EDUCATIONAL EXPENDITURE: IMPLICATIONS FOR EQUALITY

SELINA McCOY, EMER SMYTH*

1. Introduction

In the Irish context, policies to counter inequalities in education date back to the 1960s with the introduction of free secondary education. In the 1970s and 1980s, educational policy tended to focus on raising overall participation levels rather than reducing inequalities in those levels. However, from the 1990s a wide range of interventions designed to counter educational disadvantage have been introduced at primary, secondary and tertiary levels. Policy interventions include:

- The provision of early childhood education for children in disadvantaged areas (the Early Start Programme);
- Targeting of additional funding towards schools serving disadvantaged populations (Breaking the Cycle; Programme for Schools in Disadvantaged Areas; Giving Children an Even Break);
- The introduction of new curricular programmes to promote student retention and achievement (the Junior Certificate School Programme; the Leaving Certificate Applied Programme);
- The removal of tuition fees from third-level undergraduate courses;
- Locally and/or institutionally-based initiatives to promote thirdlevel participation among young people in disadvantaged areas (the Trinity Access Programme, for example).

^{*}Selina McCoy is a Research Officer and Emer Smyth is a Senior Research Officer at The Economic and Social Research Institute. We are grateful to Muiris O'Connor and Gerry O'Rourke of the Department of Education and Science for information on educational expenditure. Edgar Morgenroth kindly gave us permission to quote from his research on the social returns to education. Helpful comments on an earlier draft of this paper were given by an Editorial Committee. This paper examines the implications of these interventions in the context of overall educational expenditure. Educational expenditure represents a significant component of public expenditure, with an estimated 16.5 per cent of current spending, and 8.8 per cent of capital spending, allocated to this sector in 2003. It is important, therefore, to explore the consequences of educational expenditure patterns for educational inequality.

There has been considerable debate on whether policy should aim to ensure *equality of opportunity*, with equal access to education among different groups, or *equality of outcomes* (see Lynch, 1999). Because educational outcomes (such as the qualifications and grades received) are strongly associated with later life-chances in the Irish context, the discussion focuses on the implications of public expenditure for inequality of educational outcomes. For the purposes of this paper, attention is confined to socio-economic inequalities rather than differences in terms of gender, disability and/or ethnicity. The discussion here focuses on the primary, secondary and tertiary levels of education for the school-age population rather than adult education and training.

The second section of the paper sets the scene by describing inequalities in educational outcomes over time. The third section outlines patterns of educational expenditure, highlighting differences between and within the primary, secondary and tertiary sectors. The fourth section explores recent policy developments which involve targeting spending on 'disadvantaged' schools, through special programmes and initiatives. The fifth section of the paper discusses the implications of educational failure for labour market and other outcomes among young people in particular and the adult population in general and the final section concludes.

2. Educational Inequality in the Irish Context

Docio-economic differences in educational outcomes can be evident in two respects: first, there may be differences in educational achievement at any given level of the educational system (for example, students from middle-class backgrounds may achieve higher grades than those from working-class backgrounds within secondary schools); and second, there may be differences in the extent to which students from different backgrounds stay on within the full-time educational system.

There has been a long-standing debate internationally about the underlying reasons for persistent social class differences in educational achievement. The argument that this pattern reflects differences in 'innate' intelligence has been roundly rejected (see, Boudon, 1974; Erikson and Jonsson, 1996). Explanations tend to focus on differences in 'cultural capital' (that is, the dispositions and knowledge which help particular groups to succeed within the educational system) and/or on the role of schools in reproducing social inequality (see Drudy and Lynch, 1993). Research in the Irish context indicates that socio-economic inequality is evident in performance at Junior and Leaving Certificate levels. Among those taking the Junior and Leaving Certificate examinations, significant differences in performance levels (grades) are evident by social group with those from working-class and unemployed families tending to under-perform relative to their initial 'ability' levels (see Hannan *et al.*, 1996; Smyth, 1999b).

The persistence of inequality in educational participation among different social classes has been well documented internationally (see, for example, Shavit and Blossfeld, 1993; Shavit and Müller, 1998). Even with the same level of educational achievement, young people from unskilled manual backgrounds are less likely than those from professional backgrounds to stay on in full-time education, a pattern that can be attributed to differences between the social classes in the relative costs and benefits of education. The relative costs of education are likely to vary by social class, parents with higher levels of education are better able to help their children negotiate their way through the schooling system, and the perceived benefits and probabilities of success may differ between social classes (Erikson and Jonsson, 1996). A significant reduction in educational inequality has, therefore, only been apparent in the context of diminishing social class differences in income and living conditions (see, Erikson (1996); De Graaf and Ganzeboom (1993), on Sweden and the Netherlands). However, it has also been argued that, in the absence of such change, educational inequality may decrease when the demand for education among the upper middle classes has been 'saturated' (Raftery and Hout, 1993).

