RESEARCH SERIES
NUMBER 6
MAY 2009

Investing in Education: Combating Educational Disadvantage

Emer Smyth
and
Selina McCoy

Barnardos

ESRI

The Economic and Social Research Institute

RESEARCH SERIES
NUMBER 6
MAY 2009

INVESTING IN EDUCATION: COMBATING EDUCATIONAL DISADVANTAGE

EMER SMYTH AND SELINA MCCOY

Commissioned by Barnardos

This paper is available online at www.esri.ie
The Economic and Social Research Institute (Limited Company No. 18269).
Registered Office: Whitaker Square,
Sir John Rogerson's Quay, Dublin 2.

Emer Smyth is a Research Professor and Selina McCoy is a Senior Research Officer at The Economic and Social Research Institute.

The paper has been accepted for publication by the Institute, which does not itself take institutional policy positions. Accordingly, the authors are solely responsible for the content and the views expressed.

RESEARCH SERIES
NUMBER 6
MAY 2009

INVESTING IN EDUCATION: COMBATING EDUCATIONAL DISADVANTAGE

EMER SMYTH AND SELINA MCCOY

Commissioned by Barnardos

ISBN 978 0 7070 0280 4

CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Education matters because it is intrinsically valuable, allowing children and young people to develop intellectually, socially and morally. It also matters because, in Ireland, as in many other countries, education is a powerful predictor of adult life chances. Inequality in educational outcomes means that some groups do not reach their potential and experience restricted opportunities across several aspects of their lives:

> *Equality in education matters … because education is indispensable for the full exercise of people's capabilities, choices and freedoms in an information-driven age.* (Baker *et al.*, 2004, p. 141)

Thus, adults with low levels of education are likely to pay a 'cost' in terms of lower pay levels and greater risk of unemployment. There is a 'cost' for society as well in the form of higher expenditure on social welfare, lower levels of tax revenue and higher crime rates (Belfield and Levin, 2007). Addressing educational inequality is fundamental, therefore, to social justice as well as to broader societal development:

> *Investing in disadvantaged young children is a rare public policy initiative that promotes fairness and social justice and at the same time promotes productivity in the economy and in society at large.* (Heckman, 2006, p. 1902)

Thus educational interventions have the potential to maximise both equity and efficiency. Social inequality in educational outcomes is apparent across Western societies. However, the extent of such inequality varies significantly across countries, reflecting both general social conditions and the nature of the educational system (Shavit and Blossfeld, 1993; Willms, 2006; Marks *et al.*, 2005). Some systems successfully combine high educational standards with equal outcomes. In fact, analyses of findings from the PISA survey of 15 year olds indicate that the countries (such as Finland) with the greatest equity in academic outcomes are also the ones in which the average level of achievement is highest (OECD, 2007).

A good deal of research focuses on 'inequality of educational opportunity', that is, the extent of variation in educational outcomes (such as level attained and grades received) according to parental social class or educational level (see Breen and Jonsson, 2005, for an overview). However, some commentators go further by arguing that, from a policy perspective, it is possible to determine 'a minimum standard of education', that is, a level of education below which life chances are adversely affected. Thus, Belfield and Levin (2007), in the US context, adopt high school graduation as such a standard, documenting the outcomes for those who fail to reach this level:

> *High school graduation captures both the cognitive and the non-cognitive attributes that are important for success in adulthood … and it is usually a minimum requirement for engaging in further training and higher education.* (Levin, 2009, p. 8)

In this study, we show that such a threshold is evident in the Irish context. As the findings will show, education is highly predictive of individual life-chances in Ireland and a Leaving Certificate qualification has become the 'minimum' to secure access to further education/training and high quality employment, among other outcomes. Throughout the study, we therefore distinguish between those who left school before the Leaving Certificate, whom we describe as the 'early leaver group', and those who left the educational system with a Leaving Certificate or higher qualification (the 'Leaving Certificate plus' group).

The remainder of this report is divided into five sections. The first summarises international research on educational inequality, focusing in particular on interventions to counter educational disadvantage. The second section documents the extent of such inequality in the Irish context, looking at the way in which social background influences literacy levels, educational qualifications and grades received. The third section looks at existing provision for disadvantaged groups within the Irish educational system, incorporating new evidence on the perspectives of school principals and education stakeholders. The fourth section draws on a range of information sources to show the consequences and costs of early school leaving for the individual and the broader society; the conclusions of the report are presented in section five.

1. International Research on Educational Inequality

In this subsection, we outline three main sets of interventions which have been evaluated internationally in terms of their impact on educational inequality: early childhood education; measures designed to boost academic achievement (such as reduced class size and intensive literacy programmes); and compensatory/targeted funding for disadvantaged schools and/or areas. These three sets of interventions have been the ones subject to the most rigorous empirical analyses and cover the main strands of policy designed to counter educational disadvantage.

An emphasis on the potential of early childhood education to counter disadvantage dates back to the US 'war on poverty' in the 1960s. A number of early years' programmes in the US have targeted disadvantaged groups, providing intensive education in small groups and fostering parental involvement (Levin, 2009). Such interventions have been found to have both short-term and long-term positive effects on the children taking part in them. Participants in the High/Scope Perry Pre-School Program for 3-4 year old children had higher achievement levels over the course of their schooling career. Such benefits from participation persisted into adulthood, with a higher rate of high school graduation, higher earnings, a lower take-up of welfare and a lower crime rate (Wortman, 1995; Gomby, 1995). Similarly, participants in the Child-Parent Centers in Chicago had lower rates of early school leaving along with lower juvenile crime rates (Reynolds and Wolfe, 1997; Bryant and Maxwell, 1996; Reynolds *et al.*, 2001). The Abecedarian program, another US intervention targeted at a group of children at risk of developmental difficulties, involved very intensive support (full-week and full-year) for children and their families. Participants had higher academic achievement throughout school, were less likely to repeat a year, required less learning support, were more likely to complete high school and go to college, and were even less likely to smoke than their peers (Reynolds *et al.*, 2007). In general, the positive effects of early childhood education are found to increase with length of time in, and earlier entry to, the programme (Barnett, 1995); the benefits of high quality preschool education are particularly evident for disadvantaged and minority groups. Systematic evaluation of these US programmes indicates that they are the most cost-effective way of reducing educational inequality (Levin,

2009; Temple and Reynolds, 2007; Heckman *et al.*, 2008). Cross-national analyses have also indicated that 9-10 year olds in countries with higher levels of preschool expenditure tend to have higher maths and science test scores and that the gains are greatest for those from lower resource homes (Waldfogel and Zhai, 2008).

The High/Scope Perry program inspired the development of a similar project in the Irish context, the Rutland Street project. Like its US counterparts, the Rutland Street project had short-term benefits for participants in terms of school readiness but also longer-term benefits in increased retention to the Leaving Certificate level (Kellaghan, 1977; Kellaghan and Greaney, 1993). Advocacy of intensive early childhood education, particularly for more disadvantaged groups, has been a central theme in policy discourse in Ireland in recent years (see, for example, NESF, 2005; National Competitiveness Council, 2009). However, provision for early childhood education in Ireland has to date remained limited by international standards (OECD, 2008).

A second set of interventions designed to boost academic achievement centres on class size and literacy/numeracy initiatives. The effect of class size on student outcomes has been perhaps the most contentious issue in educational research internationally. It is often difficult to separate out the effects of class size from other factors, especially given that many systems purposely place children with learning difficulties in smaller classes. One of the few experimental studies of class size, Project STAR in Tennessee, yields some insights into the potential effects. In this study, children were randomly allocated to significantly smaller classes (13-17) compared with their peers who were in classes of 22-25. Being in a small class was found to have a positive effect on academic achievement and participants were significantly more likely to graduate from high school than their peers (Finn *et al.*, 2001; 2005). Effects were more marked for disadvantaged groups and for those who remained in small classes for a more extended period; those in classes with fewer than seventeen students for a period of three years were almost six months ahead of their peers in reading achievement (Finn *et al.*, 2001). Some later US studies exploring the impact of 'real life' variation across schools in class sizes have failed to replicate the findings of Project STAR; however, Milesi and Gamoran (2006) suggest that "…rather than contradicting Project STAR, our results highlight that the schooling conditions under which class-size reduction occurs are relevant for the student outcomes we are interested in improving" (p. 309). Two longitudinal UK studies looking at the impact of actual variation in class size across schools suggest gains to reading achievement from being in a smaller class (Iacovou, 2002; Blatchford, 2003; see also Fredriksson and Ockert, 2008, on the Swedish context).

Other interventions have focused on the provision of intensive literacy and numeracy programmes to foster academic achievement. Intensive 'Reading Recovery' programmes in the US have generally yielded positive outcomes in performance terms (D'Agostino and Murphy, 2004) as has the 'literacy hour' intervention in the UK (Machin and McNally, 2007). Reading programmes with cooperative learning at their core tend to be more successful in yielding positive outcomes for children (Slavin *et al.*, 2008). The Success for All programme in the US involves intensive reading activities and close liaison with parents in the early years within schools serving disadvantaged communities. Participation significantly boosted reading performance and resulted in a lower incidence of being 'kept back'

a year because of educational failure as well as higher achievement levels at age 14 years (Slavin and Madden, 1999; Borman *et al.*, 2002). Similarly, the First Things First programme, which involved improving the quality of teaching and learning in the school overall, was associated with a greater likelihood of high school graduation (Levin, 2009).

The third set of interventions involves targeting additional resources on schools serving disadvantaged and/or immigrant communities or schools located in disadvantaged areas. Examples include the educational priority policies in Belgium (Flanders) and the Netherlands, the Zones d'Education Prioritaire (ZEP) in France, the Title I Program in the US and the Disadvantaged Schools Program in Australia. The implementation of educational priority policies in the Netherlands and Belgium (Flanders) has had mixed results, with variable effects on student outcomes (Bernardo and Nicaise, 2000; Mulder and van der Werf, 1997). The ZEP programme in France is found to have no significant effects on student achievement and school completion within the second-level sector (Benabou *et al.*, 2006). Research in the United States has indicated that Title I funding targeting more disadvantaged schools is associated with improved student achievement but the improvements are not sufficient to close the achievement gap between high- and low-income students (see, for example, Borman *et al.*, 1998; Puma *et al.*, 1997). Area-based initiatives have also been criticised for ignoring the 'geography of inequality', whereby there may be significant variation within a local area, and for failing to locate disadvantage within the overall processes of social inequality (Rees *et al.*, 2007).

A number of other studies have highlighted additional interventions to address aspects of educational disadvantage. In Britain, Educational Maintenance Allowances, means-tested weekly payments to 16-18 year olds in post-compulsory education in selected areas, were found to increase the likelihood of remaining in education by 4-6 per cent, with the strongest effects found for those from the lower income groups (Dearden *et al.*, 2005). An overview of interventions designed to reduce early school leaving in the Australian context indicates that a strong supportive school culture is key to the success of any programmes adopted (Lamb and Rice, 2008).

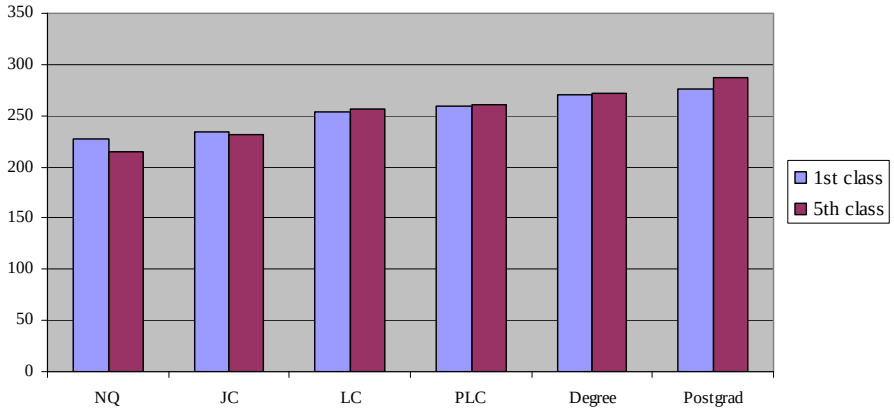
In sum, international research suggests a number of interventions which are associated with positive outcomes for disadvantaged children and young people. In the following section, we outline the extent to which educational outcomes vary by social background in the Irish context before looking at policy measures to address such inequalities.

2. Social Differentiation in Educational Outcomes

This section assesses the extent of inequality in Irish education, drawing on a range of recent large-scale surveys at both primary and second level. Attention is focused on six main educational indicators: reading scores at primary level, literacy scores on entry to second-level education, performance in the Junior and Leaving Certificate examinations, retention in second-level and progression to higher education. While the analysis focusing on literacy scores considers the extent of variation by mother's educational attainment, the remainder of this section examines differences across social class groups. Social class is measured using a dominance measure, which takes the occupation of the parent in the highest occupational position (where both parents are working) as representing the social class position of that family.

Examining reading scores at primary level, Figure 2.1 illustrates wide variations in mean reading scores for both first and fifth class pupils by mother's educational attainment level. Pupils whose mothers left school prior to reaching Junior Certificate standard achievement record an average reading score of 215 in fifth class; this rises to 256 among those whose mothers completed the Leaving Certificate and 286 for those who achieved a post-graduate qualification.

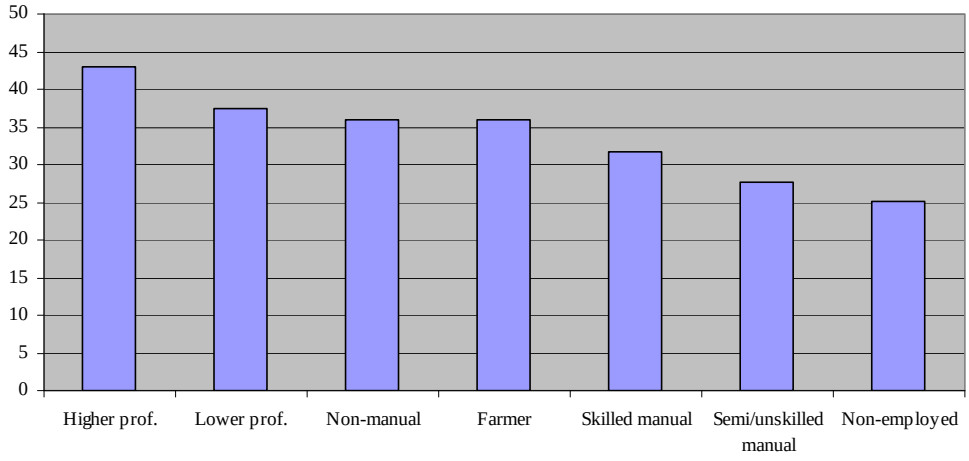
Figure 2.1: Primary Reading Scores and Mother's Educational Attainment



Source: 2004 National Assessment of Reading.

When we focus on second-level attainment patterns, marked differences are apparent across social class groups. Based on the Drumcondra Level 6 test in reading administered to first year students as part of the Post-Primary Longitudinal Study, students are assigned a 'literacy score', which is then averaged within social class groups (Figure 2.2). Clearly literacy levels vary markedly – students from higher professional backgrounds have a mean score of 43, considerably higher than the score of 28 among those from semi- and unskilled manual backgrounds and 25 among those where neither parent is in employment.

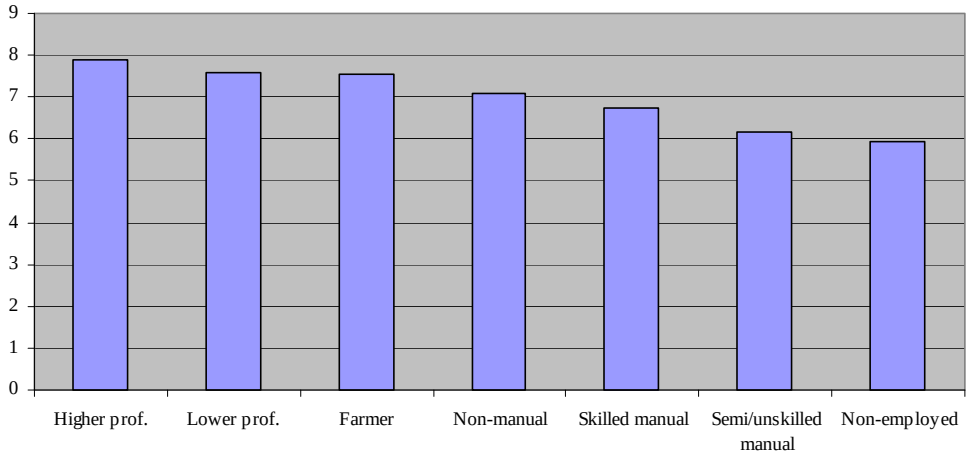
Figure 2.2: Literacy Scores on Entry to Second-level by Social Class Background



Source: Post-Primary Longitudinal Study.

Social class differentiation is similarly prominent in performance in the first State examination taken, the Junior Certificate examination (Figure 2.3). Students from higher professional backgrounds achieve grade point average scores of 7.9 (from a potential maximum of 10), relative to just 6.7 for young people from skilled manual backgrounds, 6.2 among the semi- and unskilled manual class and just 5.9 for the non-employed group. Hence, young people from higher professional backgrounds achieve, on average, 2 grades higher per subject taken in the Junior Certificate examination compared to those from non-employed backgrounds.

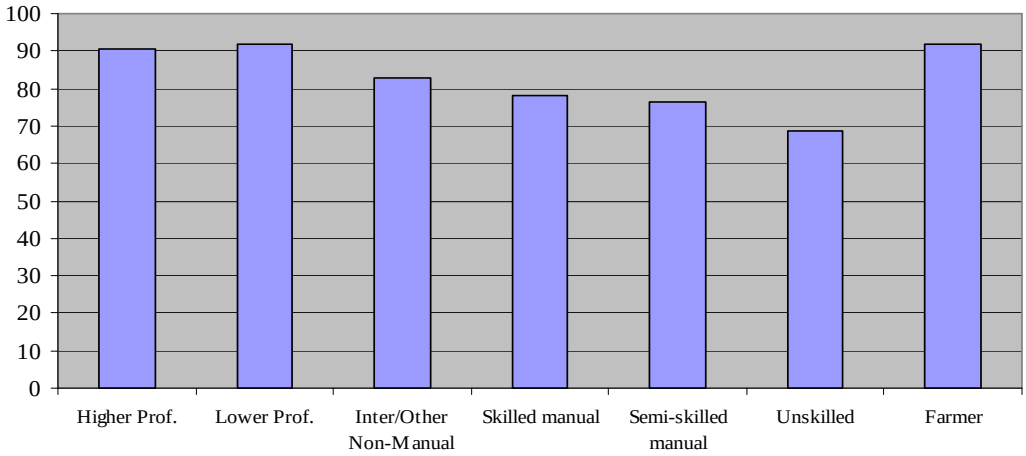
Figure 2.3: Junior Certificate Grades by Social Class Background



Source: Post-Primary Longitudinal Study.

Drawing on School Leavers' Survey data, wide social class differences in second-level retention, Leaving Certificate performance and levels of progression to higher education are also apparent. As shown in Figure 2.4, young people from more disadvantaged backgrounds are much less likely to remain in school to complete the Leaving Certificate examination (or equivalent). While over 90 per cent of young people with parent(s) in professional occupations complete the Leaving Certificate, just two-thirds of their counterparts from unskilled manual backgrounds do so. It can be noted that young people from farming backgrounds also display high second-level retention levels.

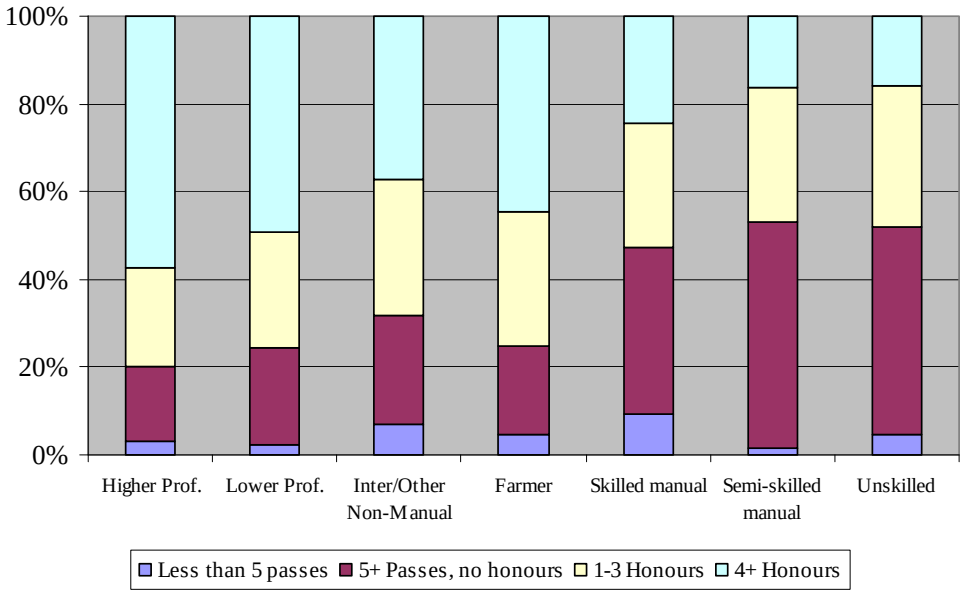
Figure 2.4: Leaving Certificate Completion by Social Class Background



Source: School Leavers' Surveys 2006 and 2007.

Performance in the Leaving Certificate (or Leaving Certificate Vocational Programme) is also strongly patterned across social class lines – young people from manual backgrounds are much less likely to achieve at least one 'honour' (grade C3 or better on a higher level paper) in the Leaving Certificate examination. While 58 per cent of students from higher professional backgrounds achieve four or more 'honours' grades in the Leaving Certificate, this is the case for just 16 per cent of those from semi- and unskilled manual backgrounds (Figure 2.5).

