schools	610	610	610	610	610	610
N primary schools	861	861	861	861	861	861
N young people	5,984	5,984	5,984	5,984	5,984	5,984

Note: \*\*\* p<.001; \*\* p<.01; \* p<.05; + p<.10.

Table 2: Sensitivity analysis - cross-classified logistic regression models of higher education participation, separating out social mix of disadvantaged primary schools (odds ratios)

	M2	M3	M4	M5	M6
School social mix:					
Move out of disadvantage	0.552***	0.680***	0.760**	0.762**	0.873
Stayers:					
UB1-DEIS	0.117***	0.239***	0.298***	0.303***	0.486**
UB2-DEIS	0.409***	0.646*	0.751	0.717	1.174
Rural-DEIS	0.420***	0.523**	0.502**	0.530*	0.651+
Move into disadvantage	0.528***	0.658***	0.713***	0.723**	0.849+
Fee-paying school	1.682***	1.270*	1.195+	1.175+	1.171+
(Ref. Socially mixed at both levels)					

Note: \*\*\* p<.001; \*\* p<.01; \* p<.05; + p<.10. Analyses also control for the variables included in Models 2 to 6 in Table 1.