A dramatic increase in participation at both secondary and tertiary levels in Ireland has been evident since the early 1980s. Between 1980 and 1998, the proportion of students taking the Leaving Certificate examination increased from 60 to 82 per cent. There has been some reduction over time in the relative difference between those from higher professional and unskilled manual backgrounds in their rates of school completion. However, participation rates continue to be strongly influenced by socio-economic background (see Figure 1).

The 1980s and 1990s have also been a period of rapid expansion in participation in tertiary education. In 1980, 24 per cent of those with a Leaving Certificate (the traditional route into university) entered full-time tertiary education; by 1999, this had increased to 47 per cent. In spite of this rapid expansion, participation in tertiary education continues to be strongly structured by social class background (see Figure 2). Tuition fees were abolished from 1996 as part of an attempt to improve access to third-level education for less advantaged groups. While there is some reduction in inequality of participation over the 1990s, there is no evidence that this was associated with the removal of tuition fees (see Smyth, 2001; Sweetman, 2002). In fact, social inequality in access to third-level education was greater in 1998 than at the beginning of the 1980s.



Figure 1: Leaving Certificate Completion Over Time

Source: ESRI Annual School Leavers' Survey, various years.





Year left school

Source: ESRI Annual School Leavers' Survey, various years.

In sum, socio-economic inequalities in educational participation and achievement remain evident within the Irish context. The following sections discuss the potential implications of educational interventions and related expenditure for countering such inequality. Per-student expenditure on education in Ireland (in euro based on 2002 prices) has increased for all levels over the 1990s (see Figure 3). The greatest relative increases took place in the primary sector with per-student expenditure increasing by 99 per cent compared with 87 per cent for the secondary sector and 22 per cent for the tertiary sector. Data from 1999 indicate that Ireland spent 4.6 per cent of GDP on education, below the OECD average of 5.5 per cent¹ (OECD, 2002). The amount of per-student expenditure in Ireland for 1999 is below the OECD average in the pre-primary, primary and secondary sectors but above average in the tertiary sector (OECD, 2002). Recent increases in educational expenditure, especially at primary level, may have reduced the gap between Ireland and other OECD countries somewhat with educational spending amounting to 5.2 per cent of GNP in 2002.

3. Patterns of Educational Expenditure

Figure 3: Expenditure by Educational Level 1992-2002 (€based on 2002 prices)



Source: Department of Education and Science, Key Education Statistics; special tabulation; figures adjusted for changes In the Consumer Price Index.

Expenditure per student rises from primary to tertiary across all OECD countries. Data for 1999 indicate a much higher ratio of tertiary to primary expenditure in Ireland than in many other OECD countries (OECD, 2002). There has been some reduction over time in the relative disparity between tertiary and primary expenditure. However, almost twice as much is now spent for each student at a third-level institution as is spent on those in the primary

¹ The gap appears slightly narrower when educational expenditure as a proportion of GNP is considered with Ireland spending 4.8 per cent of GNP on education in 1999.

sector² (see Figure 4). Given the profile of entrants to higher education (see above), this pattern of expenditure results in a disproportionate allocation of resources to students from more advantaged backgrounds (see Callan (1992) for an analysis of an earlier period). Such an approach is criticised in the most recent OECD *Economic Survey of Ireland*:

The public education system heavily subsidises tertiary education in Ireland. ... Such heavy subsidisation is questionable on both equity and efficiency grounds. (OECD Economic Survey: Ireland, 2003.)

Figure 4: Tertiary/Primary Expenditure Ratio 1992-2002



Source: Department of Education and Science, Key Education Statistics; special tabulation.

Ireland differs from many other European countries in having a highly centralised approach to allocating resources to schools (Eurydice, 2001); the only exception to this pattern being the involvement of local vocational education committees. In spite of this centralised structure, some variation is evident among primary and secondary schools in their resource allocation. In the case of vocational schools, spending is allocated to the local VEC scheme which, in turn, determines resource allocation to the individual schools. For other school types (voluntary secondary and community/comprehensive schools), resources are allocated to individual schools, although the procedure differs across school sectors (Technical Working Group, 1998). Among voluntary secondary schools, differences are also evident with fee-paying schools allocated teacher salaries only and an additional block grant given to Protestant secondary schools, all of which are fee-paying.