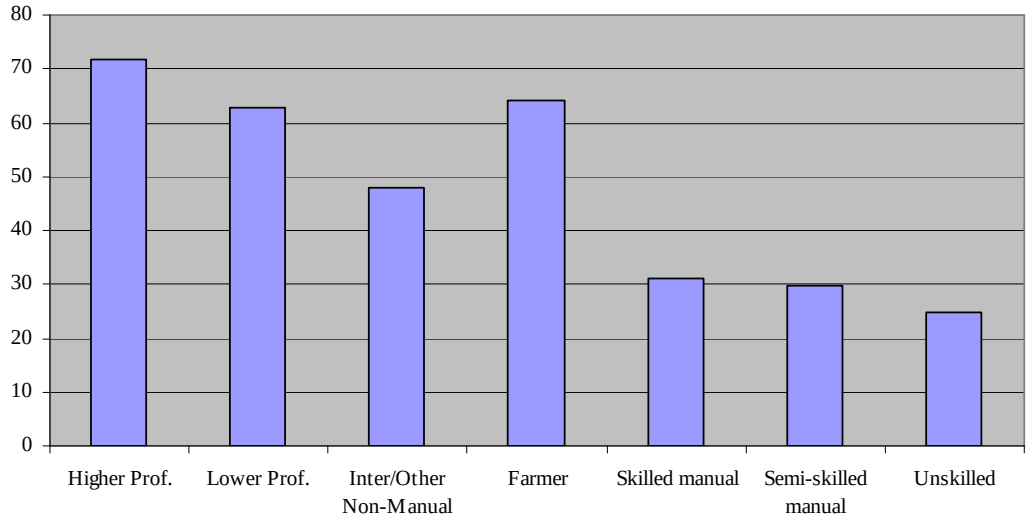
Figure 2.5: Leaving Certificate Examination Performance by Social Class Background



Source: School Leavers' Surveys 2006 and 2007.

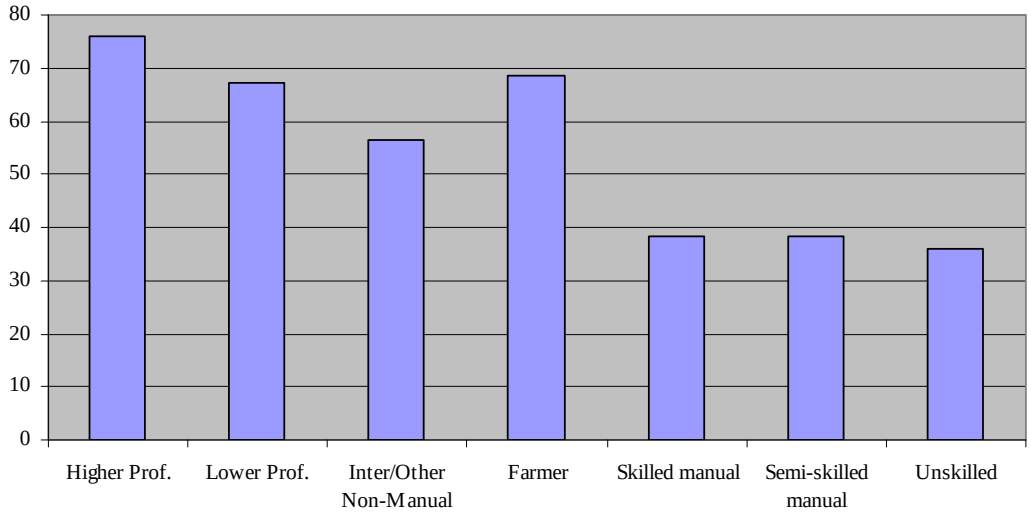
Finally, we examine patterns of progression to higher (third-level) education across social class groups. Figure 2.6 displays progression levels for the cohort of school leavers from each social class group. Figure 2.7 examines such progression among those who have remained in school to complete the Leaving Certificate (or equivalent). Focusing on the full cohort of school leavers, over 70 per cent of young people from higher professional backgrounds subsequently (within the first two years) progress to higher education. This compares to less than half of those from intermediate and other non-manual backgrounds and just 30 per cent of those from semi- and unskilled manual backgrounds. Given that young people from the latter disadvantaged groups are less likely to remain in school to complete the Leaving Certificate, and hence achieve eligibility for higher education, Figure 2.7 just considers young people who completed second-level education. Among those achieving this benchmark, social class differences in higher education entry are again marked. While three-quarters of those from higher professional backgrounds and two-thirds of those from farming and lower professional groups progress to third-level education, just 38 per cent of their peers from semi- and unskilled manual backgrounds similarly progress.

Figure 2.6: Entry to Full-Time Higher Education Among All School Leavers



Source: School Leavers' Surveys 2006 and 2007.

Figure 2.7: Entry to Full-Time Higher Education Among Those Who Completed the Leaving Certificate



Source: School Leavers' Surveys 2006 and 2007.

In sum, social class background and parental education are significantly associated with a range of educational outcomes among young people in Ireland, including reading and mathematics performance, grades achieved in State examinations, and how long young people remain in the educational system. These social background effects reflect a range of processes including differences in parental economic, social and cultural resources, the different costs and benefits attached to staying in education for different social groups, the interaction between home and school, and potential differences in 'ability'. However, international research indicates that "…even when level of demonstrated ability is held constant, children of more advantaged class origins take more ambitious educational options … than do children of less advantaged origins" (Erikson and Goldthorpe,

2002, p. 41). The following section explores the way in which educational policy in Ireland has sought to address these inequalities in educational outcomes.

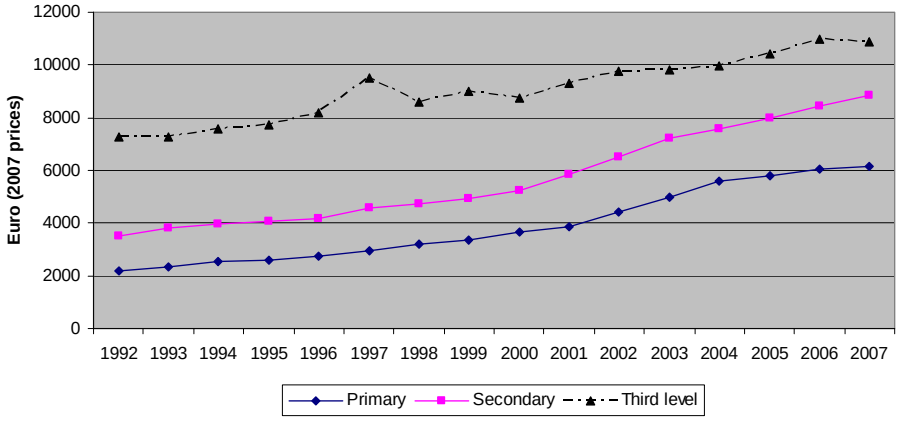
3. Educational Policy in the Irish Context

The previous section has shown the persistence of differentiation in educational outcomes by family background (social class and parental education) in the Irish context. This section explores policy designed to counter educational disadvantage. It begins by providing an overview of expenditure on education before exploring the range of measures in place for schools serving disadvantaged populations. It then explores the perceptions of such provision and of recent expenditure cuts following Budget 2009 among school principals and key education stakeholders.

3.1 Educational Expenditure in Ireland

Figure 3.1 shows expenditure per student (adjusted for 2007 prices) at each level of the educational system over the period 1992 to 2007. Expenditure has increased at all levels over this period, with more rapid increases in expenditure at primary and second-level stages since 2001. At the beginning of the period, 3.3 times more was spent on each student in third-level education than on each student in primary school. Given the social profile of students at third-level (see Section 2), this pattern of expenditure resulted in a disproportionate allocation of resources to students from more advantaged backgrounds. There has been a significant reduction in this disparity over time, but in 2007, expenditure per third-level student amounted to 1.8 times that for a primary student.

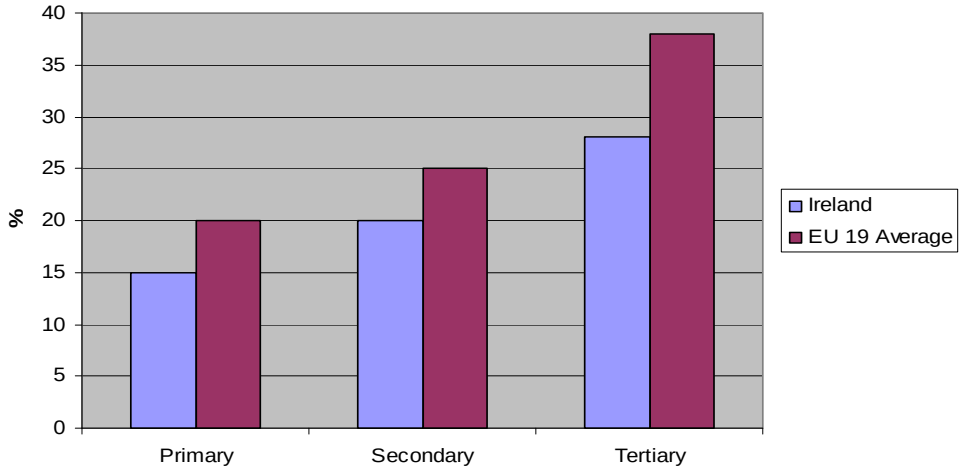
Figure 3.1: Expenditure Per Student (Adjusted for 2007 Prices), 1992-2007



Source: DES Statistics database.

Expenditure on education in Ireland can be benchmarked against other countries using data compiled by the OECD (2008). In 2005, the most recent year for which data are available, Ireland spent 4.6 per cent of Gross Domestic Product (GDP) on education compared with 5.5 per cent for the EU 19 countries and 5.8 per cent for OECD countries as a whole. If we look at expenditure per student relative to per capita GDP, we see that relative expenditure is lower in Ireland than among the EU 19 at all levels of the educational system (Figure 3.2).

Figure 3.2: Annual Expenditure on Educational Institutions Per Student Relative to GDP Per Capita



Source: OECD *Education At A Glance* (2008).

3.2 Educational Policy

A concern with educational inequality dates back to the Investment in Education Report (Department of Education and Science, 1966) which indicated significant social class and regional disparities in educational participation. However, it could be argued that the 1970s and 1980s saw a policy emphasis on increasing overall levels of educational participation in Ireland rather than reducing inequality per se. However, by the 1990s, there was an increasing policy focus on educational inequality, with the term 'educational disadvantage' becoming common in educational discourse (Smyth and Hannan, 2000). This concern was evident in the Education Act of 1998, which defined educational disadvantage in terms of the "…impediments to education arising from social or economic disadvantage which prevent students from deriving appropriate benefit from education in schools", and led to the establishment of an Educational Disadvantage Committee. This shift in focus resulted in two sets of policy changes centring on curriculum reform and targeted funding respectively.

Curricular reform has centred on two programmes targeted at at-risk students: the Junior Certificate School Programme (JCSP) and the Leaving Certificate Applied Programme (LCA), now taken by 3 and 7 per cent of the school cohort respectively. Both programmes emphasise cross-curricular work, tasks and projects, along with personal and social development. Neither programme has been the subject of systematic evaluation to date. However, available information indicates that the programmes are viewed positively by staff and students (Gleeson *et al.*, 2002; Department of Education and Science, 2005). Research on pathways into and out of LCA is currently being carried out by The Economic and

Social Research Institute for the National Council for Curriculum and Assessment.

A dominant feature of educational policy on disadvantage has centred on the provision of additional funding for schools serving disadvantaged populations. This approach is similar to that adopted in a number of other countries, including France, the Netherlands and the US (see Section 1), and is motivated by the existence of a 'multiplier effect' for concentrations of disadvantage:

> *Part of the rationale for programmes targeted at schools derives from a belief that the disadvantage associated with poverty is aggravated when large proportions of pupils in a school are from poor backgrounds (the "social context" effect).* (Educational Disadvantage Committee, 2003)

The main measures adopted since the 1990s onwards have included:

1. The Early Start Programme, an early childhood education programme targeted at 3-4 year olds in disadvantaged areas;
2. Schemes to provide additional funding for schools containing a high concentration of disadvantaged students; these have included the Scheme of Assistance to Schools in Disadvantaged Areas, Breaking the Cycle and Giving Children an Even Break. These schemes have now been subsumed into the School Support Programme, Delivering Equality of Opportunity in Schools (DEIS).
3. Home-School-Community-Liaison (HSCL) Scheme, designed to promote contact with, and involvement of, parents in disadvantaged schools;
4. School Completion Programme (SCP), which targets students aged 8-14 years of age at risk of early school leaving.

What is notable in the Irish context is that, while evaluations have been carried out on specific elements of such provision, no systematic research has been conducted which considers the potential impact of the sum total of educational expenditure across the system on social differentiation in educational outcomes. In the remainder of this subsection, we summarise available evidence on the impact of existing measures.

Levels of early childhood education have been relatively low in Ireland by international standards (OECD, 2008), and existing provision is generally through the private market. The Early Start Programme, funded by the Department of Education and Science, covers a very small proportion (around 2 per cent) of the cohort entering junior infant classes (DES, various years). Evaluation of the initial cohorts taking part in Early Start indicated no gain for participants in cognitive skills but positive perceptions among teachers of their school readiness in terms of settling into school and behaviour (ERC, 1998; Kelly and Kellaghan, 1999). The programme has subsequently been adapted to provide an increasing emphasis on cognitive and language development (Lewis and Archer, 2002, 2003). However, an evaluation of the outcomes of this change is still on-going.

The Home-School-Community Liaison Scheme involves the provision of a school-based co-ordinator to liaise with parents and the community in

primary and second-level schools. Ryan's (1994) initial evaluation of the programme indicated some positive effects, including improved parental involvement in the school and increased contact between parents and teachers. However, it remained difficult to target those parents who were seen as in most need of the scheme. Conaty's research (reported in Archer, 2007) highlighted the change in attitude and increased openness in schools to parental involvement resulting from the scheme. Subsequent research (Archer, 2007) indicated that the majority of principals and coordinators were positive about the scheme. However, the scheme was seen as having had a greater impact on attitudes than behaviour and its direct impact on students themselves was less apparent.

The School Completion Programme has not yet been subject to systematic evaluation. However, an evaluation of its predecessor (the 8-15 Early School Leaver Initiative) indicated that teachers and group workers reported a modest improvement in young people's academic and social outcomes, but also highlighted lack of progress among a significant group of young people (Cullen and Walker, 2000). In 2006, €21.7 million was spent on the School Completion Programme, a decline since the €23.5 million spent in 2004.

Since 1990, there have been a range of measures to provide additional funding to schools serving disadvantaged populations, including the Scheme of Assistance to Schools in Disadvantaged Areas, Breaking the Cycle and Giving Children an Even Break. The criteria used to target schools were reviewed and revised as the schemes developed (see, for example, Kellaghan *et al.*, 1995). An evaluation of the Breaking the Cycle Scheme indicated that principals and teachers in designated disadvantaged schools were relatively positive about the scheme. However, there was no evidence of improved reading and maths scores among students in these schools and variable results in relation to other outcomes (such as student attitudes, attendance and behaviour) (Weir, Milis and Ryan, 2002a, 2002b; Weir, 2003). The fact that 'rates of educational underachievement and early school leaving remain much higher for pupils from disadvantaged communities than for other pupils' (DES, 2005, p. 8) was the rationale for subsuming existing schemes for disadvantaged primary and second-level schools into the DEIS School Support Programme.

The DEIS action plan contains three distinctive features. Firstly, a good deal of criticism of existing provision had centred on the fragmented nature of provision and the varied criteria used for targeting schools (Educational Disadvantage Forum, 2003; Educational Disadvantage Committee, 2003; Comptroller and Auditor General, 2006). This was to be addressed by 'streamlining' provision under the auspices of DEIS. Secondly, the criteria used for targeting schools had been subject to criticism:

> *Information on socioeconomic indicators such as medical card possession is not readily available in most schools and … as a result, many school principals are forced to estimate/guess the number of pupils in the relevant category. There is a suspicion that some principals 'err on the side of caution'; while other principals do the opposite.* (Educational Disadvantage Committee, 2003)

A new procedure was devised by the Educational Research Centre for identifying schools for inclusion in DEIS and a survey of schools conducted in May/June 2005 to determine levels of disadvantage. As in

earlier schemes, the information relied on reports by principals as to the prevalence of disadvantage in their schools. At primary level, the following criteria – prevalence of unemployment, lone parenthood, Travellers, large families, free book grants and local authority housing – found to be empirically associated with reading scores, were combined into an overall scale of disadvantage (ERC, no date). This exercise yielded three categories of school: urban band 1 schools, urban band 2 schools[1] and rural schools. Additional schools with 'dispersed disadvantage' were to continue to receive some funding under the scheme. The criteria for second-level schools are somewhat different, combining a socio-economic indicator (medical card ownership) with measures of educational outcomes (junior cycle drop-out and Junior Certificate performance) to identify schools (Weir, 2004). A third distinctive feature of the DEIS programme is the emphasis on providing professional development opportunities to support specific interventions targeted on literacy and numeracy (e.g. Reading Recovery and Maths Recovery) along with the requirement for schools to provide specific plans to address these issues.

In 2008, there were 199 urban band 1 primary schools, 141 urban band 2 primary schools, 333 rural DEIS schools and 203 second-level DEIS schools. In terms of funding, grants of €10 million were paid to primary schools and almost €5 million to second-level schools. In addition, almost €4 million in grant assistance went to primary schools with 'dispersed disadvantage'. In the 2007/8 school year, almost €5 million went to primary and second-level schools who had been receiving grants under pre-existing schemes but were not included in DEIS; these grants are being discontinued from the forthcoming school year (see below).

The DEIS scheme is currently being evaluated so we cannot assess its outcomes here. However, the nature of the DEIS scheme does raise two more general issues. Firstly, the rationale for targeted provision is that there is a 'multiplier effect' with greater difficulties evident for schools with a high concentration of disadvantaged students. There is indeed evidence of such a contextual effect in the Irish context; students attending schools with a high concentration of working-class students are more likely to leave school early, have poorer attendance rates and tend to achieve lower Junior Certificate and Leaving Certificate grades than other students, even controlling for their own social background (Smyth, 1999). However, it is not at all evident that all, or even the majority of, disadvantaged students attend DEIS schools. Unfortunately, no evidence is available on the primary sector but a national survey of school leavers indicates that 61 per cent of young people from semi/unskilled manual backgrounds and 56 per cent of those from non-employed households attend non-DEIS schools. These are groups that are likely to experience socioeconomic disadvantage and we know from existing research that they achieve poorer educational outcomes (see Section 2). Thus, a significant proportion of the potential

[1] Resources are allocated to schools based on the scale of disadvantage, with Band 1 schools having the greatest concentration of disadvantage.

target group do not fall within the remit of the DEIS second-level scheme. There has been allowance for such 'dispersed disadvantage' at primary level but not for second-level schools. A second issue relates to the use of a combination of background (medical card ownership) and outcome (drop-out and performance) indicators in identifying second-level schools. This approach has the potential to exclude support from schools that have achieved positive outcomes with an otherwise highly disadvantaged student population. The following subsection explores in further detail the experience of DEIS schools.

3.3 A Profile of DEIS Schools

This subsection uses information from a national survey of 1,200 primary and post-primary principals carried out in 2007 to provide a profile of experiences within DEIS schools. The following subsection complements this analysis by drawing on detailed interviews with five principals of DEIS schools (two urban band 1 schools, two urban band 2 schools and one rural school). The latter interviews are not intended to be representative of the national picture but rather to give a flavour of the issues on the ground for DEIS schools.

Second-level DEIS schools are significantly more likely than non-DEIS schools to have experienced declining numbers over the past five years; around half have had a fall in student numbers compared with less than a fifth of non-DEIS schools. This pattern of declining numbers is also evident in urban band 1 and rural DEIS primary schools. In contrast, over half of urban band 2 schools have experienced an increase in pupil numbers.

The vast majority of DEIS schools are open to all who apply. At second-level, almost all (99 per cent) of DEIS schools accept all who apply while 27 per cent of non-DEIS schools are oversubscribed and thus must limit entry. A similar pattern is evident at primary level, with 98 per cent of urban band 1 schools, 84 per cent of urban band 2 schools and 94 per cent of rural DEIS schools accepting all applicants compared with 79 per cent of non-DEIS schools.

The profile of DEIS schools is different not only in the prevalence of students from socio-economically disadvantaged backgrounds but in the prevalence of other groups requiring extra supports. At second level, DEIS schools have higher concentrations of newcomers (7 per cent versus 4 per cent), students with physical disabilities (1 per cent versus 0.5 per cent), students with learning disabilities (12 per cent versus 6 per cent) and students from the Traveller community (2.4 per cent versus 0.7 per cent) than non-DEIS schools. Similarly at primary level, DEIS urban schools have a higher concentration of newcomers than other schools (16-17 per cent of urban DEIS schools versus 6 per cent for non-DEIS and 3 per cent for rural DEIS); the same pattern is evident for Traveller pupils (6 per cent in urban band 1 compared with 1 per cent in rural DEIS and non-DEIS schools). Unlike at second level, the concentration of primary pupils with physical or learning disabilities does not vary significantly across sectors.