More specifically, teacher allocation to second-level schools is based on student enrolment, a number of ex-quota posts and the enhanced teacher-student ratio linked to certain programmes. The

 $^{^2}$ It should also be noted that there is considerable variation in unit costs within the tertiary sector depending on the faculty and institution.

Junior Certificate School Programme, Leaving Certificate Applied and Leaving Certificate Vocational Programmes are given an enhanced teacher-student ratio because of the more flexible teaching and assessment approaches employed. Therefore, schools providing some (or all) of these programmes will have lower student-teacher ratios than other schools. In addition, the allocation of ex-quota posts is influenced by both school size (with deputy principal and learning support posts and increased guidance time available in larger schools) and 'need' (the allocation of posts such as Home-School-Community Liaison Officer are based on the extent to which the school serves a disadvantaged population and the allocation of resource posts is related to the prevalence of learning difficulties among students) (Report on Teacher Allocation, 2001). The targeting of funding on 'disadvantaged' schools is discussed further in the following section.

The funding mechanisms in place mean that schools can vary in the resources available to them with consequent implications for class size. There has been a reduction in the pupil-teacher ratio at both primary and secondary levels over the 1990s (Department of Education and Science, 2001). However, differences persist among primary schools and secondary schools in their pupil-teacher ratio. In the case of post-primary schools, differences in school resources in conjunction with variation in the subjects offered mean that actual class size can differ from the overall pupil-teacher ratio measure (Report on Teacher Allocation, 2001). When timetable information is analysed, actual class sizes are found to vary across educational programmes and subject areas (Report on Teacher Allocation, 2001).

The discussion so far has focused on the allocation of resources to the different educational sectors and to individual schools. However, financial aid to individual students and/or their families should also be considered. Certain forms of (direct or indirect) financial aid are available to low-income students and their families, including book grant schemes to provide assistance for the purchase of educational materials, free school meals for students in certain urban areas, and a Back to School Clothing Allowance to assist welfare-dependent families with the costs incurred at the start of the school year. However, these measures have tended to be piecemeal in nature, differing in their level of coverage and in the nature of the groups targeted (Smyth and McCabe, 1997). The main expenditure on financial aid is the grants system for third-level (and PLC) students. Grants are allocated on the basis of parental income or, in the case of mature students in independent households, the student's own income. As might be expected, patterns of grant receipt vary by socio-economic background with the highest levels found among those from manual and non-employed backgrounds. In addition, the majority of those from farming backgrounds

receive third-level grants. However, a significant minority of students from professional backgrounds receive financial aid (see Figure 5). The de Buitleir report (1993) recommended improvements in the administration of grants, the introduction of a capital test (alongside the income test) and the tapering of grants for those just over the eligibility threshold. While the core issue of a capital test has not yet been addressed, from the academic year 2003/4 grant payments will be graded by parental income up to a threshold of €38,000.

Figure 5: Receipt of Third-level Grant by Social Class Background (1997-8)



Source: ESRI Annual School Leavers' Survey.

Variation between and within educational sectors is only significant to the extent that it impacts on educational outcomes. There has been considerable debate internationally about the relationship between resources (however defined) and (a range of) educational outcomes. Much of the discussion has centred on the United States where the absence of a centralised and standardised educational system has resulted in wide disparities in funding between States, districts and individual schools. Hanushek (2002) has argued, in effect, that "money doesn't matter", highlighting the fact that an increase in the resources given to schools over time has not translated into improved test performance, that there is no relationship between country-level expenditure and average test performance, and that no difference in performance is evident across schools in terms of their pupil-teacher ratio or expenditure per pupil. However, analyses of a large number of studies in the US indicate that the level of resources is positively related to student outcomes (Greenwald et al., 1996), with similar findings reported for the US by Gamoran (1996) and Hedges and co-authors (1992). In addition, a positive relationship between capital investment in individual schools and student performance has been reported for both the US and Britain (PricewaterhouseCoopers, 2001; Jones and

Zimmer, 2001). Resources have been found to have a marked impact on the achievement levels of specific groups, particularly students from more disadvantaged backgrounds (Wenglinsky, 1998; Grissmer *et al.*, 1997; 2000).