DEIS school principals were asked about the proportion of students in their school with difficulties deemed 'to adversely impact on their educational development'. Almost half of DEIS second-level principals report serious literacy and numeracy difficulties among more than a quarter of their students compared with one in twenty of non-DEIS schools

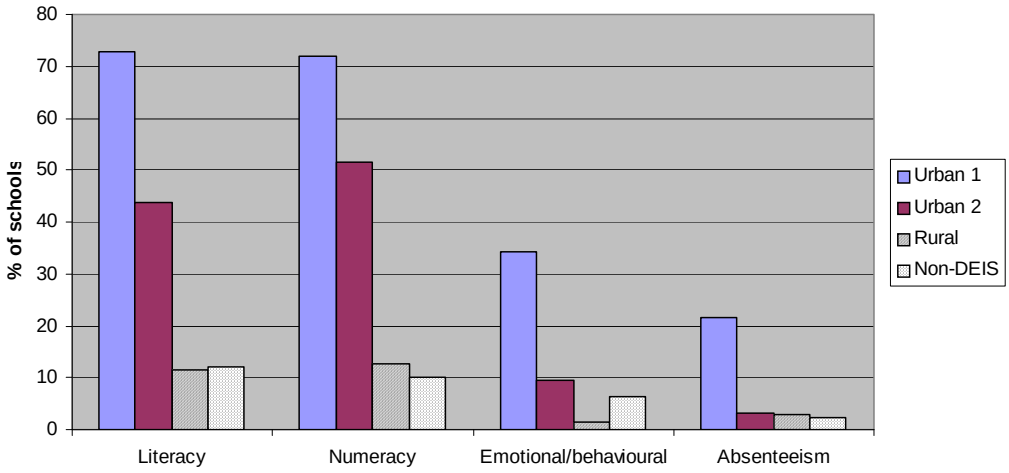
(Figure 3.3). DEIS second-level principals also report more emotional/behavioural and absenteeism problems among their students.

Figure 3.3: Perceived Proportion of Second-level Schools Where More Than a Quarter of Students have Difficulties

Source: Survey of Diversity, 2007.

DEIS urban primary schools, particularly those in band 1, similarly report a high concentration of pupils with literacy and numeracy difficulties (Figure 3.4). Principals in these schools also report a higher incidence of emotional/behavioural difficulties among their pupils. Absenteeism is seen as a more significant problem in DEIS urban band 1 schools than in other primary school types.

Figure 3.4: Perceived Proportion of Primary Schools Where More Than a Quarter of Students have Difficulties

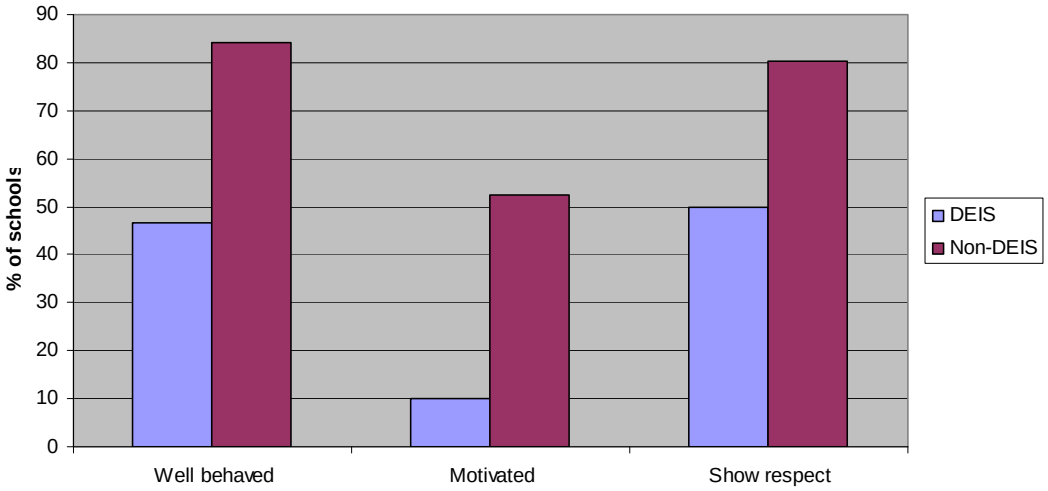


Source: Survey of Diversity, 2007.

Differences are evident between DEIS and non-DEIS schools in relation to aspects of school climate. Principals in DEIS second-level schools are significantly less likely to report that 'nearly all' of their students are well-behaved in class, motivated about their schoolwork and show respect for their teachers (Figure 3.5). They are less likely to report that

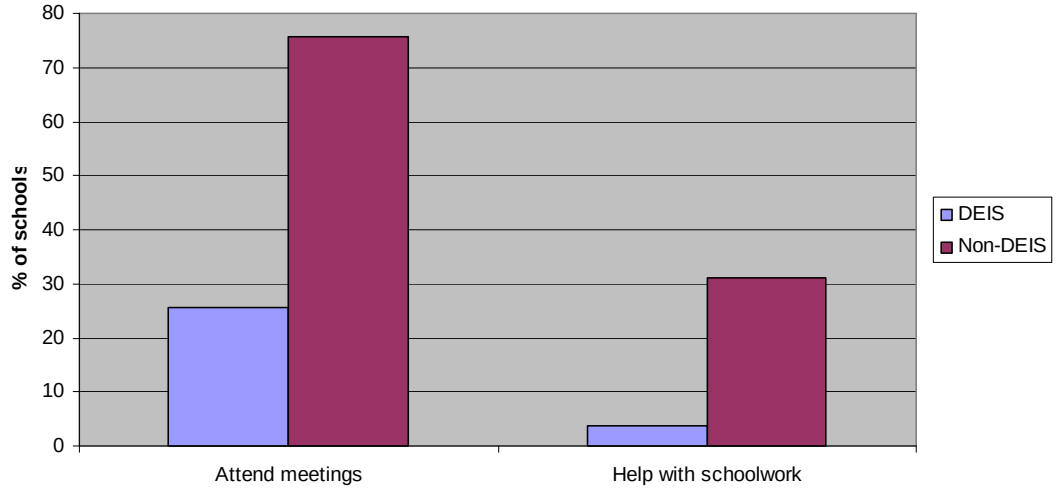
'nearly all' parents attend parent-teacher meetings and help their children with their schoolwork (Figure 3.6).

Figure 3.5: Perceptions of Students by Second-level Principals ('True of Nearly All')



Source: Survey of Diversity, 2007.

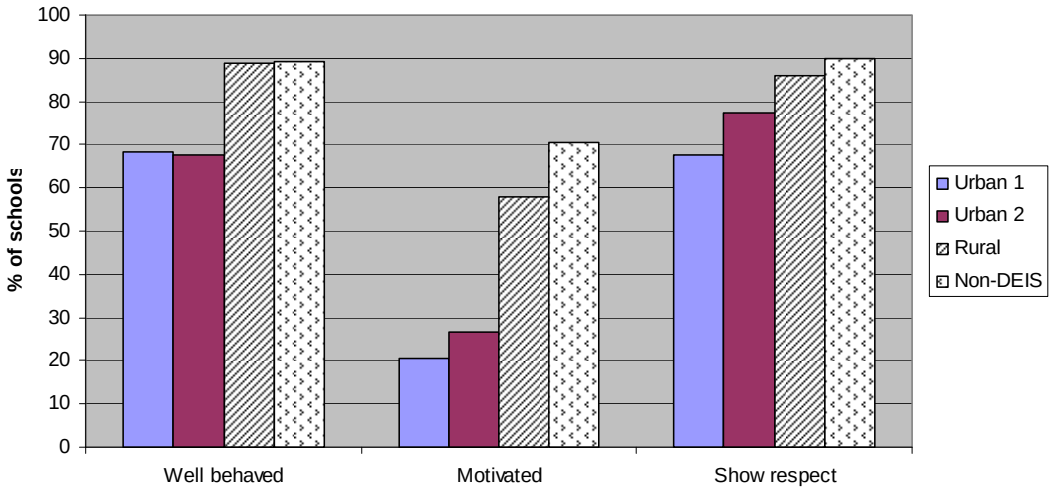
Figure 3.6: Perceptions of Parents by Second-level Principals ('True of Nearly All')



Source: Survey of Diversity, 2007.

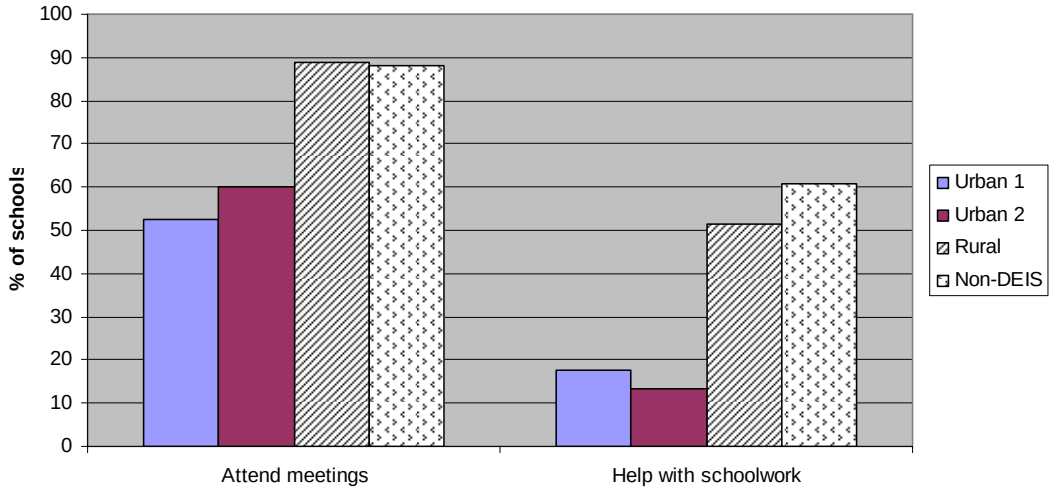
As in the second-level sector, there are differences between DEIS and non-DEIS primary schools in relation to school climate. In particular, principals of urban DEIS schools are much less likely to see their pupils as motivated in relation to their schoolwork than those in non-DEIS or rural DEIS schools. They are also less likely to see them as well behaved in class. Parents of pupils in urban DEIS schools are seen as less likely to attend meetings and to help with schoolwork than those in non-DEIS schools; rural DEIS schools are similar to non-DEIS schools in the profile of parental support.

Figure 3.7: Perceptions of Pupils by Primary Principals ('True of Nearly All')



Source: Survey of Diversity, 2007.

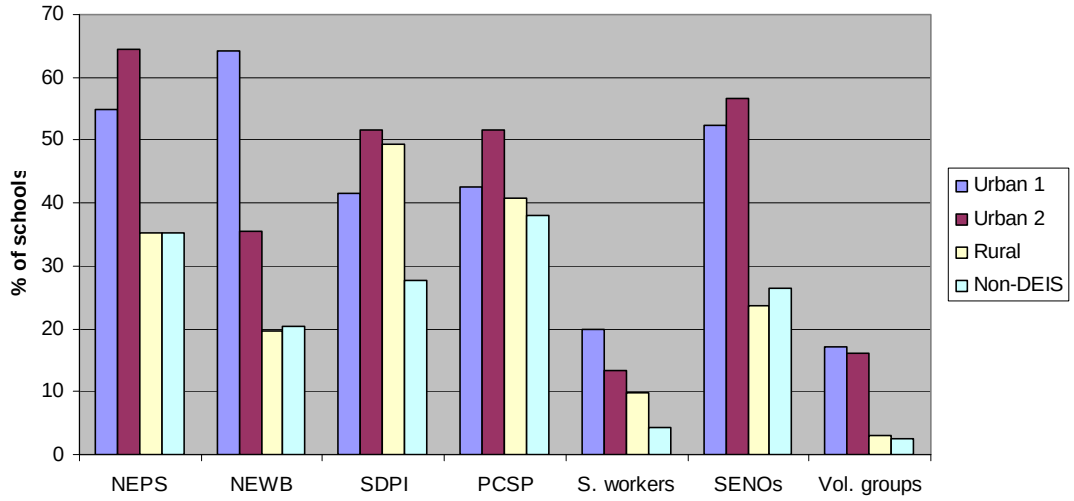
Figure 3.8: Perceptions of Parents by Primary Principals ('True of Nearly All')



Source: Survey of Diversity, 2007.

Principals in urban DEIS primary schools report much higher levels of contact with external services than those in other schools (Figure 3.9); a similar pattern is evident in the second-level sector. This pattern applies not only to education-related services, such as the National Educational Psychological Service and the National Educational Welfare Board, but also to broader social work and voluntary services.

Figure 3.9: Contact with External Services ('to a Great Extent'), Reported by Primary Principals



Source: Survey of Diversity, 2007.

Additional information on school organisation in disadvantaged and non-disadvantaged second-level schools is available from the Moving Up Survey (2002), conducted for the ESRI Post-Primary Longitudinal Study. Students in designated disadvantaged schools were found to take fewer subjects in first year and in their Junior Certificate year than other students. Disadvantaged schools were more likely to offer the Leaving Certificate Applied Programme (60 per cent versus 27 per cent) but less likely to offer Transition Year (67 per cent versus 81 per cent). Principals of disadvantaged schools reported more settling-in difficulties among first year students in relation to academic progress, behaviour in class, absenteeism and interaction with peers. They were somewhat less likely to consider the junior cycle curriculum as suitable for the majority of their first year students and they were significantly more likely to consider it too challenging for a significant minority of their students. Designated disadvantaged schools were much more likely to use streaming (that is, allocating students to base classes according to their assessed ability) than non-disadvantaged schools (47 per cent versus 15 per cent). Research has shown that the use of streaming contributes to an achievement gap and greater likelihood of dropping out of school for those allocated to lower stream classes (Smyth *et al.*, 2008).

The following section presents the perspectives of education stakeholders and DEIS principals on the nature of provision within disadvantaged schools and more generally.

3.4 Stakeholder and Principal Perceptions of Educational Disadvantage Policy

Interviews were undertaken with a total of seven individuals working in a diverse range of educational bodies and statutory organisations along with five principals of DEIS primary schools.[2] These interviews focused on their views across a number of main areas:

- Nature and levels of educational disadvantage in Ireland;
- Impact of educational disadvantage;
- Overall policy measures addressing educational disadvantage;
- Recent changes in educational policy (Budget 2009 and thereafter).

This section presents the main views emerging from these stakeholders and school principals, reflecting both their experiences of educational disadvantage within their organisations or schools and their views on educational disadvantage policy more generally.

Respondents uniformly emphasised that children were not on 'an equal playing field' and many were already disadvantaged relative to their peers when starting school:

> *[They] would be deprived of books, there would be no books at home. The language they would be growing up with would be restricted, they wouldn't have access to the same language and vocabulary that a lot of their peers would. … They would be left to their own devices a lot more and a lot earlier than similar children in the country … [so they] lack the ability to relate and access the education that's being provided.* (DEIS Principal)

> *At the end of junior infants, they're kind of like those at the start of it in a well to do area. … You come in with a language deficit by virtue of the fact that you're not really exposed to books and educational toys.* (DEIS Principal)

> *Children who start off behind the others, way behind the starting line, children who present at school significantly behind their peers throughout the country and that's mainly because of poverty, poor expectations at home, the social milieu where they live. Basically they're playing catch-up from then on.* (DEIS Principal)

Educational disadvantage was seen as not solely relating to socio-economic factors but to 'cultural' and attitudinal ones:

> *Disadvantage can be a state of mind … it can be a vicious circle where children and whole generations get caught up and they don't see that education is that important.* (DEIS Principal)

[2] We are extremely grateful to the stakeholders and principals who generously gave of their time for the study. We do not provide specific details on those interviewed in order to maintain confidentiality.

The issue of funding was prominent in discussions with key educational stakeholders. Some argued that there was simply a lack of funding to address educational disadvantage in Ireland, and this was reflected in stretched and inadequate resources for both school and non-school initiatives and supports for the most vulnerable. However, concerns were also focused on the structure and nature of policy around educational disadvantage and the implications this had. First, it was felt by a number of key informants that the system was overly complex, creating difficulties for those most vulnerable:

> *We expect them [those from disadvantaged backgrounds] to be able to negotiate the labyrinth of education in the way other people do. We provide these elaborate processes around appeals, around legal ways of doing things, [but] by and large these people are already alienated from society, they will not engage with these things … I think we design overly elaborate processes … there needs to be protections there that we get these people on board, that they can use these processes in a way that they can navigate them.* (Stakeholder)

It was contended that the system is fragmented and hierarchical, with a lack of integration across services and government departments: 'we [in education] are very regimented in our views, we always think in terms of vertical, hierarchical structures, we don't think horizontal'. Allied to this, a number of interviewees suggested that there is a lack of coherence across policies, even within the DEIS programme, which is discussed further later. These difficulties are reflected in discontinuities in educational policy across educational levels and programmes:

> *[There are] discontinuities between primary and post-primary and between post-primary and further education. If they drop out of school and enter Youthreach, even if only 16 or 17 [years of age], resources from school do not follow through, they can't access the resources of National Educational Psychological Service (NEPS) … you can't access any service from National Council for Special Education (NCSE) and also [there is] no formal contact with National Educational Welfare Board (NEWB)* (Stakeholder)

In keeping with the prominence of the issue internationally, pre-school education was seen as vital for disadvantaged groups and a number of respondents emphasised the improved school readiness evident among children who had such experience:

> *You can tell a child that's attended playschool because they're more confident, their language would be much better than a child who hasn't.* (DEIS Principal)

> *The place to make the difference is right back at the start.* (DEIS Principal)

Despite commitments within the DEIS programme (2005) to design and commence the 'implementation of early childhood education measures' for 'communities served by the 150 urban/town primary schools with the highest concentrations of disadvantage', stakeholders were critical of the absence of action on this front.

> *This is one of the ones that withers us to be honest. … But all the research and all the literature shows that early intervention is the way. The state takes a narrow view. DES do education from 4 on and anything before that is not their*

responsibility. Shutting down Centre for Early Childhood Development and Education (CECDE) Centre … was a blow against any kind of early childhood intervention. … There was a commitment … in the DEIS programme to support early childhood intervention … but they seemed to go off then and see what's out there and there was this great mapping exercise done by the CECDE and then they were going to pick a few programmes and support them. But it just seems to have run into the ground. (Stakeholder)

Views on the DEIS programme among education stakeholders were somewhat varied and diverse. Some felt the programme was a positive development in educational policy and is making valuable inroads in addressing the needs of those most marginalised in education.

I think it's come a long way to have that DEIS strategy, because it does focus on the main areas, it focuses on literacy and numeracy, it focuses on attendance, it focuses on retention, it's putting in targeted resources, it's trying to be more robust in terms of the methodology of identifying schools. (Stakeholder)

However, others were more sceptical, arguing the programme had not resulted in any substantial changes.

I don't think it was a significant policy change in the overall scheme of things, it simply brought together into one basket a range of different funding methods, schemes … I am not sure it has made any significant kind of gain, except that there was additional money thrown in and co-ordinators … but I'm not sure how clear the role of these co-ordinators is, particularly in rural areas. (Stakeholder)

The DEIS principals interviewed were generally positive about the DEIS programme and the School Completion Programme. In particular, they singled out the additional funding available which could be used to subsidise a range of activities for children and their parents, smaller class sizes ('which is huge because you've more time for each kid'), the emphasis on teaching and learning (and the materials provided), the role of planning and access to home-school liaison.

I think that's vital, breaking down those barriers between home and school because, let's face it, many of the parents aren't comfortable around school. (DEIS Principal)

Those [Reading and Maths Recovery] are really, really vital for disadvantaged schools, giving the children that little bit of a leg up. (DEIS Principal)

I think the idea of a school having a definite plan under the new DEIS … in the major areas like mathematics, literacy and attendance, I think it's vitally important that schools have a plan. (DEIS Principal)

School meals were also seen as a very positive aspect of the provision:

We notice the difference with the kids in the lunches because everybody is getting two decent snacks every single day and it's nourishing stuff … they get at least two pieces of fruit every day. (DEIS Principal)

One aspect of DEIS that evoked a considerable response from the key stakeholders and principals was the way in which resources are distributed within the DEIS programme and the nature of targeting. In the first instance, it was felt that the mechanism by which schools were identified for inclusion in the DEIS programme, using both socio-economic indicators and educational outcomes, was unfair and, in particular, penalised schools which, despite socio-economically disadvantaged intakes, had been successful in addressing low retention and high performance in the past.

> *Prior to the DEIS there was over two hundred second-level schools in the disadvantaged scheme. When the DEIS came in, I think there was ninety-nine left out and yet … those principals in those schools said "we were punished for being successful". …. [One principal commented] "my students haven't changed but the school has managed to cope with them better". The reason they didn't get into the DEIS was because the Junior Cert results had gone up. "We are punished for doing good", he said. "But the students that are coming in are very, very weak but we are doing better*". (Stakeholder)

Looking to the future, fears were expressed that schools which are effective in using additional resources in the current DEIS programme would be 'thrown out' of the programme at the end of the current phase, in the same way as former disadvantaged schools had been.

Further, it was argued by many stakeholders that the selection of schools at primary level was arbitrary, in the absence of objective external data, with 'issues around the over- or under-reporting of data' apparent. Principals themselves raised issues relating to the difficulty of compiling such information for their pupils as well as the fact that the indicators were based on principal reports rather than 'objective' measures:

> *It's not easy to assess because you're going into very private areas of people's lives. … A lot of the time you're only guessing or assuming from what you heard.* (DEIS Principal)

> *As a principal, you were deciding certain things about the make-up of your families. So to a certain extent, it depends on the honesty of the principal.* (DEIS Principal)

> *There's anecdotal evidence that … the idea is you talk up your school, or talk down your school. If you're being truly honest about your school, that can put you at a disadvantage. … Schools can lose out if you're being too honest.* (DEIS Principal)

This approach was seen as creating anomalies in terms of different designations for schools in the same area:

> *The criteria were fair enough but we were a little bit taken aback that we were designated DEIS 2 whereas some of our feeder schools are designated DEIS 1. And that has always seemed an anomaly in these schemes.* (DEIS Principal)

> *It depends how honestly people answer that. … There was a computer grant there recently and we are DEIS band 1, according to what I sent in, we wouldn't be*

> *within the first hundred schools which you would actually find very hard to believe so we didn't qualify for that.* (DEIS Principal)

Certain other aspects of DEIS implementation were criticised by school principals. Some principals felt that there had been a 'fanfare' about DEIS but that in reality 'a lot of the grants I had been getting before were all subsumed into this' so the level of funding was not as great as first anticipated. Furthermore, some concern was expressed in relation to the adequacy of levels of learning support, given that DEIS schools fall under the same general allocation model as other schools:

> *For a school such as ours, that [one learning support teacher] is not sufficient. As I said, 40 per cent of our children are below the 20th percentile so that presents a huge caseload for a learning support teacher … The general allocation model should be revisited, particularly for disadvantaged schools and particularly for all male disadvantaged schools.* (DEIS Principal)

While Reading and Maths Recovery Programmes were viewed positively, the involvement of the existing resource teacher in such provision was seen as creating a zero-sum trade-off with existing resource provision.