A significant way in which the level of resources can impact on students' learning experiences is through facilitating smaller class sizes. There is a long-standing debate within the educational community about the impact of class size on student achievement. The fact that, in many contexts, lower-achieving students are allocated to smaller classes (either for learning support purposes or because of ability-based differentiation within the school) has made it hard to compare 'like with like' in exploring the effects of class size on student outcomes. One of the few experimental studies of class size, Project STAR in Tennessee, indicated a positive and substantive effect of being in a smaller class on achievement if children were put into smaller classes at an early stage in their education and remained in these small classes for a number of years; 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); see Iacovou (2001) for similar findings in the British context).

Unfortunately, no systematic study has been undertaken of the impact of resources on student outcomes in the Irish context. Smyth (1999b) found no significant relationship between pupil-teacher ratio and exam performance in the second-level sector. However, variation between schools in their pupil-teacher ratios are comparatively modest, especially relative to the pattern in the United States, and the ratio has a complex relationship with actual class size (see Report on Teacher Allocation, 2001). The extent to which one aspect of educational policy, targeting educational expenditure on disadvantaged schools and/or students, is likely to impact on educational outcomes is discussed in the following section.

4. Targeting Educational Expenditure

During the 1970s and 1980s, the focus of Irish educational policy was on increasing overall levels of educational participation rather than reducing social inequalities in access (Smyth and Hannan, 2000). As indicated above, the resulting growth of educational participation was not in itself sufficient to increase equality of educational opportunity. The 1990s saw an increasing policy focus on educational inequalities, with 'educational disadvantage' emerging as a matter of policy concern. The government White Paper on Education (1995) stated that "the State should seek to eliminate or compensate for the sources and consequences of educational disadvantage" which it construes as impediments related to "physical, mental, economic or social factors" (p.6). The Education Act (1998) 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 provided for the establishment of an Educational Disadvantage Committee to advise the Minister for Education on related issues. In addition, the government's National Anti-Poverty Strategy includes as an overall objective the need "to ensure that children, men and women living in poverty are able to gain access, participate in and benefit from education of sufficient quality to allow them to move out of poverty, and to prevent others from becoming poor".

In spite of the increasing attention to 'educational disadvantage', the definition of the term and its operationalisation for policy purposes have not always been clear. The focus of attention has tended to be on school retention and early school-leaving rather than on educational achievement or broader student development. The concern with countering educational disadvantage has resulted in two sets of policy changes. First, curricular reform has been implemented in order to provide 'alternative' educational routes for less academically-oriented young people, a measure which could be seen as an attempt to provide equal treatment within the schooling system. The new curricular programmes have resulted in additional teaching and/or operational resources being allocated to schools providing them (see above). Second, a number of measures which involve targeting additional expenditure at 'disadvantaged' schools or local areas have been introduced. These measures cover early childhood education, primary and secondary schooling.

At present, the initiatives fall under the jurisdiction of several government departments and State agencies. These initiatives have been underpinned by the notion that (scarce) resources should be targeted on schools with a concentration of disadvantaged students:

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.)

Such compensatory education programmes are, or have been, applied in other European countries, with schools requiring additional resources identified by the presence of target populations (e.g. the number of students from disadvantaged and/or immigrant backgrounds) or on the basis of the residential areas within which schools are situated (Eurydice, 2001). Examples include the educational priority policies in Belgium (Flanders) and the Netherlands (Bernardo and Nicaise, 2000). A similar approach is taken with the Title I programme in the United States which was initially created as part of the war on poverty in 1965 and is designed to help low-income children attending schools serving disadvantaged areas.

The range of measures to counter educational disadvantage at pre-primary, primary and secondary levels are summarised in Table 1.

Early educational intervention for disadvantaged children has indicated significant long-term benefits in terms of school engagement and achievement in the United States and elsewhere and has been identified as one of the most cost-effective wavs of targeting resources on more disadvantaged groups (Gomby et al., 1995; Grissmer et al., 2000). Similarly, a pilot programme of early childhood education, the Rutland Street project, in operation in a disadvantaged area of Dublin since 1969, indicated positive effects of such intervention on participants, particularly with regard to retention in post-compulsory education (Kellaghan, 1977; Kellaghan and Greaney, 1993). However, there was no attempt to mainstream this experience until 1994 when the Early Start Programme was introduced. The aim of the Early Start Programme is to enhance the overall development of the child, to ensure a smooth transition to full participation in the formal education system, and to offset the effects of socio-economic disadvantage. It is targeted at three and four year old children living in disadvantaged areas. A preliminary evaluation of the pilot phase of the Early Start Programme suggested no significant improvement in children's cognitive, language and motor behaviour following programme participation. However, children were found to have improved school-readiness on entry to primary school (Educational Research Centre, 1998). Further research on early childhood education in Ireland is crucial in order to identity its impact on later educational progress.