The broader issue of allocating resources on a targeted basis provoked considerable response, both in favour of and against this mechanism. Those who argued for the need to target those with greatest levels of disadvantage often held that for schools with low proportions from socio-economically disadvantaged backgrounds, for example, "…there are dynamics and factors within those schools that can be used to help those children along. The more concentrated the disadvantage levels the more it feeds on itself". In essence, some stakeholders felt that schools with low levels of disadvantage have the capacity, within universal supports, to address the needs of disadvantaged students:

> *Where the concentration of such children is not terribly high or is sufficiently low there is an expectation that schools, from within their existing mainstream resources, should be able to cater for the individual or differentiated needs of such children and it is only where the examples of disadvantage are highly concentrated that there is a need for supplementing what is mainstream. … if you have disadvantaged children in small numbers in places like Blackrock or Foxrock, places like that, those schools have the wherewithal to engage in fundraising which actually supplements their sources of income and supplements what is provided by the State and provides them with an additional capacity to support extra-curricular activities or other material supports for disadvantaged children.* (Stakeholder)

However, and what was perhaps a more widely held view, many stakeholders argued that targeting on its own was a flawed mechanism for addressing the needs of students from disadvantaged backgrounds. One stakeholder quoted an OECD finding which indicated that "…targeted interventions are not doing anything for literacy across the system because they are too targeted". Others were more vociferous in their views, stating:

> *The approach of targeting is insufficient politically … it lets the State get off to a certain extent. If we are to deal with educational disadvantage, it has to be more than just the targeting of what we would see as severe concentrations of*

> *disadvantage … There are students who have extremely poor standards of literacy and numeracy, and they are in every school in the country. And we are extremely concerned that the policy to deal with educational disadvantage does not take that into account.* (Stakeholder)

The issue of class sizes emerged in numerous guises: in terms of the perceived positive impact of reduced class sizes for schools within the DEIS programme (Band 1 schools); the need for reduced class sizes for all students during the early years of primary and post-primary education and for core subjects; and the challenges of teaching in large class contexts:

> *The biggest single change that I would like to see at primary level is probably early investment to keep class numbers low in the junior and senior infants. …There is no doubt about it that smaller classes are needed at junior infants, senior infants and first class.* (Stakeholder)

> *[There is] strong evidence from teachers that class size is very important to them – morale and efficacy to them is what matters. … Classes should be smaller at junior cycle, particularly for English and Maths.* (Stakeholder)

Curriculum change and the introduction of more vocationally-oriented alternatives into second-level education were noted by most stakeholders as positive developments within educational policy.

> *If you talk to teachers ... they are very enlightening ... they will talk about curriculum relevance, how do you get a child engaged if the curriculum is so irrelevant to them. And for many of these children with the poor literacy and numeracy skills, the hands on learning approach ... having what you're learning to be relevant to you is actually for all of us the best motivator to learn … one size doesn't fit all.* (Stakeholder)

Both the Junior Certificate School Programme (JCSP) and Leaving Certificate Applied (LCA) were noted as being particularly important and relevant to young people most at risk, although difficulties around negative perceptions of these programmes, the extent to which students taking these programmes are fully integrated within their schools, and the lack of progression opportunities for school leavers from the Leaving Certificate Applied Programme were noted.

> *Crucial, in terms of JCSP – marvellous programme at junior cycle level, monitoring their progress over the 3 years and then they are given credits for that at the end. ... The very existence of the programme … is helping to retain those very vulnerable young people in the system.* (Stakeholder)

> *Leaving Cert Applied is crucial as well … in my own school had not the Leaving Cert Applied been available to quite a cohort of the young people in the school they would have been early school leavers. The difficulty in terms of progression after the Leaving Cert Applied is that not many of the third level colleges seem to be able to put in place courses that suit Leaving Cert Applied students, so the majority of those, or a certain number will go on to post-Leaving Cert courses … I think it's demoralising for people sitting the Leaving Cert Applied ... [Also] the system of awarding grades to Leaving Cert Applied students is quite different to those awarded at the Leaving Cert. So kids are getting merits so they can't say*

well I got 3 As and 2 Bs, which is a pity … I think that should be re-examined. (Stakeholder)

However, a number of stakeholders raised a more general concern that teacher training programmes were insufficiently focused on preparing teachers to deal with disadvantage and diversity.

What awareness is there in our teacher training programmes about how to deal with disadvantage? How to recognise the signs, how to engage with those parents? To what extent do school principals and boards of management get skills around that? (Stakeholder)

External support services, such as the services of the National Educational Psychological Service (NEPS), the National Educational Welfare Board (NEWB) and the National Council for Special Education (NCSE), received considerable attention from the key stakeholders – mostly in terms of perceived serious inadequacies in funding for these services and the notable impact that this was having on provision for young people most at risk. Further, it was felt that recent cutbacks will have an additional negative impact on these services.

NEWB is only reacting now to students who are out of school over 60 days. That makes a mockery of the entire system. … They are suffering hugely under the cutbacks; they are not able to replace maternity leave, their budget is stalled at what it was last year, so increments and salaries and so on effectively mean that they have to cut staff and let staff go. So their ability to perform statutory responsibilities is severely circumscribed. (Stakeholder)

The interviews also elicited the views of stakeholders on the extent to which educational programmes and initiatives addressing educational disadvantage have been adequately assessed and evaluated in terms of their impact and efficacy. Virtually all stakeholders raised concerns over the extent to which programmes and measures have been evaluated. Some went so far as to state that there is a resistance to evaluation and a fear as to what such evaluations might reveal along with a lack of expertise to undertake evaluations.

We just don't do it [evaluation], we don't have a culture here. We have a fear of it in some ways … if you did it, as a way of setting policy and forming policy, some of the vested interests might feel threatened by it because it would disempower them somewhat. … It's in the interest of everybody concerned that we do have independent evaluations so that we can all learn. (Stakeholder)

We have been putting additional teachers, additional funding, into schools since the 1980s and I don't know how effective that is. I think it's only recent times that schools began to accept that other people, other experts, had a role within schools, and that is a welcome change. But we are still very much tied to the view that you need to be a teacher in schools. In other places they identify other sets of skills like social work, psychology and they can work cohesively as a team in the school and they can share the same objective around the child outcome. (Stakeholder)

However, it was noted that the DEIS programme places a particular emphasis on evaluation and has comprehensive assessment mechanisms built into the programme.

> *There were evaluations of all of the schemes that preceded DEIS but in many cases evaluations actually took place after the event and we were very anxious to ensure that that wasn't going to be a criticism that could reasonably be levied against us in the context of DEIS. … [We] commenced evaluation process early … [we] started with a series of testing in May 2007, across the DEIS national schools … in excess of 400 schools … [the] principal purpose was to establish baseline data … but also gave opportunities to compare rural and urban disadvantage … followed up with a range of other surveys, attitudinal surveys [students, parents]. ... [We] expect the final strand to be concluded in May 2010.* (Stakeholder)

The absence of a national database on primary level pupils was seen as a particular difficulty by a number of stakeholders. This made tracking pupil retention and progression problematic, as well as making the process of identifying schools for inclusion in the DEIS programme unsystematic.

> *We are absolutely in favour of it [a primary pupil database], I've raised it countless times with the Department for the simple reason when the DEIS was being organised and surveys were being done, at the post-primary they pushed a button and they were able to tell medical cards and unemployment and all kinds of things. At our [primary] level you had principals … trying to guess and second-guess without being invasive of the families they are serving. ... For all kinds of reasons a primary pupil database is necessary.* (Stakeholder)

> *The lack of data generally is a very significant problem and the lack of cohesion and continuity I think is also really significant … I mean how many children do actually leave straight from primary school? … At this stage in the 21st century we can't actually identify that, bit of a nonsense really! (*Stakeholder)

In the absence of systematic data on the outcomes of DEIS funding, principals themselves considered that provision under DEIS and the School Completion Programme (SCP) had made a positive difference for children and parents in their school community. However, they also sounded a note of caution in relation to the parameters of change. First, it was felt that, while resources had a positive impact, they were not sufficient to 'close the gap' with more advantaged children who have access to a range of social and cultural supports in their home setting:

> *We are making a difference but it's very slow, it's small steps. … they have missed out … there are only 182 school days and … there is positive intervention for other children, it's no wonder that the gap is actually widening.* (DEIS Principal)

Secondly, they argued for the need to take a more holistic view of the child and their family, criticising the current absence of appropriate supports, in the form of speech and language therapy ('almost impossible to get'), social work services and family support services (an issue previously raised by the Comptroller and Auditor-General, 2006):

> *We would be able to pinpoint at four years of age children who are at risk for a number of reasons, it could be speech and language, it could be more emotional, or lack of emotional, development. And I don't think as a society that we are providing those services. … We're being reactive rather than proactive.* (DEIS Principal)

> *My biggest concern has always been children with emotional or behavioural disturbance. And I think that their school life is very disrupted. And I would always hope that services would become more coordinated for those children.* (DEIS Principal)

> *We end up spending a couple of thousand every year on private assessments, and these are children who really need to be assessed.* (DEIS Principal)

Failing to provide appropriate support for disadvantaged children was seen as having very significant consequences for society at large, an issue to which we return in Section 4:

> *By about 8 or 9, if the children have not … tuned into school and seen it as valuable, and that's down to the parents in a large number of cases, they are the kids … that are going to have difficulties with the law, with secondary schooling, are likely to drop out, are likely to get in trouble with drugs, crime.* (DEIS Principal)

3.5 Budget 2009

Some of the main changes in educational expenditure arising from the Supplementary Budget 2009 and from the April 2009 Budget are detailed below, alongside notes on the impact these changes are likely to have for the most vulnerable children and young people (as assessed by the authors based on this and previous research). Unfortunately, it is not possible to quantify the number of schools and students impacted by these changes. Further, it should be noted that budgetary changes are likely to have different implications at primary and post-primary levels. For example, increased pupil-teacher ratio is likely to result in larger classes in primary schools but may impact on subject and programme choice at post-primary level.

This assessment by the authors is followed by a discussion of the reactions of key education stakeholders and school principals to these changes (these are the same stakeholders and principals as in the earlier section (3.4)). Interviews took place some weeks before the April budget so the discussion focuses on prior policy changes.

	Change/Cut	Likely Impact
General Funding		
1.	Increase in pupil-teacher ratio at primary (from 27-to-1 to 28-to-1) and post-primary (from 18-to-1 to 19-to-1) levels.	Implications for subject options and (vocational) programme provision, which is likely to have greater impact on less academically oriented students.
2.	Changes to teacher substitution and supervision arrangements.	Likely to have a bigger impact in smaller schools. Also will impact on provision of sports and other extra-curricular activities, which have been

		found to be important for the engagement and retention of students at risk of early leaving.
Schools Formerly Classified as Disadvantaged		
3.	Withdrawal of some capitation funding for former disadvantaged schools.	Loss of posts such as Home-School Community Liaison and Guidance in schools which were formerly classified as disadvantaged; impact on schools with some prevalence of disadvantage.
4.	Abolition of book grant scheme for non-DEIS schools.	Greater financial difficulty for the majority of young people from disadvantaged backgrounds attending non-DEIS schools.
Supports for Specific Programmes/Subjects		
5.	Abolition of grants for cookery, resource grant for language support teachers and equipment grant for resource teachers at primary level.	Will impact on the nature of learning support for weaker students.
6.	Abolition of grants for choirs/orchestras, Home Economics, Physics and Chemistry, Junior Certificate School Programme (JCSP), Leaving Certificate Applied (LCA), Leaving Certificate Vocational Programme (LCVP), and Transition Year (TY) at post-primary level.	JSCP and LCA, in particular, play an important role for less academically oriented students, these programmes may be phased out in some schools.
Supports for Specific Groups		
7.	A change in the criteria for the allocation of language support, especially for schools with a higher proportion of newcomers.	Greater difficulties for larger schools with higher concentrations of newcomer students; DEIS schools are over-represented in this category.
8.	Non-implementation of Education for Persons with Special Educational Needs (EPSEN) Act	Implications for students with a range of learning impediments.
9.	Removal of 128 Mild General Learning Disability Classes in primary schools	It is estimated that 80 of these posts are located in disadvantaged areas – these students will now be placed in mainstream classes.
10.	Reduction in capitation funding for Travellers	Already low levels of retention and performance among students from Traveller Community may worsen.
External Supports		
11.	Increase in charges for School Transport Scheme at post-primary level	Likely to place greater financial pressure on families on low incomes.
12.	Delay in recruitment of additional educational psychologists to the National Educational Psychological Service due to a saving of €2 million in the April Budget.	Likely to adversely impact on the capacity of schools to cater for children and young people with special educational needs.

Early Childhood Education		
13.	Closure of Centre for Early Childhood Development and Education (CECDE)	Lack of support for policy developments in early childhood education.
14.	Announcement of a new Early Childhood Care and Education Scheme for 3-4 year olds to commence in 2010.	Such a scheme has significant potential to enhance the longer term educational and social outcomes of all children, especially those from disadvantaged backgrounds.

At Departmental level, it was maintained that measures introduced in the Budget 'ring-fenced DEIS schools' and, for the most part, did not have a direct impact on them. A Department of Education and Science representative stated that there is a strong commitment by government:

> … *that DEIS interventions in DEIS schools would not be affected by the Budget and they were not. There was no reduction in capitation and no reduction in pupil-teacher ratios, none of the programmes were pulled back although there was a very minor pre-Budget cut on the payroll allocation to School Completion Programme of the order of 3 per cent … with minimal if any impact on services.* (Stakeholder)

It was, however, acknowledged that the increase in the pupil-teacher ratio in the post-primary sector did impact on DEIS schools, as did the re-imposition of the limit on English language support for newcomer students, which impacted on all schools, and new regulations regarding supervision and substitution arrangements. Further it was argued that:

> *We are not hearing anything negative at all from DEIS schools. They believe that they have been protected and they believe that there is an element of pain to be shared by all and everybody is really working hard and positively to embrace what has to happen.* (Stakeholder)

Finally, the decision to remove posts from non-DEIS schools (formerly classified as disadvantaged) was justified by the Department on the grounds that these schools have been validly assessed as not having a high concentration of students from disadvantaged backgrounds.

> *Disadvantaged posts being removed [recently] are not coming out of disadvantaged schools … the schools they are coming out of are not disadvantaged by any objective measure and the effect and impact of removing these posts is that those schools from which they are being removed are being restored to the same level of support as schools with similar levels of socio-economic advantage and disadvantage. These are posts that were hung over from pre-existing schemes, which were given on the basis of out-dated and outmoded criteria and should have been taken out years ago.* (Stakeholder)

Stakeholders working in a range of educational settings were critical of recent policy changes and fearful of the impact such changes were likely to have for students at risk. Concerns particularly surrounded the impact of the removal of the book grant scheme from non-DEIS schools, the removal of posts from non-DEIS schools, reductions in English language support teachers, the abolition of grants for Home Economics and school choirs/orchestras, reductions in Leaving Cert Applied, LCVP and

Transition Year funding, and changes in relation to substitution and supervision.

> *Devastated, [my] reaction was one of devastation. When the full implications emerged, horrendous to think that the infrastructure we have built up was being undermined – taking away grants for school books, taking away grants for home economics – that is one of the biggest, most popular subjects in these DEIS schools, the fact that you take away grants for choirs and orchestras all of that. It was more the symbolism, how could you attack something as pathetic as an orchestra grant. That's where the devastation came in, the sense of the complete disregard for the quality dimension. … One of the things we are so proud of is the Transition year ... when it's a good programme it can have fantastic benefits for the children and the school. To think that now suddenly schools are making choices not to do it … [pupils in a certain school] they got a letter … in second year, his parents got a letter to say that from September 2009 we will have no Transition Year in our school.* (Stakeholder)

> *For programmes like Leaving Cert Applied and the Junior Cert Schools Programme that is likely to be drastic and to be an unanticipated outcome of the quota changes. … As principals begin to discuss subject options … there is no doubt about it that some subjects will be lost … subjects like Applied Maths, Physics. … The government has the stated objective that it wants to improve fourth level graduates in these areas and one of the side effects of the cutbacks is going to be the loss of those subjects. More worryingly in terms of disadvantage, the Leaving Cert Applied, Transition Year and Junior Cert Schools … are very much at risk.* (Stakeholder)

> *[I have] great reservations about the implications for schools in disadvantaged programme [who lost their allocation], and especially in relation to the guidance, home-school liaison and extra resources that were given to those schools and were guaranteed by the Department to be in place for another number of years but which have now all been pulled and that we think is a major, major difficulty … there is huge potential for the disadvantaged child to fall through the cracks.* (Stakeholder)

For the School Completion Programme, the cut in funding is seen to have implications for the types of activities the programme covers and the 'innovative' element of the programme:

> *[The] impact of the cut [is that] it takes away some of the innovation element of SCP, a lot of what SCP is about is what's tried and tested, what works, but it also leaves scope for local communities to decide particular interventions for young people on a needs basis, and that can't be done. That kind of work gets stifled when those kinds of cuts are made. … [Also] it had a demoralising effect on people working in the scheme. They felt their work wasn't being appreciated. They also felt that the government weren't serious about really tackling the early school leaving initiative if you cut the funding.* (Stakeholder)

While some acknowledged that some of the changes did relate to a more stringent approach to the allocation of resources, other changes were viewed in a more negative light:

> *Some of the changes have been a more stringent approach to the allocation of resources and I do not have a problem with that. Also I'm not convinced that changing the pupil-teacher-ratio as such of itself is going to significantly increase difficulties. But I would be concerned in a more general sense that where there's cutbacks in services, for example in relation to special educational needs, that they are more likely to impact at an individual level, the individual who should be receiving supports would be in difficulty.* (Stakeholder)

It was also argued that because of the fragmented nature of the system and the way in which programmes are often introduced as 'add-ons', this makes it easier to cut these services:

> *There are a lot of add-ons in education and I'm not too sure has anyone thought about the whole thing as one holistic unit ... sometimes the interface between ourselves and the social welfare system or the care system … education has always thought of itself as a straight line and no interfaces … [as a result] if you see a little scheme that's maybe 5 or 6 million it might be easy to knock, but if it was part of a whole then it might be more difficult to do it.* (Stakeholder)

The removal of non-DEIS schools from the 'free books scheme', in particular, was viewed as counterproductive and as likely to have serious implications for students most at risk, particularly in the current economic climate:

> *[The removal of the free book scheme] will have a serious effect on non-DEIS schools … when schools realise in September the consequences of this it's going to be quite serious. …I would say it's more than counter productive. I think it's the start of chipping away and dismantling a lot of the foundations for the weaker students in the system.* (Stakeholder)

It was also argued that the 'enrichment' and extra-curricular side of education would be adversely impacted by the changes in relation to substitution and supervision, as well as impacting on the capacity of staff to attend staff meetings, and thereby facilitate a culture of school planning and development.

> *[The] Camogie leagues have collapsed in Leinster, [as] no teachers are being released. School has to be more than books, school has to be an experience for children and the sports and the games and the extra-curricular – that's what has made our education system good. There was an emotional reaction almost to the Budget, they could see all of this being pulled. … All of that qualitative enrichment of the curriculum, these things aren't trips; they are enrichment of the curriculum. They are going to go and they are gone.* (Stakeholder)

This shift was seen by many stakeholders as having longer term consequences by making it more difficult to promote the kinds of student engagement necessary to retain disadvantaged young people in the educational system:

> *There is fear about discipline in schools because the enriched curriculum and the extra-curricular is what gave the balance and when that gets very impoverished students who are difficult to engage or to motivate, it's going to be far more*

difficult to engage them and motivate them in a mainstream academic curriculum. (Stakeholder)

Many stakeholders did not agree that DEIS schools were completely protected from the recent cuts:

They are saying for example that the DEIS schools were ring-fenced and protected and in one sense yes they were. As in they didn't take away staffing, they didn't cut down the basic grants that they are getting. But there were subtle … ways, for example the recent announcement about the 128 mild general learning disability classes, 80 of those are in disadvantaged areas. Yes, of course some of those classes had very small numbers but the point was that they had very small numbers because it wasn't a case of the child having a mild general learning disability, you had complex needs of all kinds in there and those teachers were an additional support and were making a difference. Those kids are now going to be put back into a mainstream classroom in some of the most disadvantaged schools in the country. (Stakeholder)

This viewpoint was supported by the experience of five DEIS principals interviewed for the study. Three of the schools were losing a special class from the forthcoming school year because the numbers had dropped below the designated level. It was felt that this would have significant negative consequences for those children because they would be unable to cope in a mainstream classroom setting:

The kids in there would be extremely needy in every respect and they're coming from situations where there's a whole history of learning disability. And their IQs … are 52 to 78. And the Minister said just put them in with general allocation. … They won't be able to get these one to ones and intense help, it's gone. (DEIS Principal)

The most disadvantaged children in the school will now be thrown on the heap of an already huge caseload. (DEIS Principal)

Three of the five principals were unsure about the implications of changes in language support provision for their schools, with one considering it highly likely that they would lose one language support post. This would reduce the opportunity to provide more intensive support to newcomer students during the settling-in period. One school was being reduced from a full-time home-school liaison post to a part-time one:

That means that person won't be available to parents, here parents don't ring up a week in advance and say I'd like a consultation, they like to drop in when something happens, when the crisis hits. (DEIS Principal)

One principal of a small school reported that losing cover for the first day of a teacher's uncertified sick leave "…impacts hugely on a small school because obviously you have to split the classes."

In general, recent cuts in educational expenditure were seen by DEIS principals as short-sighted, given the longer term implications for society in general:

> *When you think of it proportionally, what they're saving is miniscule and the damage they're doing. They'll pay for it later on, because they'll turn into vandals basically, a lot of these because they'll have lost interest in school.* (DEIS Principal)

> *We are looking at huge ghettoes which will explode in years to come. … We're losing huge potential here.* (DEIS Principal)

The broader economic climate was seen as having particular consequences for disadvantaged areas. Principals reported seeing an increase in unemployment among parents of children in their school:

> *So many women had part-time jobs and they're all finished now. … They were never high earners anyway but that's gone from them now.* (DEIS Principal)

Economic uncertainty was seen as having a direct impact on the children themselves, due to their experience of stress within the family:

> *Uncertainty is filtering back into primary education … dads, mams are having to make do without holidays, unemployment … siblings having to leave Ireland. … This uncertainty is causing huge stress to our children.* (DEIS Principal)

This was seen as contributing to higher levels of drug use. In the longer term, unemployment and drug use were seen as leading to higher crime rates.

Section 1 indicated that high quality early childhood education is seen internationally as the most effective way to promote longer term positive outcomes for disadvantaged children. Publicly funded early childhood education has been relatively sparse in Ireland by international standards. However, the April Budget saw the very significant announcement of a new Early Childhood Care and Education Scheme (ECCE) to be rolled out from January 2010. This scheme is open to all children between the ages of 3 years 3 months and 4 years 6 months, an estimated cohort of 70,000 children. Existing preschool service providers can opt into the scheme and will receive a capitation grant to cover three hours per child five days a week for 38 weeks of the year (or alternatively, 2 hours 15 minutes per day for 50 weeks of the year). Because the stakeholder and principal interviews took place prior to the ECCE announcement, we cannot report their perceptions of the policy. However, there is a long-standing consensus in the policy community that preschool education is a prerequisite to tackling educational disadvantage. Initial responses from organisations in the field have been broadly positive, although some concerns have been raised about having a sufficient number of preschool places and about the level of the capitation grant. The success of the measure in terms of children's outcomes is likely to be contingent on the full implementation of the National Quality Framework for Early Childhood Education in Ireland (developed by the CECDE) and of the Framework for Early Learning being developed by the National Council for Curriculum and Assessment. From the perspective of educational disadvantage, it will be crucial to monitor participation in the scheme among different groups of children.

4. Consequences and Costs of Early School Leaving

Education can have significant consequences for individual life-chances but also for the broader society. This section considers the consequences of early school leaving, placing data on Ireland in the context of international research findings. Five aspects are considered here: labour market outcomes; other welfare payments and State subsidies; health; crime; and intergenerational transmission, that is, the influence of a parent's education on their child's outcomes. In the following discussion, we mainly focus on the distinction between 'early leavers' (including those with no formal education, primary education only, and Junior Certificate equivalent) and the 'Leaving Certificate plus' group (including those with a Leaving Certificate, post-secondary education, a sub-degree and degree). For the most part, we focus on the adult population aged 20-64 years to exclude differences caused by full-time educational participation among the younger group and by retirement among the older group.

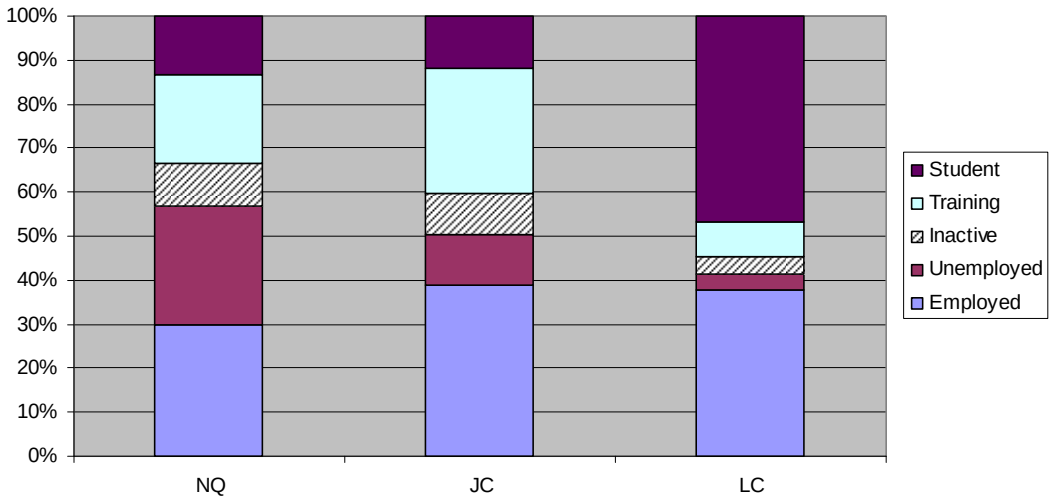
4.1 Labour Market Outcomes

Across many different educational and labour market systems, higher levels of education have been found to be associated with a smoother transition to paid employment among young people entering the labour market and access to better quality jobs (Müller and Gangl, 2003). Such differences persist among adult workers with more highly educated adults having higher labour force participation rates, lower unemployment risks, greater access to more highly skilled jobs and higher average pay levels across OECD countries (Allmendinger, 1989; Kerckoff, 1995; OECD, 2008). Explanations for these patterns have broadly fallen into two groups. On the one hand, human capital theory suggests that differences in pay (and other working conditions) reflect greater actual productivity among more highly educated workers (see Becker, 1964). On the other hand, a set of theories focus on the interaction of employer practice (through shaping the content and structure of jobs) and worker behaviour (through union action, for example) to shape job conditions (Maurice *et al.*, 1986). From the latter perspective, employers may perceive education as a 'signal' of potential productivity and less educated workers fall further behind in the 'job queue' if employment is scare (Spence, 1973).

In the Irish context, young people leaving school take very different pathways depending upon their educational qualifications. Figure 4.1 indicates the main status of young people one year after leaving school, differentiating between those with no qualifications (pre-Junior Certificate

leavers), those with Junior Certificate qualifications and those with Leaving Certificate qualifications. The dominant pattern for Leaving Certificate leavers is a transition to full-time education (usually higher education). Very few of the no qualifications or Junior Certificate groups remain on in full-time education. For these groups, the dominant pattern is immediate labour market entry. Among the no qualifications group in particular, unemployment is a significant feature of their initial post-school pathway.

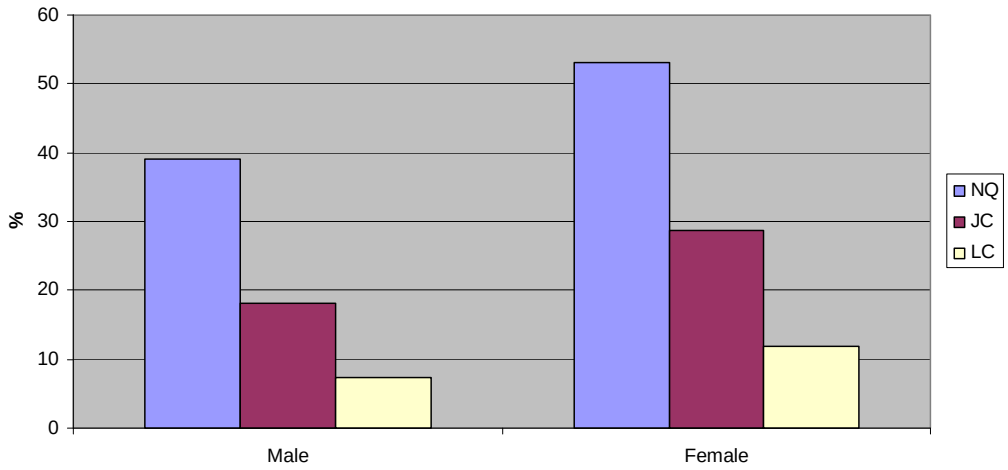
Figure 4.1: Labour Market Status One Year After Leaving School by Educational Level



Source: School Leavers' Survey 2007.
Note: 'NQ' No qualifications (pre-Junior Cert); 'JC' Junior Certificate; 'LC' Leaving Certificate.

Figure 4.2 allows us to explore these unemployment risks further by confining attention only to those young people who enter the labour market immediately upon leaving school. The unemployment rate is calculated as the number unemployed as a proportion of all those in the labour force (that is, either employed or unemployed). It is clear that less educated groups face significantly higher unemployment chances. For male leavers, almost four in ten of those with no qualifications are unemployed compared with only 7 per cent of those with a Leaving Certificate. For female leavers, the disparity is even greater: over half (53 per cent) of those with no qualifications are unemployed compared with 12 per cent of their Leaving Certificate peers. Thus, young women are less likely to leave school early than young men but experience significant labour market disadvantages if they do so.

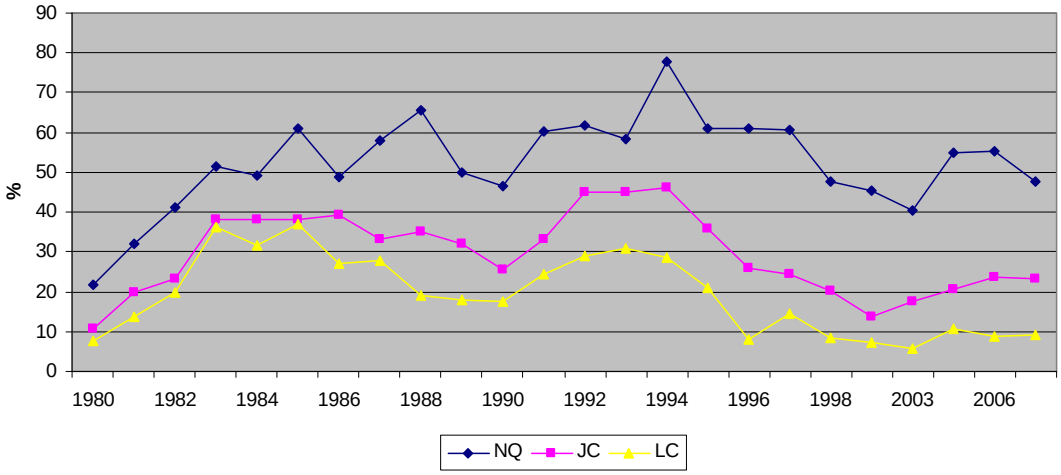
Figure 4.2: Unemployment Rate One Year After Leaving School by Educational Level



Source: School Leavers' Survey 2007.

If we explore trends over time, we see that the gap in unemployment risks by educational level has actually increased over time (Figure 4.3). Even in the boom years, those with low levels of education experienced significant difficulties in accessing paid employment relative to their more highly qualified counterparts.

Figure 4.3: Unemployment Rates Among School Leavers by Education Over Time (1980-2007)

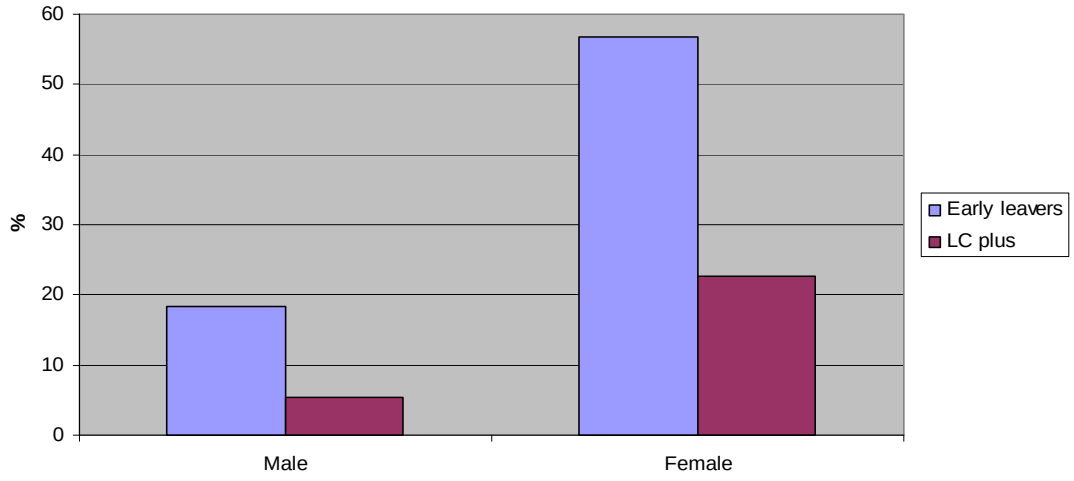


Source: School Leavers' Survey, various years.

Differences in early labour market experiences persist into the adult working career. Here we focus on those aged 20 to 64 years of age. By this stage, those with third-level qualifications have entered the labour market so here we distinguish between the 'early leaver' group (those with Junior Certificate or no qualifications) and the 'Leaving Certificate plus' group (with Leaving Certificate, post-secondary or third-level qualifications). Figure 4.4 indicates that the early leaver group are more likely to be outside the labour force than the Leaving Certificate plus group. For males, early leavers are 3.5 times more likely to be outside the labour force than their more highly educated peers, mostly because of long-term illness or

disability. For females, the differential is somewhat less at 2.5 times. However, even here, it is clear that higher levels of education are associated with higher rates of labour force participation, with over half of early leaver females being outside the labour force.

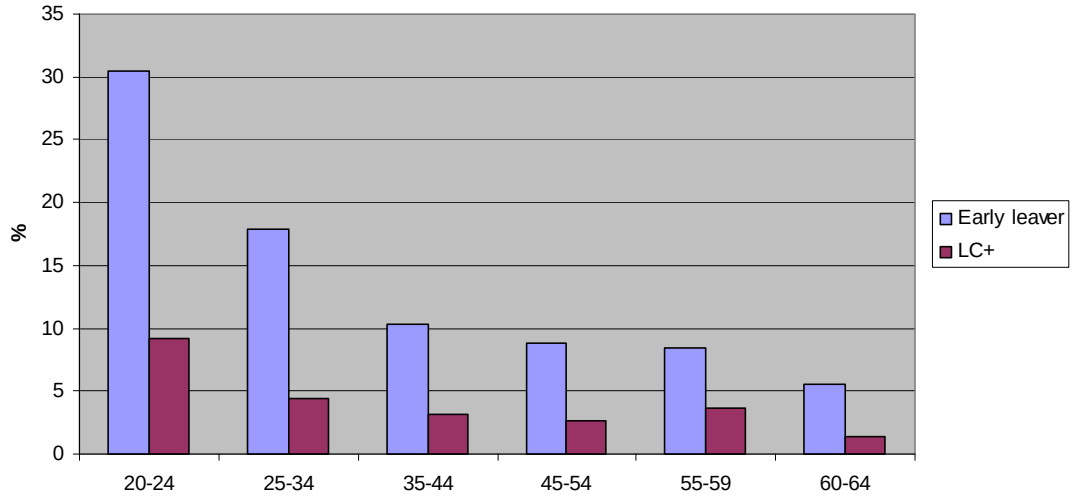
Figure 4.4: Proportion Outside the Labour Force by Education and Gender, 2008



Source: Quarterly National Household Survey, 2008.

Figure 4.5 shows the proportion of adults in the labour force who are unemployed. It is clear that there is a markedly higher risk of unemployment for early leavers across all of the age-groups. With the exception of the 55-59 age-group (where the disparity is somewhat less), early leavers are three to four times more likely to be unemployed than their more highly educated peers.

Figure 4.5: Unemployment Rate by Education and Age-group, 2008

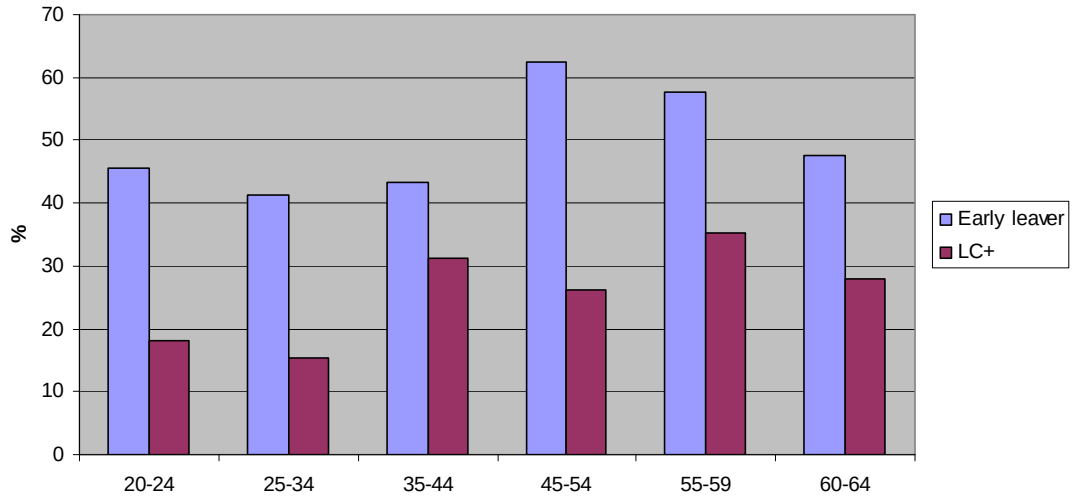


Source: Quarterly National Household Survey, 2008.

Adults with lower educational qualifications are not only more likely to be unemployed but, if they are unemployed, they are more likely to be in this situation for a protracted period of time. Figure 4.6 shows the proportion in long-term unemployment (that is, unemployed for 12 months or more) by education across the various age-groups. The early

leaver group is much more likely to be long-term unemployed than those with Leaving Certificate (or higher) qualifications. It is worth noting that those aged 45-59 years with Junior Certificate or no qualifications are particularly vulnerable to long-term unemployment. Thus, adults with lower educational levels are more likely to become unemployed and have more difficulty exiting unemployment when they do so.

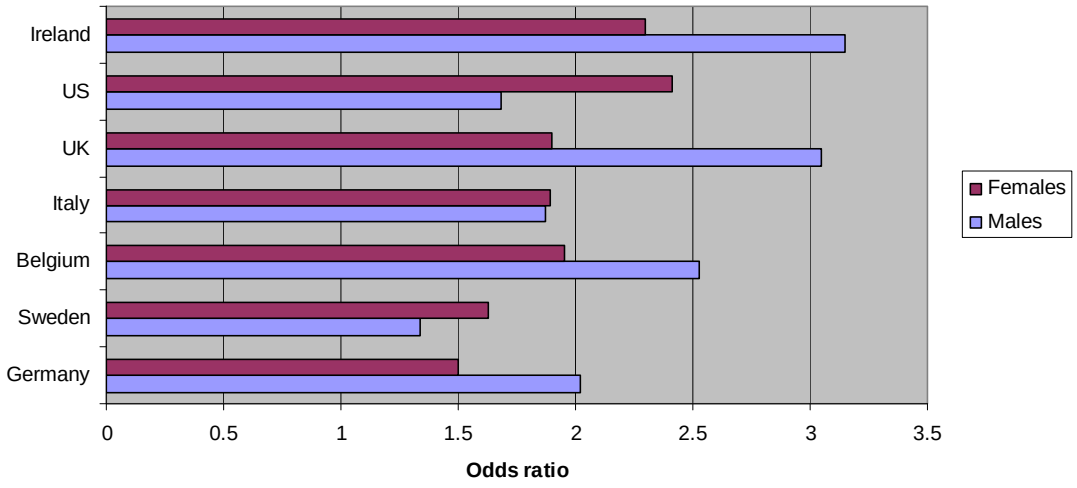
Figure 4.6: Proportion of Unemployed in Long-term Unemployment by Education and Age-group, 2008



Source: Quarterly National Household Survey, 2008.

The disparity in unemployment risks between the early leaver group and those with higher levels of education is particularly strong in Ireland compared with many other OECD countries (Figure 4.7).

Table 4.7: Ratio of Unemployment Among Adults Aged 30-44, Upper Secondary/ Post-Secondary Non-tertiary Qualifications Versus Less than Upper Secondary

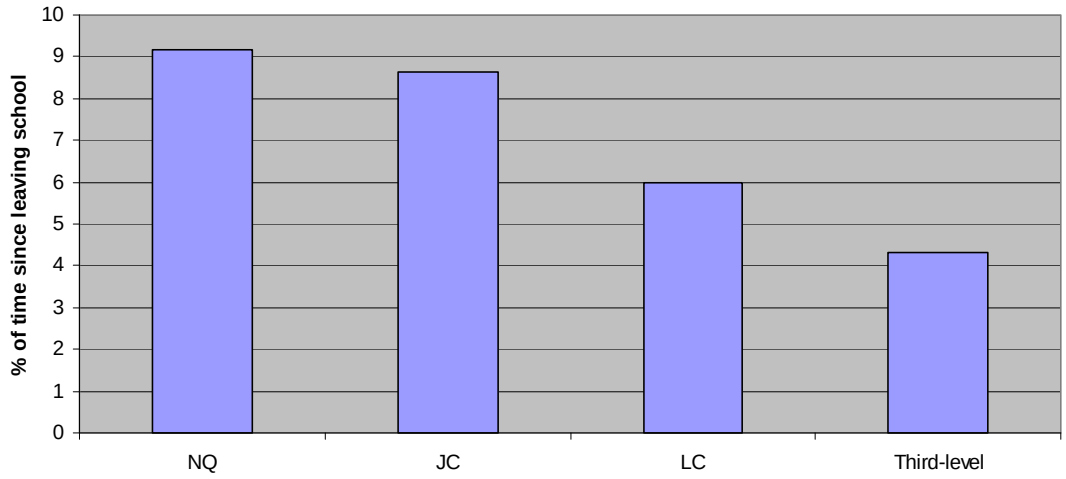


Source: OECD Education At A Glance, 2002.