It should be emphasised that the Early Start Programme caters only for a small minority of pupils – around 5 per cent of 3 and 4 year olds in the educational system. In overall terms, the level of public funding available for pre-school provision in Ireland remains very low by European standards and early childhood education provision is highly fragmented falling under the jurisdiction of several government departments and State agencies. The recent government White Paper on Early Childhood Education, *Ready to Learn* (1999), states that provision for disadvantaged children should be a policy priority; it emphasises the importance of integrating service provision and achieving greater parental involvement, and recommends the establishment of a unitary Early Childhood Education Agency to this effect. These recommendations currently await legislative implementation.

Table 1: A Summary of Measures to Counter Educational Disadvantage

Name	Level	Target Group	Numbers Involved (2001)	Expenditure in
				€
Rutland Street project	Pre-primary	3-5 year olds in the school	91 students	203,979
Early Start	Pre-primary	3-4 year olds in disadvantaged areas	1,587 students in 40 schools	1.8 million
Scheme of Assistance to Schools in Designated Areas of Disadvantage	Primary and Secondary	Students in disadvantaged schools	314 primary schools with 70,000 students;211 secondary schools with 96,000 students	2.6m (primary) 3.7m (secondar
Breaking the Cycle	Primary	Students in disadvantaged schools (urban and rural)	Incorporated into Giving Children an Even Break, 2001.	
Giving Children an Even Break	Primary	Students in schools with higher concentrations of disadvantaged students	2,320 schools within which 80,234 students are targeted (26%)	5.08 million
Home-School-Community Liaison Scheme	Primary and Secondary	Parents of students in disadvantaged schools	277 primary schools 197 secondary schools	7.6m (primary, i 7.25m (seconda
School Completion Programme	Primary and Secondary	Students aged 8-14 at risk of drop-out	288 primary and 112 secondary schools	23m allocated spent on anter Stay in Sc Initiative and Leaving Initiativ

Note: Expenditure excludes teacher salaries except where otherwise indicated.

In 1990 a Scheme of Assistance to Schools in Designated Areas of Disadvantage, covering both primary and secondary schools, was introduced. The scheme involved the provision of extra funding per pupil along with additional teacher allocation for schools which were designated 'disadvantaged' in terms of their student profile. The criteria used for selection of schools were based on the proportion of students whose parents were unemployed, in receipt of free medical care (a proxy for low income), were lone parents or were living in publicly funded housing, as reported by the school principals. For secondary schools, the proportion of students entering the school with serious literacy or numeracy difficulties and the proportion of drop-outs were also taken into account.

A review of the scheme (Kellaghan et al., 1995) indicated that the initial system of allocation tended to favour urban areas and that there was no incentive for schools to adopt a structured approach to tackling disadvantage. Subsequent modifications of the programme required that schools submit a development plan indicating how they would use the additional resources. A new Breaking the Cycle initiative for primary schools was announced in 1996 with distinct criteria for the selection of schools in urban and rural areas. A further review of the scheme resulted in the launch of a new scheme for primary schools, Giving Children an Even Break. The new scheme goes beyond a selected core of primary schools to give grants (varying in size) to over 2,000 primary schools (about two-thirds of the total) to provide in- and out-of-school activities for disadvantaged students. This scheme differs from previous schemes in that it targets disadvantaged children across a broader range of schools; 26 per cent of all students across the designated schools are targeted for support, although the proportion of students targeted varies across schools (Department of Education and Science, 2003). The allocation of a grant is linked to the development of an integrated plan by schools to improve retention. In addition, extra teachers are to be provided in order to reduce class sizes, especially in the first few years of primary education. At the secondary level, schools designated under the disadvantaged areas scheme receive an additional teacher allocation, additional capitation grants of €38 per pupil and funding for a book rental scheme. Research is on-going as to the effects of these schemes on pupil attainment.