The data presented so far have been based on a snap-shot of labour market status at one point in time. However, it is also important to explore the extent to which certain people experience unemployment over a

significant proportion of their adult life. Using the Living in Ireland Survey data, we can see that, of those who had spent any time in the labour market, 30 per cent of the early leaver group had spent some time unemployed compared with 18 per cent of the Leaving Certificate (or higher) group. This survey also asked adults to indicate the amount of time they had spent in different labour market statuses since leaving school. Again, we confine our attention to those who had spent some time in the labour market. Those with lower levels of education had spent around 9 per cent of the time since leaving school unemployed compared with 6 per cent for the Leaving Certificate group and 4 per cent for those with third-level qualifications (Figure 4.8). Assuming a working life of 40 years, this translates into 3.7 years of unemployment for the pre-Junior Certificate group, 3.4 years for the Junior Certificate group, 2.4 years for the Leaving Certificate group and 1.7 years for the third-level group.

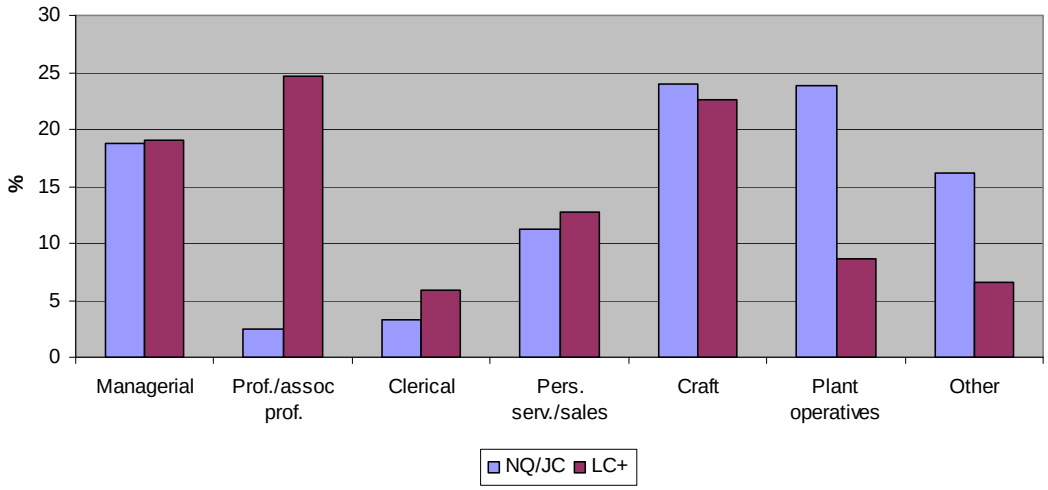
Figure 4.8: Proportion of Time Spent Unemployed Since Leaving School, Adults Aged 20-64 years



Source: Living in Ireland Survey, 1994.

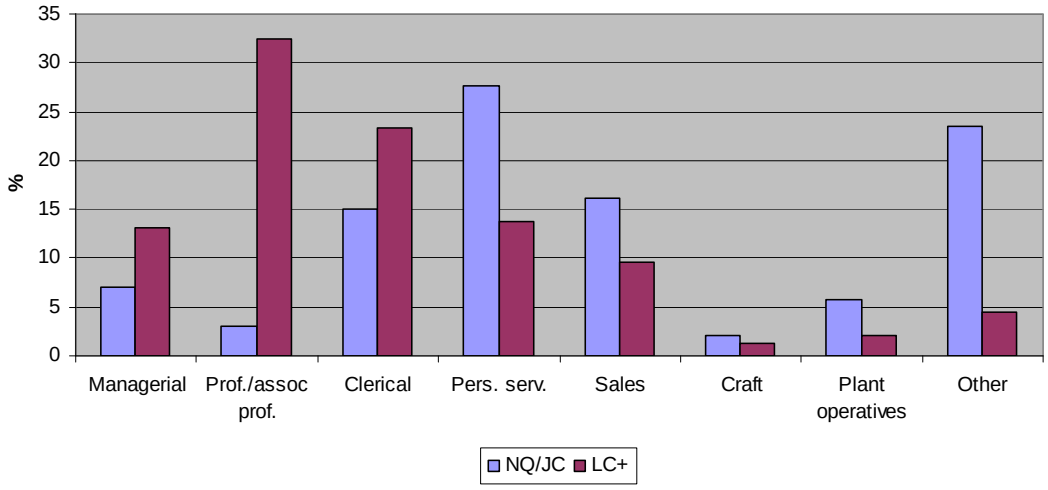
In the Irish context, education influences not only the likelihood of obtaining employment but the quality of that employment. Here we examine two aspects of job quality: occupational group and pay levels. Information on men and women is presented separately because of the highly gendered nature of the labour market. Among men, those with higher levels of education are more likely to be found in professional occupations while those from the early leaver group are disproportionately concentrated in the plant and machine operatives (generally semi/unskilled manual work) group (Figure 4.9a). Among women, those with higher levels of education are over-represented in professional, managerial and clerical jobs while women with lower levels of education are disproportionately found in personal service and sales jobs (Figure 4.9b).

Figure 4.9a: Occupational Group by Education, Males Aged 20 to 64 years, 2008



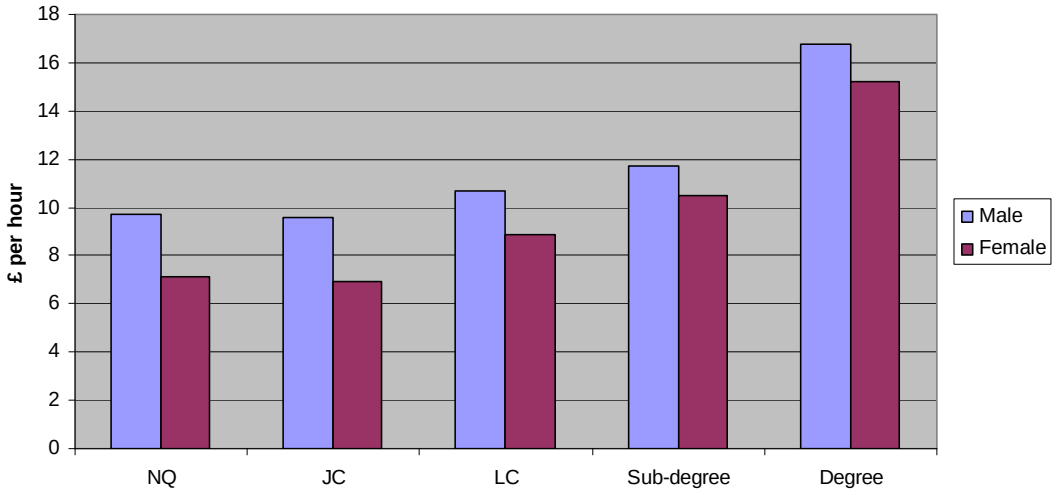
Source: Quarterly National Household Survey, 2008.

Figure 4.9b: Occupational Group by Education, Females Aged 20 to 64 years, 2008



Source: Quarterly National Household Survey, 2008.

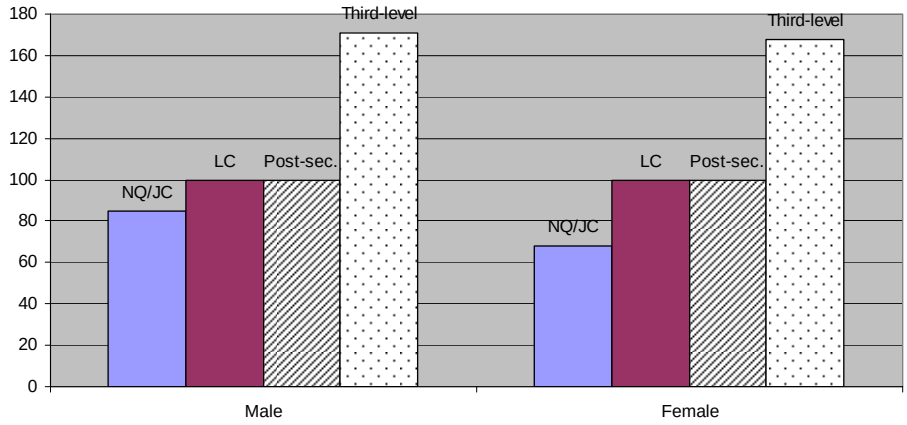
Figure 4.10: Hourly Pay by Education and Gender, 2001



Source: Living in Ireland Survey data, presented in McGuinness *et al.* (2009)

Educational level is also predictive of another aspect of job quality, pay. Figure 4.10 indicates that hourly pay rates increase with level of education for both women and men. While there is a pay return to completing second-level education, the main pay difference is between graduates and others. Net returns to educational qualifications are evident even taking into account number of years in employment and the hours worked (McGuinness *et al.*, 2009). Figure 4.11 shows relative earnings by education level for 2004, setting the Leaving Certificate group as 100. The early leaver group have significantly lower earnings relative to the Leaving Certificate group and there is a significant difference in earnings between graduates and other adults. The earnings gain from third-level qualifications is high in Ireland relative to many other OECD countries (OECD, 2008). More recent data from the National Employment Survey also indicate substantial differences in earnings by educational level; average hourly earnings are €15.04 for early leavers compared with €16.20 per hour for the Leaving Certificate group and €29.89 per hour for third-level graduates (CSO, 2007).

Figure 4.11: Relative Earnings by Education Level for those Aged 25-64, 2004



Source: EU-SILC data 2004, quoted in OECD *Education at a Glance 2008*.

In sum, education is found to be highly predictive of labour market outcomes in the Irish context. Those with lower levels of education spend more of their adult life in unemployment and, where they are employed, they are disproportionately found in less skilled and lower paid work.

4.2 Welfare Payments and State Subsidies

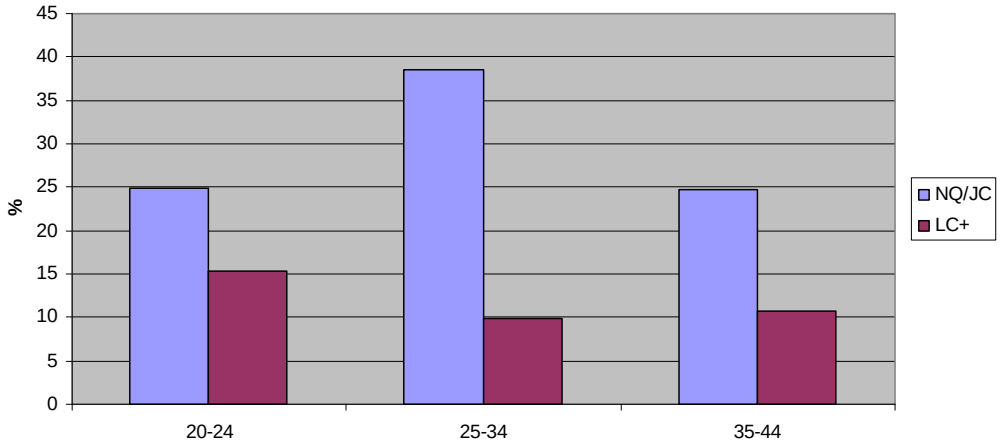
This section considers two groups receiving State subsidies: lone parents, and those in local authority housing.

International research has indicated an association between education and lone parenthood, particularly teenage motherhood (Kiernan and Smith, 2003). This pattern has also been found in Ireland; Fahey and Russell (2001) report that both unmarried and separated lone mothers have lower education levels than average and are disproportionately drawn from the semi- and unskilled manual groups. In the Irish context, little is known about the exit from lone parenthood through the formation of new unions (Fahey and Russell, 2001) so we are confined to providing a snap-shot of lone parenthood at a single point in time. In Figure 4.12, we use QNHS data to estimate the proportion of all women within specified age-groups who are lone parents. It should be noted that this dataset is likely to underestimate the total number of lone parents as it is difficult to distinguish second family units within the household, for example, lone mothers who live with their own parents. For this reason, the estimate should be taken as a conservative one.

Within each age-group, women from the early leaver group are significantly more likely to be lone mothers than those with a Leaving Certificate (or higher) qualification (Figure 4.12). In the 24 to 34 year age group, women with Junior Certificate or no qualifications are almost four times more likely than their Leaving Certificate counterparts to be lone mothers.

In 2007, 84,270 people were in receipt of one parent social welfare payments (Department of Family and Social Affairs, 2008). The biggest single group was aged 25-29 years, and the overwhelming majority were female. Excluding widows, 51,881 lone mothers aged 20 to 34 years were in receipt of lone parent payments in 2007. Given the QNHS estimate that 19 per cent of lone mothers in this age range are early leavers, we estimate a total of 9,900 early leavers in receipt of lone parent payments.

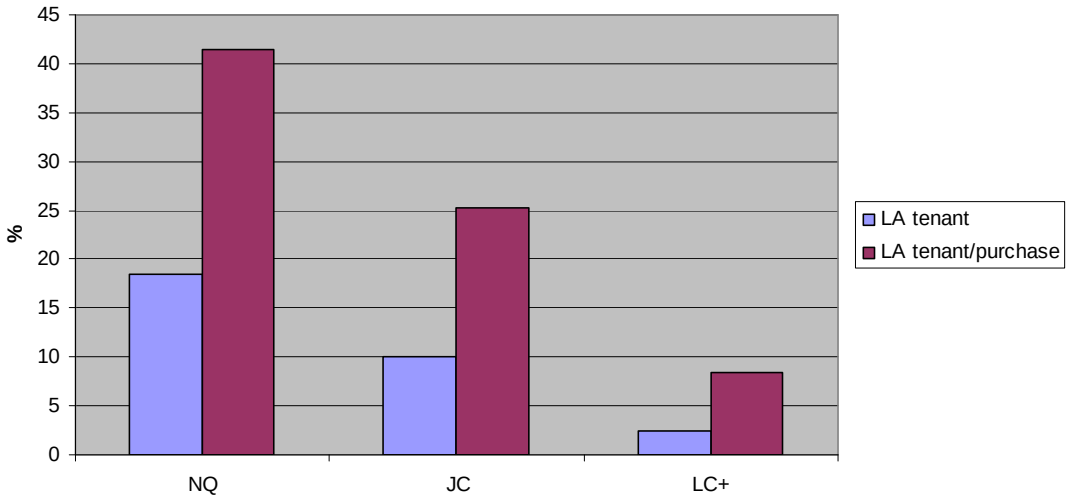
Figure 4.12: Lone Motherhood by Education, 2008



Source: Quarterly National Household Survey, 2008.

Social housing represents another form of subsidy to more disadvantaged groups. Figure 4.13 shows the proportion of adults living in local authority housing as tenants and separately those who are tenants or tenant purchasers. It is evident that adults with lower levels of education are significantly more reliant on local authority housing than more highly educated groups.

Figure 4.13: Proportion of Adults Aged 20-64 Living in Local Authority Housing



Source: Living in Ireland Survey, 2004.

4.3 Health

Education influences health both indirectly and directly. First, education influences material circumstances in later life (see Section 4.1) and therefore has an indirect effect on health status:

> *Education affects inequalities in health via a number of different routes. First of all, educational qualifications are an important determinant of an individual's occupational and labour market success and this influences their level of income, risk of unemployment, housing and wider material circumstances. Research shows that material circumstances are the primary determinant of health outcomes. Given this chain of causation, education must be seen as the primary route out of disadvantage and poorer health.* (Layte *et al.*, 2007, p.160)

Education also has a direct effect on health outcomes by influencing people's knowledge about healthy behaviour and diet.

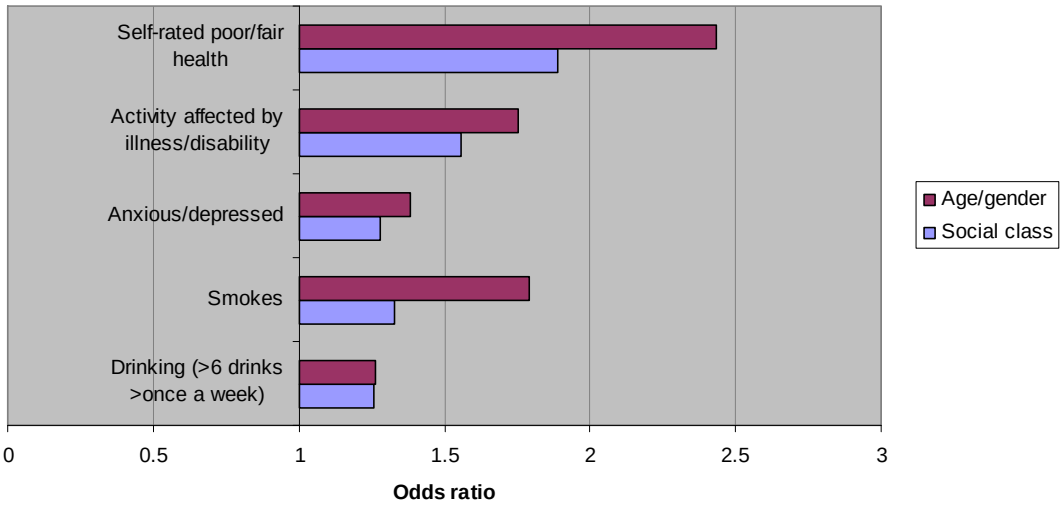
US and European studies indicate people with lower levels of education have higher mortality rates, lower levels of general health and a higher incidence of particular conditions (see Higgins *et al.*, 2008). Furthermore, those with higher levels of education are more likely to engage in healthy behaviours in relation to physical activity, diet and smoking. A number of research studies have indicated a situation of 'cumulative disadvantage', with the educational gap influencing a range of health outcomes in adulthood and the gap widening with age (Walesmann, 2008; Dupre, 2008). Across European countries, lower levels of education are associated with poorer self-assessed health, greater limitations on day-to-day activities because of disability and greater utilisation of general practitioner (GP) services, even controlling for age, gender and socio-economic characteristics (Layte *et al.*, 2005; von dem Knesebeck *et al.*, 2006).

In the Irish context, data from EU SILC 2004 indicate that less than good health is more frequently reported by those with lower levels of education, especially those with primary education only (Layte *et al.*, 2007). The differential is found to be greater for men than for women. Some of the effect of education is mediated through socioeconomic circumstances; in other words, less educated adults are less healthy because they are found in poorer working and living conditions. However, this research indicates that, even within social classes, differences in ill health are found across people with different educational levels.

For the purposes of this paper, analyses were carried out on the SLÁN 2002 survey data to examine differences in health status between early leavers and others. These analyses show the relative difference between early leavers and others, controlling first for age and gender, and then for social class. Respondents to the survey were asked to rate their general health from 'excellent' to 'poor'. If we combine the categories of those who see their health as 'poor' or 'fair', we see that early leavers are 2.4 times more likely to fall into this group than those who have a Leaving Certificate (or higher), controlling for gender and age-group (Figure 4.14). If we control for the respondent's own social class, there is a reduction in the disparity; however, early leavers are still 1.9 times more likely to rate their health as poor or fair than those with higher qualifications. Respondents were also asked whether their daily activity or work were limited by a long-term illness or disability. Again there is a significant difference in the incidence of such disability by educational level: early leavers are 1.8 times more likely to report such difficulties than those with higher qualifications,

and this difference is only partly related to current social class. Differences by educational level are also evident in relation to reported anxiety or depression: early leavers are 1.4 times more likely to report moderate or extreme anxiety/depression than those with higher qualifications, controlling for age and gender.

Figure 4.14: Relative Difference in Health Status and Behaviour Between Early Leaver and Leaving Certificate Plus Groups (Odds Ratios), Adults Aged 20-64



Source: SLÁN Survey, 2002, © Health Promotion Unit and UCD.

International studies have shown that adults with higher levels of education are more likely to engage in physical exercise and to have a healthy diet, and less likely to smoke (Higgins *et al.*, 2008). A national study in Ireland indicated that the large majority of adults who engage in sport are from higher income and more highly educated groups, with less educated adults significantly less likely to engage in sport (Lunn, 2007). Those with lower levels of education are also less likely to practice safe sex and have a higher incidence of teenage pregnancy (Layte *et al.*, 2006). Differences are evident even among children; a comparison of children in DEIS schools with a matched group in non-DEIS schools found that the former group were less likely to report being in good health, and the boys were more likely to report drinking and smoking; they also reported less consumption of fruit and vegetables and more consumption of sweets and soft drinks (Molcho *et al.*, 2008).

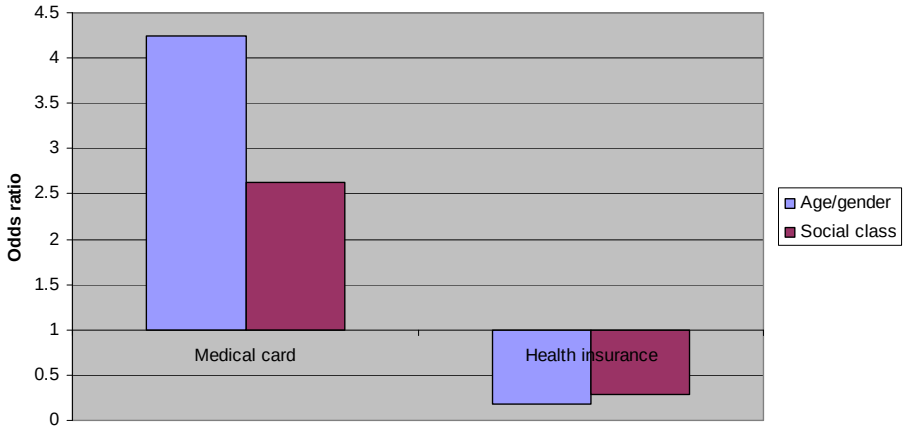
We can use data from the SLÁN survey to explore the incidence of certain health-related behaviours across educational groups. Here we focus on the incidence of smoking and on the frequency of heavy drinking. Early leavers are 1.8 times more likely than the more highly educated to report smoking; this differential is still 1.3 when current social class is taken into account (Figure 4.14). In relation to drinking behaviour, we distinguish between those who report having six or more drinks more than once a week and all others. The early leaver group is 1.2 times more likely to report falling into this category than those with Leaving Certificate (or higher) qualifications.

It is more difficult to obtain systematic data on the incidence of illegal drug use than on drinking and smoking. However, information on treated

problem drug use indicates that problem drug users are generally male, young, have low levels of education and are unlikely to be employed (Reynolds *et al.*, 2008). Figures for 1996 indicate that 62 per cent of all treated had left school at 15 years of age or younger. More recent data indicate that those who leave school before the official school-leaving age make up around a fifth of all those treated for problem drug use.

Differences by educational level are evident not only in health status but in the source of funding for health care and the utilisation of health services. Using SLÁN survey data, the source of funding for health care is found to vary significantly by educational level. Those with Junior Certificate or no qualifications are almost four and a half times as likely to be in receipt of a medical card as those with Leaving Certificate qualifications (Figure 4.15). A good deal of this differential reflects the concentration of early leavers in low paid jobs or non-employment (see Section 4.1): the disparity is 2.6 when we control for the respondent's current social class. The early leaver group is less than a fifth as likely as others to currently hold health insurance, controlling for age and gender; when we take their current social class into account, they are 0.29 times as likely to do so.

Figure 4.15: Relative Difference in Medical Card and Health Insurance Access by Educational Level



Source: SLÁN Survey, 2002, © Health Promotion Unit and UCD.

The frequency of visiting a GP varies significantly across educational groups, with the greatest frequency among the primary education group and the lowest average number of visits found among the third-level education group (Layte *et al.*, 2007). These differences hold even controlling for income and health status. In contrast, the average number of dentist visits is highest for the third-level group and those for those with primary education (Layte *et al.*, 2007).

4.4 Crime

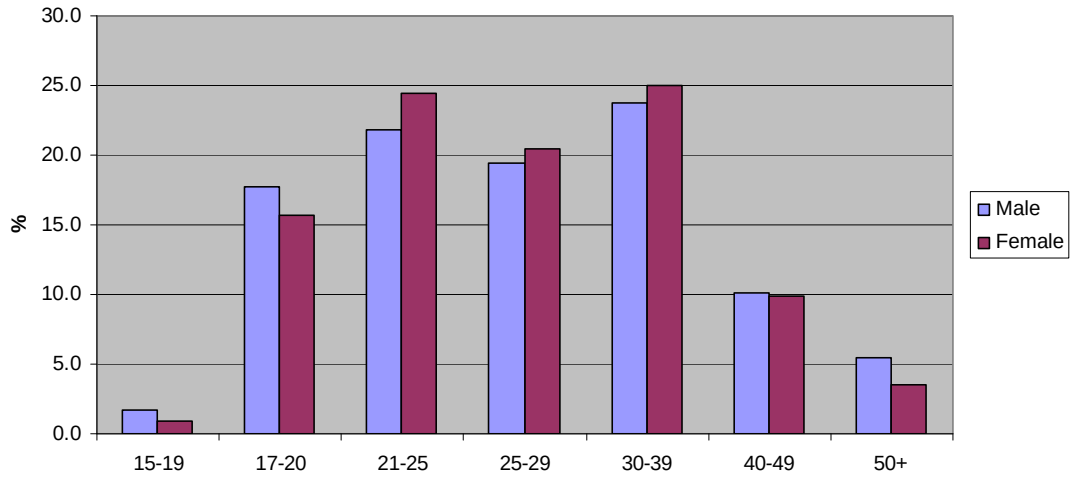
Previous international research has indicated an association between educational levels and the likelihood of committing or being convicted of a crime. American research, for example, indicates higher incarceration rates among high school dropout males than among other groups (Lochner *et al.*, 2004; Arum and Beattie, 1999). Other research has gone further by establishing a causal relationship between education and the likelihood of committing crime. All else being equal, additional years of schooling are associated with a lower likelihood of arrest and imprisonment; this is due to the reduction of criminal activity among more highly educated males (Lochner *et al.*, 2004).

There is little systematic information available on the educational profile of offenders or prisoners in Ireland. A small number of studies yield useful insights, however. A study of a sample of prisoners in Mountjoy (O'Mahony, 2002) indicated that four-fifths had left school before the age of 16 years, half had left before the age of 15 years, while three-quarters had never sat a State examination. Only 4 per cent of the prisoners had reached Leaving Certificate level or beyond. Over a quarter (29 per cent) of the prisoners had difficulties in relation to literacy. Among this group of prisoners, leaving school earlier was found to be associated with earlier first conviction and a greater number of convictions overall. Similarly, O'Donnell and co-authors' (2008) study of all those released from prison over the period 2001 to 2004 indicated that over half had no formal education. Furthermore, those with lower levels of education were more likely to reoffend after release. Children (under 16 years) on custodial remand have already experienced difficulties in relation to schooling; four in ten have a learning disability and many have truanted (57 per cent) and been suspended or expelled from school (49 per cent and 31 per cent respectively) (Anderson and Graham, 2007).

The age profile of committals is concentrated in the 21 to 40 year age-group (Figure 4.16). In 2002, there were 4,735 males imprisoned and 301 females (O'Donnell *et al.*, 2005). Given the strongly gendered nature of imprisonment, we focus here on the pattern for males only. Using Census 2002 data for males aged 25-29 years, we find that 24 per cent of the group finished their education at primary or lower secondary level. We therefore assume that 24 per cent of the 319,000 males in the 21-30 year age range are early leavers. On the basis of O'Donnell's data,[3] we find that only 10 per cent of prisoners have achieved a Leaving Certificate or higher qualification so we assume that this educational profile applies to the imprisonment figures for 2002. The committal rate for 2002 is therefore 46.6 per 1,000 early leavers and 1.6 per 1,000 with Leaving Certificate or higher qualifications for the male population aged 21-30.

[3] We are extremely grateful to Professor Ian O'Donnell, UCD, for a special tabulation of his data on recidivism.

Figure 4.16: Distribution of Committals by Age, 2002



Source: Derived from *Irish Prison Service Annual Report, 2002.*

4.5 Intergenerational Effects

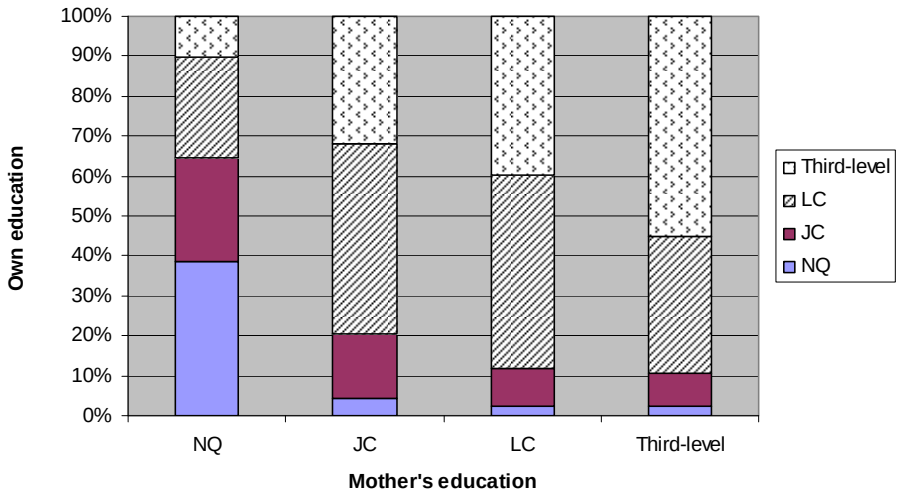
Education is found to have significant effects not only on the life-chances of adults but on the future life-chances of their children.

Across countries with very different education systems, a strong relationship is found between levels of parental education and their children's educational level and academic achievement (Shavit and Blossfeld, 1993; Gamoran, 2001; Breen and Jonsson, 2005). Indeed, education is the main mechanism for ensuring the transfer of social and economic resources from one generation to the next (Breen and Jonsson, 2005). More highly educated parents generally occupy a higher social class position and therefore provide greater educational opportunities (and material and social resources) for their children. However, the effect is not only mediated through social class since parental education can influence engagement in activities which facilitate academic achievement. Furthermore, highly educated parents are in a better position to help their children successfully negotiate a pathway through the educational system (Erikson and Jonsson, 1996). Some commentators have emphasised the role of 'innate ability' in shaping educational (and other) outcomes but social class effects are evident even controlling for ability (Erikson and Goldthorpe, 2002) and it is difficult to disentangle heritable differences from the socio-cultural milieu within which people live (Maccoby, 2000). Some studies have indicated that the effect of mother's education on children's education outcomes is stronger than that of the father (see Hannan *et al.*, 1996). The educational system can itself influence the degree of educational and social inequality; educational outcomes are more equal in systems with less (or later) differentiation in different academic and vocational tracks, with less emphasis on actively choosing between schools, high quality early childhood education, and support for those experiencing educational difficulties (OECD, 2007). The wider societal context is highly influential, with a greater reduction in educational inequality evident in countries which have actively set out to equalise life-chances through taxation and social support (Erikson, 1996).

Figure 4.17 shows the relationship between own and mother's education for the adult population in 1994. It is evident that educational level is

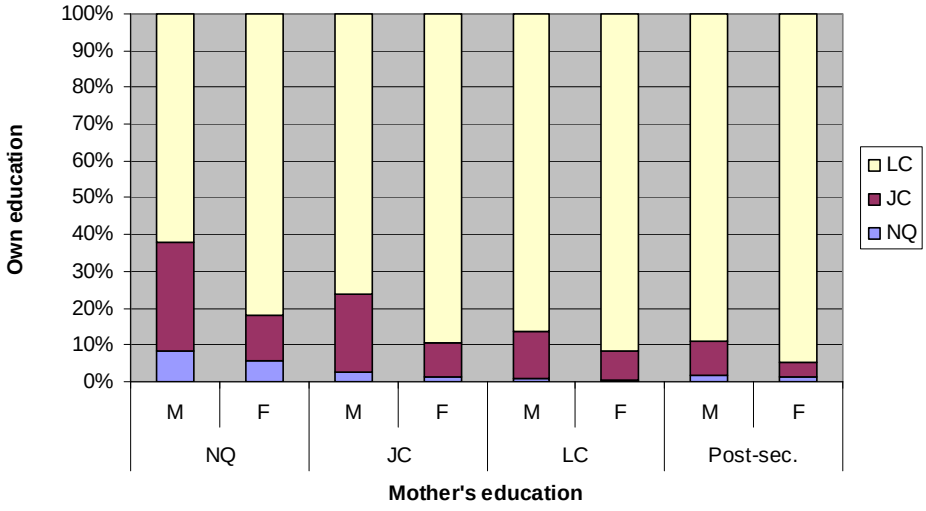
strongly differentiated by maternal education; over half of those whose mothers have tertiary educational qualifications themselves obtain such qualifications compared with a tenth of those whose mothers are pre-Junior Certificate leavers. In spite of educational expansion, a relationship with mother's education is still evident among current school-leavers. Figure 4.18 indicates that those whose mothers have higher levels of education are more likely to reach Leaving Certificate level. This differentiation is more marked for male leavers than for their female peers.

Figure 4.17: Own Education by Mother's Education, Adults Aged 20-64



Source: Living in Ireland Survey, 2004.

Figure 4.18: Own Education by Mother's Education Among School-leavers



Source: School Leavers' Survey 2007.

As well as being strongly related to educational level, parental education is significantly associated with educational performance (in the form of grades achieved), even controlling for parental social class (Hannan *et al.*, 1996; Smyth, 1999).

4.6 Cost-benefit Analyses of Education

A number of studies internationally have looked at the costs associated with early school leaving from the individual and/or societal perspective. These studies have often focused on a single set of outcomes, for example, relating to crime or health. However, other researchers, most notably Henry Levin, have looked at the total costs of early school leaving over a range of outcomes.

The largest body of research relates to the returns to education, that is, the gain in income made by the individual by investing additional time in schooling. Estimation of the individual returns to education has been a mainstay within economic research (for a review, see Harmon *et al.*, 2001; Heckman *et al.*, 2006). Research in the Irish context has indicated that those with higher levels of education tend to achieve higher earnings (McGuinness *et al.*, 2009). Using 2004 data, OECD (2008) provides estimates of the private (individual) rate of return and the public (societal) rate of return to education for Ireland and other countries. The private rate of return is based on gains associated with higher education levels in the form of employment chances and higher earnings, minus the costs (the expenditure on education, the income foregone by staying in education and the additional tax associated with higher earnings). On this basis, in Ireland there is a return of 7.9 per cent for men and 8.8 per cent for women associated with staying in education to Leaving Certificate or PLC level relative to Junior Certificate level (OECD, 2008). Public returns are calculated by the OECD based on additional tax revenue minus expenditure on education and the tax foregone while the person is in education. This yields returns of 7 per cent for men and 5.1 per cent for women for the Leaving Certificate (OECD, 2008).

However, we have shown above that the consequences of early school leaving are much broader than additional tax revenue. A number of studies, mostly carried out in the United States, have sought to estimate the 'returns' to education in this broader sense.

In the US, it has been estimated that the lower enrolment of high school graduates in Medicaid and Medicare result in average savings of $25,600 per expected high school graduate (Levin, 2009). In the UK, Chevalier and Feinstein (2006) estimate that an increase in the proportion of women taking A-levels would yield Stg£200 million per year by reducing the lost output associated with higher depression rates among the less educated.

The lifetime crime costs for a typical high school drop-out in the US are estimated to be $26,200, based on the higher rates of crime, arrest and incarceration among this group (Levin, 2009). In the UK, it has been estimated that a 1 per cent increase in lower secondary completion could cut the costs of crime by up to Stg£320 million annually (Feinstein *et al.*, 2008). In the Netherlands, increasing average education by one year is estimated to save €623 million per year, because of reductions in shoplifting, vandalism and violent crime. However, higher tax fraud rates among the more highly educated group reduce the net gain to €578 million per annum (Groot and van den Brink, 2007).

Levin (2009) estimates the *total* public benefit accruing to an expected high school graduate to be $209,100, consisting of benefits from additional tax revenue ($139,100), health expenditure ($40,500), crime ($26,600) and welfare ($3,000). Even Levin's thorough analysis is likely to represent an

underestimate of these costs since it excludes wider impacts, such as life expectancy, health status, social cohesion and intergenerational effects.

There has been a lack of studies in the Irish context estimating the costs of early school leaving. The exception is a study carried out by Morgenroth (1999). This study estimates the short- to medium-term societal costs associated with leaving school before the Junior Certificate relative to staying on at this level. As with international studies, he indicates that the "…estimated potential overall costs savings are substantial" (p. 45), amounting to IR£11 million over the initial post-school period (six years), assuming no young person leaves school prior to Junior Certificate. These costs relate to reduced State expenditure resulting from lower unemployment, lone parenthood and crime rates. As Morgenroth (1999) indicates, this is likely to be a conservative estimate since it includes the costs of a number of other outcomes, including health.

Some studies have gone further by examining the benefits of particular educational interventions relative to their costs. The Abecedarian program, an intensive early child care education programme, was found to yield significant returns in terms of participant earnings, reduced need for special education, reduced smoking incidence and welfare use (Barnett and Masse, 2007). Using information from Project Star, Muennig and Woolf (2007) estimate net savings in terms of health of $168,000 for each high school graduate and conclude that "…reducing class sizes may be more cost-effective than most public health and medical interventions" (p. 2020). Levin (2009) reviews five sets of interventions which have been rigorously evaluated and shown to yield improved outcomes for participants: two early childhood education programmes (the Perry Preschool Program and the Chicago Child-Parent Centers Program), a comprehensive school reform (First Things First), class size reduction (based on evidence from Project Star), and a measure to increase teacher salaries to improve teaching quality. For each of these interventions, he compares the costs associated with the programme and the benefits it yields. For all five programmes, the benefits represent a multiple of the costs, with the ratio ranging from 3.5 for comprehensive school reform and 3.1 for the Chicago Child-Parent Centers to 1.5 for class size reduction. He concludes:

> *The monetary value of the public benefits of reducing the number of high school dropouts exceeds considerably the required public costs of successfully validated educational interventions.* (p.16)

Other studies have adopted somewhat different methodologies but have indicated a consistently high benefit-cost ratio for intensive early childhood education programmes, especially ones targeting more disadvantaged groups. Temple and Reynolds (2007), for example, estimate benefit ratios of 3.8 to 10.1 for a range of such programmes, surpassing those of interventions among older age-groups.

This kind of benefit-cost study has not been carried out in the Irish context, principally because of the lack of systematic information on the costs associated with a range of outcomes among early leavers but, more importantly, the lack of detailed information on the unit cost of different educational interventions. NESF (2005) suggests a potential benefit-cost ratio of between 4.6 and 7.1 of providing one year of early childhood education on a universal basis in Ireland. However, in the absence of an

adequate evidence base, these calculations were based on assuming that some of the benefits in the Irish context would be similar to those in the US.

In sum, international evidence indicates substantial societal benefits from investment in education, particularly in the early years (see Heckman *et al*., 2008). Given the lack of systematic data on costs and benefits in the Irish context, it is not possible to derive an overall estimate of such benefits. However, Table 4.1 provides indicative figures on the potential costs associated with early school leaving based on the analyses provided above. It is apparent that in Ireland, as in the United States, there are very substantial costs associated with early school leaving.

Table 4.1: Potential Costs Associated with Early School Leaving in the Irish Context

Outcomes	Potential costs	Estimates
Unemployment	Welfare payments	Using the Living in Ireland data on the proportion of time in unemployment and assuming a 40 year working life, we estimate that the early leaver group spends 14 months more unemployed than those with a Leaving Certificate. Allowing for costs of €204.30 per week (Jobseeker's Allowance), on the basis of current prices the differential cost over the life-time comes to €12,300 per early leaver. This is only indicative because we cannot allow for future trends in unemployment patterns. In addition, some of the Leaving Certificate group may experience higher unemployment if there are no early leavers.
	Income tax foregone	Using National Employment Survey data and assuming a working week of 35 hours and a working life of 40 years, there is an estimated difference in life-time earnings between the early leaver and LC groups of €84,500. Allowing for a tax rate of 20 per cent results in a tax revenue loss of €17,000 per early leaver.
Lone parenthood	Welfare payments	We use QNHS data for 25-34 year olds to estimate the likelihood of being a lone mother. We assume that all of this group are on welfare payments and, following Morgenroth (1999), we make the conservative assumption that lone parents will be drawing down payments for 4 years. With weekly rates of one parent payments being €204.30, this gives a differential cost of €4,000 per female early leaver.
Health	Utilisation of health services	The above analyses indicate poorer health and higher levels of GP utilisation among early leavers. No estimate of the differential costs has been conducted for Ireland. However, Nolan (1991) and Layte and Nolan (2004) show that a relatively high

		share of health expenditure goes on lower income groups. Given the relationship between education and income, we would therefore expect that health expenditure on early school leavers would be greater than on Leaving Certificate leavers.
Crime	Cost of imprisonment and other services	A prison place cost €97,700 per annum in 2007. For males aged 21 to 30 years, we estimated imprisonment rates of 46.6 per 1,000 early leavers and 1.6 per 1,000 Leaving Certificate leavers. Assuming each of those committed spends one year in prison, the potential difference in crime costs between early leavers and LC leavers amount to just under €280 million. This can be taken as a conservative estimate as it does not allow for greater recidivism among the less qualified group or for the costs of Garda and probation services and the costs of property crime.

5. CONCLUSIONS

Education is highly predictive of future life chances in the Irish context. Those who leave school before the Leaving Certificate are more likely to be unemployed or lone parents, earn less if they have a job, and have poorer health and higher crime levels. One in six young Irish people still leave school without reaching Leaving Certificate level and their likelihood of doing so is strongly influenced by their social background. This has substantial costs for the young people themselves and for society as a whole. Higher rates of early school leaving mean higher future expenditure on welfare, health and prisons and lower tax revenue.

International research has indicated that early childhood education and measures to boost academic achievement are key factors in retaining young people within full-time education. A number of countries have also adopted compensatory approaches targeting funding on disadvantaged areas and/or schools. This targeted approach has formed the core of Irish policy addressing educational disadvantage.

Survey research indicates that DEIS school principals report significantly higher levels of literacy, numeracy, attendance and behavioural difficulties than their non-DEIS counterparts. As well as catering for students from disadvantaged backgrounds, DEIS schools have disproportionate numbers of groups of students requiring extra support, including newcomers, Travellers and children with learning disabilities. School principals are generally positive about the focus on literacy and numeracy along with funding for educational resources within the DEIS programme. However, both principals and stakeholders raised issues regarding the assessment criteria used for access, the gap on school entry between disadvantaged children and their better-off peers, and more broadly, the capacity of the school to 'close the gap' between their children and their counterparts in non-DEIS schools. A further issue relates to the adequacy of targeting funding on particular schools as the sole mechanism for addressing educational disadvantage. There is indeed a 'multiplier effect' whereby those in schools with a high concentration of disadvantaged students experience poorer outcomes in relation to attendance, achievement and early school leaving. However, survey evidence indicates that, at least in the second-level sector, over half of disadvantaged young people are attending non-DEIS schools.