An additional scheme, the Home-School-Community Liaison (HSCL) Scheme, was also introduced in 1990 as an initiative to counteract disadvantage by increasing co-operation between schools, parents and community agencies in the education of young people. The scheme applies to both primary and secondary schools and involves the provision of a school-based co-ordinator to liase with parents and the community. An initial evaluation of the programme indicated some positive effects, including improved

parental involvement in the school and increased contact between parents and teachers. However, the positive effects of the programme were generally confined to parents who were actively involved in activities and those whom teachers often regarded as being least in need of the scheme. Furthermore, very few parents had taken a leading role in parental activities, with a tendency to adopt a more passive role (Ryan, 1994).

Other measures to improve school retention have been introduced in a number of schools. The School Completion Programme focuses on young people aged 4-18 years who are at risk of leaving school early, providing schools with funds to develop appropriate intervention strategies (such as in-school and afterschool supports). There have also been a number of interventions developed by local area-based Partnerships whose overall role is to promote social inclusion by bringing together statutory and nonstatutory organisations. These initiatives are at an early stage of development and involve activities such as mentoring, peer education and after-school activities (Area Development Management, 2000).

While there has been some evaluation of individual schemes to counter educational disadvantage, there has to date been no attempt to assess the cumulative impact of these measures on student outcomes in the context of overall spending on education. Some of these schemes are in an early stage of development but other measures have been in place for more than a decade. It is crucial that future policy development draw on a strong evidence base which identifies the most effective ways of targeting educational disadvantage.

In the absence of systematic evaluation of measures to counter educational disadvantage, a number of issues should be highlighted regarding the current approach to targeting resources. First, it is unclear the extent to which the schemes discussed cover all (or the majority of) disadvantaged students, however defined. Students from disadvantaged backgrounds may attend schools where they form a minority of students or they may attend schools where a significant proportion of other students are disadvantaged but in insufficient numbers to qualify for the scheme (ESF Evaluation Unit, 1997; Technical Working Group, 1998). The new primary school programme (Giving Children an Even Break) does extend the coverage somewhat to address the needs of disadvantaged students in schools that are somewhat less 'disadvantaged' than those initially targeted. It could be argued that, while targeting disadvantaged schools will miss some disadvantaged students, the needs of these schools are greater due to their concentration of disadvantaged students. Indeed, research indicates that students tend to under-perform and have higher drop-out rates in schools with a high concentration of students from working-class and/or unemployed families, irrespective of their own social background (Smyth, 1999b; McCoy, 2000b). It is unclear, however, whether existing funding levels are adequate to compensate schools for the disadvantage experienced by their students and, regardless of the targeting of resources on disadvantaged groups, more is still spent on the more select group who attend tertiary education than on those in the primary or secondary sectors (OECD, 2002; NESF, 2002). Furthermore, particularly at secondary level, students not attending disadvantaged schools do not receive any extra assistance. A more gradated form of support would be preferable with schools receiving assistance depending on the proportion of their students who come from more disadvantaged backgrounds (see Technical Working Group, 1998).

Second, while schools are now required to develop plans regarding their use of additional resources, the disadvantaged schools schemes have failed to take account of broader processes of school effectiveness and improvement. There appears to be no coherent model of an 'effective' way of catering for disadvantaged children or any indication of how a school could move towards such a model. The Educational Disadvantage Forum (2003) suggests that funding should be linked to specific targets because the current approach may tend to "reinforce poor performance". Third, the focus of measures on school retention as a goal runs the risk of neglecting under-performance among disadvantaged students. Young people are disadvantaged in their access to employment and further education/training by low achievement levels as well as by early school-leaving (see below).

Fourth, questions have been raised internationally about the effectiveness of such compensatory education policies. The implementation of educational priority policies in the Netherlands and Belgium (Flanders) has had mixed results (Bernardo and Nicaise, 2000). Research in the United States has indicated that positive discrimination in terms of funding is associated with improved student achievement but the improvements are not sufficient to close the achievement gap between high- and lowincome students (see, for example, Borman et al., 1998; Puma et al., 1997). Given the scale of pre-existing educational inequality, it is perhaps not surprising that additional funding to schools would need to be set at an extremely high level in order to compensate for inequalities between more and less advantaged schools in their access to resources (financial, social and cultural). In general, it has been found that educational interventions need to be underpinned by a broader reduction in social inequality in order to bring about a substantial reduction in educational inequality (see Erikson and Jonsson, 1996, on the Swedish context).