The study points to three sets of issues for future policy development. Firstly, preschool education is crucial in enhancing the later educational and social outcomes of disadvantaged children. The new Early Childhood Care and Education Scheme has significant potential to counter educational disadvantage. However, the scheme should be subject to careful evaluation regarding the extent to which children from disadvantaged backgrounds take part, and on whether all children have access to high quality learning

opportunities. Second, policy regarding educational disadvantage in the Irish context has principally focused on targeting resources on schools serving disadvantaged populations. While there are strong arguments in favour of such an approach, it should be noted that a considerable proportion of young people from disadvantaged backgrounds attend non-DEIS schools. School targeting alone cannot, therefore, address the needs of all children and young people in the relevant groups, and a tapered approach to allocating additional resources to schools according to the number of disadvantaged students in their population has some merit. Finally, schools do not exist in isolation so there is a need for joined-up planning and provision between education, health and welfare services in addressing the holistic development of children. Further, inequality within the educational system will reflect, and reinforce, inequalities within the broader society.

The issue of educational disadvantage is even more pertinent in the current climate. The current recession is likely to disproportionately impact on disadvantaged children and their families in terms of unemployment and associated problems, such as drug use and crime. Recent expenditure cuts have attracted criticism in terms of their impact on the educational system as a whole and on disadvantaged groups in particular. While funding for the DEIS programme has been ring-fenced, other measures such as the abolition of the book grant scheme for non-DEIS schools, the reduced capitation grant for Travellers, and the reduced curricular programme grants, are likely to have a disproportionate impact on disadvantaged students, especially those attending non-DEIS schools.

In sum, research indicates that investment in education yields very significant economic and social benefits for society at large. In the current difficult climate, it is important that the long-term importance of investment in education is not forgotten:

> *Educational equity is a moral imperative for a society in which education is a crucial determinant of life chances.* (Levin, 2009, p. 5)

REFERENCES

ALLMENDINGER, J., 1989. "Educational Systems and Labour Market Outcomes", *European Sociological Review*, Vol. 5. pp. 231-250.

ANDERSON, S. and G. GRAHAM, 2007. "The Custodial Remand System for Juveniles in Ireland: the Empirical Evidence" in K. Lalor, F. Ryan, M. Seymour and C. Hamilton (eds.), *Young People and Crime: Research, Policy and Practice*, Dublin: Dublin Institute of Technology.

ARCHER, P., 2007. "Research and Evaluation", in *The Home-School-Community-Liaison Scheme in Ireland: From Vision to Best Practice*, Dublin: Department of Education and Science.

ARUM, R. and I.R. BEATTIE, 1999. "High School Experience and The Risk of Incarceration", *Criminology*, Vol. 37, No. 3, pp. 515-540.

BAKER, J., K. LYNCH, S. CANTILLON, and J. WALSH, 2004. *Equality: From Theory to Action*. Basingstoke: Palgrave Macmillan.

BARNETT, W.S., 1995. "Long-term Effects of Early Childhood Programs on Cognitive and School Outcomes", *The Future of Children*, Vol. 5, No. 3, pp. 25-50.

BARNETT, W.S. and L.N. MASSE, 2007. "Comparative Benefit-cost Analysis of the Abcederian Program and its Policy Implications", *Economics of Education Review*, Vol. 26, pp.113-125.

BECKER, G., 1964. *Human Capital*. New York: National Bureau of Economic Research.

BELFIELD, C.R. and H.M. LEVIN, (eds.) 2007. *The Price We Pay: Economic and Social Consequences of Inadequate Education*. Washington, DC: Brookings Institution.

BENABOU, R., F. KRAMARZ. and C. PROST, 2006. "The French Zones d'Education Prioritaire: Much Ado About Nothing?" London: Centre for Economic Policy Research Working Paper.

BERNARDO, J. and I. NICAISE, 2000. "Educational Priority Policies", in I. Nicaise, (ed.), *The Right to Learn: Educational Strategies for Socially Excluded Youth in Europe*, Bristol: Policy Press.

BLATCHFORD, P. 2003. *The Class Size Debate: Is Small Better?* Milton Keynes: Open University Press.

BORMAN, G.D., J.V. D'AGOSTINO, K.K. WONG and L.V. HEDGES, 1998. "The Longitudinal Achievement of Chapter 1 Students: Preliminary Evidence from the Prospects Study", *The Journal of Education for Students Placed at Risk*, Volume 3, No. 4, pp. 363-399.

BORMAN, G.D. and G.M. HEWES, 2002. "The Long-term Effects and Cost-effectiveness of Success for All," *Educational Evaluation and Policy Analysis*, Vol. 24, No. 4, pp. 243-266.

BREEN, R. and J.O. JONSSON, 2005. "Inequality of Educational Opportunity in Comparative Perspective", *Annual Review of Sociology*, Vol. 31, pp. 223-243.

BRYANT, D.M. and K.L. MAXELL, 1996. "Early Intervention", *Current Opinion in Psychiatry*, Vol. 9, No. 5, pp. 317-321.

CHEVALIER, A. and L. FEINSTEIN, 2006. "Sheepskin or Prozac: The Causal Effect of Education on Mental Health". Bonn: IZA Discussion Paper.

COMPTROLLER AND AUDITOR GENERAL, 2006. *Educational Disadvantage Initiatives in the Primary Sector*. Dublin: Government of Ireland.

CENTRAL STATISTICS OFFICE, 2007. *Survey on Income and Living Conditions (SILC) in Ireland*. Dublin: Stationery Office.

CULLEN, B. and L. WALKER, 2000. *The Department of Education and Science's 8-15 Early School Leaver Initiative: Evaluation Report*. Dublin: Children's Research Centre, Trinity College.

D'AGOSTINO, J.V. and J.A. MURPHY, 2004. "A Meta-analysis of Reading Recovery in United States Schools", *Educational Evaluation and Policy Analysis*, Vol. 26, pp. 23-38.

DEARDEN, L., C. EMMERSEN, C. FRAYNE, and C. MEGHIR, 2005. *Education Subsidies and School Drop-out Rates*. London: Institute for Fiscal Studies.

DEPARTMENT OF EDUCATION, 1966. *Investment in Education*. Dublin: Stationery Office.

DEPARTMENT OF EDUCATION AND SCIENCE (various years). *Statistical Report*. Dublin: DES.

DEPARTMENT OF EDUCATION AND SCIENCE, 2005. *The Leaving Certificate Applied Programme*. Dublin: DES.

DEPARTMENT OF FAMILY AND SOCIAL AFFAIRS, 2008. *Statistical Information on Social Welfare Services 2007*. Dublin: DFSA.

DUPRE, M.E., 2008. "Educational Differences in Health Risks and Illness Over the Life Course: a Test of Cumulative Disadvantage Theory", *Social Science Research*, Vol. 37, pp. 1253-1266.

EDUCATIONAL DISADVANTAGE COMMITTEE, 2003. *Identifying Disadvantage for the Purpose of Targeting Resources and Other Supports*. Submission to the Minister for Education and Science.

EDUCATIONAL DISADVANTAGE FORUM, 2003. *Educational Disadvantage Forum: Report of Inaugural Meeting*. Dublin: Educational Disadvantage Committee.

EDUCATIONAL RESEARCH CENTRE, 1998. *Early Start Preschool Programme: Final Evaluation Report*, Dublin: ERC.

EDUCATIONAL RESEARCH CENTRE (no date). *The Assessment of Levels of Disadvantage in Primary Schools for DEIS*. Dublin: ERC.

ERIKSON, R., 1996. "Explaining Change in Educational Inequality – Economic Security and School Reforms", in R. Erikson and J.O. Jonsson (eds.)*, Can Education Be Equalized? The Swedish Case in Comparative Perspective,* Boulder: Westview Press.

ERIKSON, R. and J.H. GOLDTHORPE, 2002. "Intergenerational Inequality: a Sociological Perspective", *Journal of Economic Perspectives*, Vol. 16, No. 3, pp. 31-44.

ERIKSON, R. and J.O. JONSSON, 1996. "Explaining Class Inequality in Education: the Swedish Test Case", in R. Erikson and J.O. Jonsson (eds.), *Can Education Be Equalized? The Swedish Case in Comparative Perspective,* Boulder: Westview Press.

FAHEY, T. and H. RUSSELL, 2001. *Family Formation in Ireland. Trends, Data, Needs and Implications,* Policy Research Series No. 43. Dublin: The Economic and Social Research Institute.

FEINSTEIN, L., R. SABATES, T.M. ANDERSON, A. SORHAINDO, and C. HAMMOND, 2008. "What are the Effects of Education on Health?" in OECD, *Measuring the Effects of Education on Health and Civic Engagement*, Paris: OECD.

FINN, J.D., S.B. GERBER, C.M ACHILLES, J. BOYD-ZAHARIAS, 2001. "The Enduring Effects of Small Classes", *Teachers College Record*, Vol. 103, No. 2, pp. 145-183.

FINN, J. D., S.B.GERBER, and J. BOYD-ZAHARIAS, 2005. "Small Classes in the Early Grades, Academic Achievement, and Graduating from High School', *Journal of Educational Psychology*, Vol 97, No. 2, pp. 214-223.

FREDERIKSSON, P. and B. OCKERT, 2008. "Resources and Student Achievement – Evidence from a Swedish Policy Reform", *Scandinavian Journal of Economics*, Vol 110, No. 2, pp. 277-296.

GAMORAN, A., 2001. "American Schooling and Educational Inequality: Forecast for the 21st Century", *Sociology of Education*, Vol. 34, pp. 135-153.

GLEESON, J., A CLIFFORD, A. COLLISON *et al.*, 2002. "School Culture and Curriculum Change: the Case of the Leaving Certificate Applied (LCA)", *Irish Educational Studies*, Vol. 21, No. 3, pp. 21-44.

GOMBY, D.S., 1995. "Long-term Outcomes of Early Childhood Programs: Analysis and Recommendations", *The Future of Children*, Vol. 3, No. 5, pp. 6-24.

GRISSMER, D.W., A. FLANAGAN, S. WILLIAMSON, 1997. *Does Money Matter for Minority and Disadvantaged Students? Assessing the New Empirical Evidence*. California: Rand.

GROOT, W. and H.M. VAN DEN BRINK, 2007. "The Effects of Education on Crime", *Applied Economics*, pp. 1-11.

HANNAN, D.F., E. SMYTH, J. MCCULLAGH, R. O'LEARY, D. MCMAHON, 1996. *Coeducation and Gender Equality: Exam Performance, Stress and Personal Development*. Dublin: Oak Tree Press/The Economic and Social Research Institute.

HARMON, C., H. OOSTERBEEK, and I. WALKER, 2001. *The Returns to Education: A Review of Evidence, Issues and Deficiencies in the Literature*. London: Centre for the Economics of Education, London School of Economics.

HECKMAN, J.J., L.J. LOCHNER, and P.E. TODD, 2006. *Earnings Functions and Rates of Return*. Dublin: UCD Geary Institute.

HECKMAN, J.J., 2006. "Skill Formation and the Economics of Investing in Disadvantaged Children", *Science*, Vol. 312, pp. 1900-1902.

HIGGINS, C., T. LEVIN, and O. METCALFE, 2008. *Health Impacts of Education: A Review*. Dublin: Institute of Public Health in Ireland.

IACOVOU, M., 2002. "Class Size in the Early Years: Is Smaller Really Better?', *Education Economics*, Vol. 10, No. 3, pp. 261-290.

IRISH PENSION SERVICE, 2003. *Annual Report 2002*, Dublin: The Stationery Office.

KELLAGHAN, T., 1977. *The Evaluation of an Intervention Programme for Disadvantaged Children*, Slough: NFER.

KELLAGHAN, T. and B.J. GREANEY, 1993. *The Educational Development of Students Following Participation in a Preschool Programme in a Disadvantaged Area.* Dublin: Educational Research Centre.

KELLAGHAN, T., S. WEIR, S. Ó HUALLACHÁIN and M. MORGAN, (1995). *Educational Disadvantage in Ireland.* Dublin: Dept. of Education/ Combat Poverty Agency.

KELLY, D. and T. KELLAGHAN, 1999. *The Literacy and Numeracy Achievement of the First Cohort of Early Start Children (1994/95) when they were in second class (1998/99).* Dublin: Educational Research Centre.

KERCKHOFF, A.C., 1995. "Institutional Arrangements and Stratification Processes in Industrial Societies, *Annual Review of Sociology*, Vol. 21, pp. 323-347.

KIERNAN, K. and K. SMITH, 2003. "Unmarried Parenthood: New Insights from the Millennium Cohort Study", *Population Trends*, Vol. 114, pp. 26-33.

LAMB, S. and S. RICE, 2008. *Effective Strategies to Increase School Completion Report*. Melbourne: State of Victoria.

LAYTE, R. and B. NOLAN, 2004. "Equity in the Utilisation of Health Care in Ireland", *The Economic and Social Review*, Vol. 35, No. 2, pp. 111-134.

LAYTE, R., A. NOLAN and B. NOLAN, 2007. *Poor Prescriptions: Poverty and Access to Community Health Services*. Dublin: Combat Poverty Agency.

LAYTE, R., A. NOLAN, B. NOLAN, and T. VAN TOURTI, 2005. *Health and Morbidity by Age and Socio-economic Characteristics*. European Network of Economic Policy Institutes.

LAYTE, R. *et al*., 2006. *The Irish Study of Sexual Health and Relationships*. Dublin: Crisis Pregnancy Agency and The Department of Health and Children.

LEVIN, H.M., 2009. "The Economic Payoff to Investing in Educational Justice", *Educational Researcher*, Vol. 38, No. 1, pp. 5-20.

LEWIS, M. and P. ARCHER, 2002. *Further Evaluation of Early Start: Progress Report*. Dublin: Educational Research Centre.

LEWIS, M. and P. ARCHER, 2003. *Early Start Evaluation: Report on Observation Visits*. Dublin: Educational Research Centre.

LOCHNER, L. and E. MORETTI, 2004. "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests and Self-reports", *American Economic Review*, Vol. 94, No. 1, pp. 155-189.

LUNN, P., 2007. *Fair Play? Sport and Social Disadvantage in Ireland*. Dublin: The Economic and Social Research Institute. Books and Monographs No. 190.

MacCOBY, E.E., 2000. "Parenting and its Effects on Children: on Reading and Misreading Behavior Genetics", *Annual Review of Psychology*, Vol. 51, pp. 1-27.

MACHIN, S. and S. McNALLY, 2007. "The Literacy Hour", *Journal of Public Economics*, Vol. 92, Nos. 5-6, pp. 1441-1462.

MARKS, G.N., J. CRESSELL and J. AINLEY, 2005. "Explaining Socioeconomic Inequalities in Student Achievement", *Educational Research and Evaluation*, Vol. 12, No. 2, pp. 105-128.

MAURICE, M., F. SELLIER and J.J. SILVESTRE, 1986. *The Social Foundations of Industrial Power*. MIT Press.

McGUINNESS, S., F. McGINNITY, and P.J. O'CONNELL, 2009. "Changing Returns to Education During a Boom? The Case of Ireland", *Labour*, Vol. 23, pp. 197-221.

MILESI, C. and A. GAMORAN, 2006. "Effects of Class Size and Instruction on Kindergarten Achievement", *Educational Evaluation and Policy Analysis*, Vol. 28, No. 4, pp. 287-313.

MOLCHO, M., C. KELLY, A. GAVIN and S. NIC GABHAINN, 2008. *Inequalities in Health among School-aged Children in Ireland,* Galway: Health Promotion Research Centre.

MORGENROTH, E., 1999. *Estimated Social Rates of Return to Educational Interventions to Prevent Early Educational Failure*. Report to the Department of Education and Science. Dublin.

MUENNIG, P. and S.H. WOOLF, 2007. "Health and Economic Benefits of Reducing the Number of Students per Classroom in US Primary Schools', *American Journal of Public Health*, Vol. 97, No. 11, pp. 2020-2027.

MULDER, L. and G. VAN DER WERF, 1997. "Implementation and Effects of the Dutch Educational Priority Policy", *Educational Research and Evaluation*, Vol. 3, No. 4, pp. 317-339.

MÜLLER, W. and M. GANGL, (eds.), 2003. *Transitions from Education to Work in Europe*. Oxford: Oxford University Press.

NATIONAL COMPETITIVENESS COUNCIL, 2009. *Statement on Education and Training*. Dublin: NCC.

NATIONAL ECONOMIC AND SOCIAL FORUM, 2005. *Early Childhood Care and Education*. Dublin: NESF.

NOLAN, B., 1991. *The Utilisation and Financing of Health Services in Ireland*, General Research Series No. 155, Dublin: The Economic and Social Research Institute.

O'DONNELL, I., E.P. BAUMER and N. HUGHES, 2008. "Recidivism in the Republic of Ireland", *Criminology and Criminal Justice*, Vol. 8, No. 2, pp. 123-146.

O'DONNELL, I., E. O'SULLIVAN and D. HEALY, (eds.), 2005. *Crime and Punishment in Ireland 1922 to 2003: A Statistical Sourcebook*. Dublin: Institute of Publin Administration.

OECD, 2007. *No More Failures: Ten Steps to Equity in Education*. Paris: OECD.

OECD, 2008. *Education At A Glance: OECD Indicators 2008*. Paris: OECD.

O'MAHONY, P. (ed.), 2002. *Criminal Justice in Ireland*. Dublin: Institute of Publin Administration.

PUMA, M.J.,N. KARWEIT, C. PRICE, A. RICCIUTI, W. THOMPSON, M. VADEN-KIERNAN, 1997. *Prospects: Student Outcomes. Final Report*. Department of Education, Washington, D.C.

REES, G., S. POWER, and C. TAYLOR, 2007. "The Governance of Eucational Inequalities: the Limits of Area-based Initiatives", *Journal of Comparative Policy Analysis: Research and Practice*, Vol. 9, No. 3, pp. 261-274.

REYNOLDS, A.J. and B. WOLFE, 1997. "Special Education and School Achievement", *Educational Evaluation and Policy Analysis*, Vol. 21, No. 3, pp. 249-269.

REYNOLDS, A.J., J.A. TEMPLE, D.L. ROBERTSON, and E.A. MANN, 2001. "Long-term Effects of an Educational Intervention on Educational Achievement and Juvenile Arrest", *Journal of the American Medical Association*, Vol. 285, No. 18, pp. 2339-2346.

REYNOLDS, A.J., J. TEMPLE, S-R. Ou, *et al.*, 2007. "Effects of a School-based, Early Childhood Intervention on Adult Health and Well-being", *Archives of Pediatrics and Adolescent Medicine*, Vol. 161, No. 8, pp. 730-739.

REYNOLDS, S., S. FANAGAN, D. BELLEROSE, and J. LONG, 2008. *Trends in Treated Problem Drug Use, 2001 to 2006*. Dublin: Health Research Board.

RYAN, S., 1994. *Home-School-Community Liaison Scheme: Final Evaluation Report*. Dublin: Educational Research Centre.

SHAVIT, Y. and H.P. BLOSSFELD, (eds.), 1993. *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Boulder: Westview Press.

SLAVIN, R.E. and N.A. MADDEN, 1999. *Success for All/Roots and Wings: Summary of Research on Achievement Outcomes*. Baltimore: CRESPAR.

SLAVIN, R.E., A. CHEUNG, C. GROFF, and C. LAKE, 2008. "Reading Programs for Middle and High Schools: a Best-evidence synthesis", *Reading Research Quarterly*, Vol. 43, No. 3, pp. 290-322.

SMYTH, E., 1999. *Do Schools Differ? Academic and Personal Development among Pupils in the Second-level Sector*. Dublin: Oak Tree Press/ESRI.

SMYTH, E. and D.F. HANNAN, 2000. "Education and Inequality", in B. Nolan, P.J. O'Connell and C.T. Whelan (eds.), *Bust to Boom? The Irish Experience of Growth and Inequality*, Dublin: IPA/ESRI.

SMYTH, E., A. DUNNE, M. DARMODY and S. McCOY, 2008. *Gearing Up for the Exam? The Experiences of Junior Certificate Students*. Dublin: Liffey Press/ESRI.

SPENCE, M., 1973. "Job Market Signalling", *The Quarterly Journal of Economics*, Vol. 87, No. 3, pp. 355-374.

TEMPLE, J.A. and A.J. REYNOLDS, 2007. "Benefits and Costs of Investments in Preschool Education: Evidence from the Child-Parent Centers and Related Programs", *Economics of Education Review*, Vol. 26, pp. 126-144.

VON DEM KNESEBECK, O., P.E. VERDE and N. DRAGANO, 2006. "Education and Health in 22 European countries", *Social Science and Medicine*, Vol. 63, pp. 1344-1351.

WALDFOGEL, J. and F. ZHAI, 2008. "Effects of Public Preschool Expenditures on the Test Scores of Fourth Graders: Evidence from TIMSS", *Educational Research and Evaluation*, Vol. 14, No. 1, pp. 9-28.

WALESMANN, K.M., 2008. "Accumulating Disadvantage Over the Life Course", *Research on Aging*, Vol. 30, pp. 169-199.

WEIR, S., 2003. *The Evaluation of Breaking the Cycle: A Follow-up of the Achievements of 6th Class Pupils in Urban Schools in 2003*. Dublin: Educational Research Centre.

WEIR, S., 2004. *A Commentary on the Implementation of Giving Children an Even Break*. Dublin: Educational Research Centre.

WEIR, S., L. MILIS, and C. RYAN, 2002. *The Breaking the Cycle Scheme in Urban Schools: Final Evaluation Report*. Dublin: Educational Research Centre.

WEIR, S., L. MILIS, and C. RYAN, 2002b. *The Breaking the Cycle Scheme in Rural Schools: Final Evaluation Report*. Dublin: Educational Research Centre.

WILLMS, J.D., 2006. *Learning Divides*. Montreal: UNESCO.

WORTMAN, P.M., 1995. "An Exemplary Evaluation of a Program that Worked: the High/Scope Perry Preschool Project", *American Journal of Evaluation*, Vol. 16, No. 3, pp. 257-265.

Published by
The Economic
and Social
Research Institute
Whitaker Square
Sir John Rogerson's
Quay
Dublin 2

ISBN 978 -0-7070-0280-4