Finally, educational interventions for disadvantaged students tend to be highly fragmented in terms of delivery with variation in the criteria used to target schools and/or students (Educational Disadvantage Forum, 2003; Educational Disadvantage Committee, 2003). There is, therefore, scope for greater clarity in areas of responsibility along with the definition and criteria of disadvantage used.

5.1. SHORT-TERM INDIVIDUAL CONSEQUENCES

5. Consequences of Educational Failure

Viewed from a multitude of societal and individualistic perspectives, the influence of educational achievements on subsequent labour market success has been well demonstrated (see Hannan et al., 1998; Hannan et al., 2003). In considering the relationship between education and access to employment, for example, Breen, Hannan and O'Leary (1995) estimate that the likelihood of securing employment improves by 50 per cent for those who remain in school to sit the Leaving Certificate, relative to those who leave prior to sitting any exam. Results from the Annual School Leavers' Surveys (1980-1999) show some deterioration in the relative labour market position of unqualified and Junior Certificate school leavers over recent decades. Figure 6 displays, in the form of odds ratios³ the relative unemployment experiences of differentially qualified young. Unemployment odds for Junior Certificate qualified young relative to those who secured the Leaving Certificate appear to rise slightly in the interim. However, the most notable change is in the labour market struggle of those leaving school unqualified. Such unemployment relativities appear to reflect the prevailing economic climate, reaching their highest levels in times of low unemployment. This may reflect employment difficulties across the board when jobs are relatively scarce, while in more affluent times more highly qualified youth edge out their competitors and greatly increase their employment probabilities as large-scale hiring affords employers the opportunity to select the most qualified applicants.

Additional analyses (McCoy, 2000a) indicate that less qualified school leavers are more likely to be in the unfavourable position of seeking their first job. In addition, average duration of unemployment declines with successive educational attainment; achieving the Junior Certificate reduces the average unemployment span by seven weeks, while Leaving Certificate completion creates an additional reduction of 13 weeks. Essentially, those attaining higher levels of education have fewer and shorter unemployment spells and take less time to secure employment. Difficulties in

³ Odds-ratios can simply be defined as the difference in unemployment risk between the different educational groups. An odds ratio of 1 indicates no difference in unemployment risk; a ratio greater than 1 indicates greater unemployment risk among the unqualified; while a ratio less than 1 indicates lower unemployment among the unqualified group.

accessing employment for the least qualified have become exacerbated over time.





Source: ESRI Annual School Leavers' Surveys.

Similar educational distinctions are evident in the characteristics and quality of jobs young people enter. Unqualified school leavers are increasingly entering semi- and unskilled manual occupations, with a decline in their representation in agricultural and sales and service occupations (McCoy, 2000a). The increase in school leavers entering such sales and service occupations reflects a dramatic increase in Leaving Certificate holders taking up such jobs. However, semi- and unskilled manual positions are also attracting increasing proportions of Junior and Leaving Certificate qualified young people, as their representation in clerical occupations has contracted greatly. Essentially, young people leaving school with few or no qualifications are effectively being pushed out of their traditional areas of work (skilled and semi-skilled manual jobs and service occupations), by more qualified competitors in the labour market. As Hannan, McCabe and McCoy (1998) observe, a significant proportion of secondary jobs (jobs which are poorly paid, insecure, with little training or promotion prospects), previously dominated by employees with poor educational qualifications, appear to be increasingly occupied by more highly qualified young people on a temporary and often part-time basis. Such jobs are circulated among such cohorts, offering poorly qualified young people little opportunity to establish themselves in the labour market.

Such difficulties are further reflected in the initial earnings of poorly qualified young people. The average net hourly earnings⁴ of school leavers in employment for at least 30 hours weekly are displayed in Figure 7: the results are presented in the form of odds ratios relative to the Junior Certificate group. Regardless of year, unqualified school leavers who do succeed in gaining employment are at a disadvantage compared to the Junior Certificate group in terms of earnings, although the differential appears to have narrowed somewhat over the period. Persisting in school to complete the Leaving Certificate clearly brings financial reward in terms of initial earnings, although the 'payoff' has narrowed over time. It is likely that given that the vast majority of students now achieve Leaving Certificate standard, the composition of the Leaving Certificate group is now more diverse, which may explain the apparent decline in their earnings advantage.

Figure 7: Net Hourly Earnings Ratios of Full-Time Employed School Leavers 1980-1999



Source: ESRI Annual School Leavers' Surveys.

It is important to note that since the proportion of young people leaving school prior to Leaving Certificate standard (as discussed in Section 1) has declined over the decades, it is likely that those withdrawing prior to Leaving Certificate in recent years are those less academically accomplished and less well-prepared for the labour market. The findings clearly show that, in accessing employment, the experiences of the least qualified appear to be worsening over time, even though the problem is affecting fewer numbers of young people. Those leaving school unqualified appear to be facing increasing difficulty in securing employment partly reflecting a disappearance of traditional employment niches (in

⁴ Since gross earnings are not available for the survey years 1980-1985, net hourly earnings are used. Real net hourly earnings are based on nominal figures adjusted for the Consumer Price Index based on mid-May 1999 (Base 1.00).

semi- and unskilled manual and services sector employment) with the growing entry of more qualified young people into such domains.

The situation with regard to employment quality is somewhat different: the level of polarisation between the least qualified and those entering the labour market at Leaving Certificate stage appears to have narrowed over time. Two factors can be argued to account for this decline: first, given the expanding progression to third level among those securing the Leaving Certificate, those who immediately proceed to the labour market after this exam may be a somewhat more negatively selected group and perhaps less well prepared for the labour market. Second, the range of jobs (and hence earnings) occupied by Leaving Certificate qualified young people appears somewhat wider than hitherto, giving rise to higher levels of occupational overlap with less qualified labour market entrants.

Progression to Post-School Educational and Training Courses

In their year subsequent to leaving school, many school leavers do not enter the labour market directly, but pursue additional education or training courses. As expected, striking differences in participation in further education according to level of education attained are clearly observable (Figure 8). Participants in third-level courses are overwhelmingly comprised of Leaving Certificate holders, and the proportion of Leaving Certificate holders pursuing third level has risen. While in 1980/81, 36 per cent of Leaving Certificate holders progressed to further education in their year

Figure 8: Participation in Full-Time Further Education or Training, 1980-1998



Source: ESRI Annual School Leavers' Surveys.

subsequent to leaving school, the relevant figure for 1999 was more than half. The position of unqualified school leavers does appear to have improved somewhat: a participation rate of 2 per cent in 1980/81 rose to 9 per cent in 1999.

Participation of school leavers in Vocational Preparation Training Courses (including PLC courses) and post-second level State Training Programmes (such as those operated by FÁS, Youthreach and CERT) also shows considerable educational differentiation. First, these two types of training courses appear to be attracting different school leavers, particularly in more recent years: while 70 per cent of state training course participants in 1999 had secured the Leaving Certificate, over 98 per cent of their VPT/PLC course participants were similarly qualified. State training courses are to some extent compensating for the overrepresentation of Leaving Certificate holders in post-second level education courses: the pattern of participation in training courses operates to the advantage of those with few or no qualifications. However, and perhaps most notably, the level of representation of less qualified school leavers in VPT/PLC courses appears to have declined over the past 10 years, as Figure 9 displays. Over half the participants in such courses in 1988 did not hold the Leaving Certificate, this figure declined to just 2 per cent in 1998 and 1999, respectively.

Figure 9: Participation in Training Courses Without Leaving Certificate Qualifications, 1980-1998



Source: ESRI Annual School Leavers' Surveys.

Denny and Harmon (2000), also drawing on Annual School Leavers' Survey data, model the impact of second level attainment and participation in state-sponsored training on the employment and earnings of labour market entrants, along with rates on progression to higher education. While the study further illustrates

the impact of educational attainment on the probability of entering higher education or employment, results also show important gender differentiation in the impact of educational and training attainments. In particular, earnings returns to education were found to be higher for males – males were more highly rewarded. Similar trends are observed by the OECD (2002) who suggest that higher earnings returns for males relate to differences in the choice of career and occupation and the relatively high incidence of part-time work among females.

5.2. LONGER-TERM INDIVIDUAL CONSEQUENCES

The negative ramifications incurred by the decision to leave school prematurely are not confined to early labour market experiences, but are long-term, prevailing throughout life. Labour Force Survey data (1996) demonstrates that the disadvantage experience by poorly qualified youth is not confined to initial labour market attempts, but actually persists and "becomes stronger over the initial period of labour market integration" (Hannan, Smyth and McCabe, 1997). Compared to the 15-19 age cohort, they illustrate that labour market inequalities according to educational level are more pronounced by age 25-29 years. Furthermore, and in contrast to more qualified young people, the unemployment rate does not decrease with age for the least qualified (staying at 35-37 per cent).

Differentiation 5-6 Years After Leaving School

The extent to which those leaving school poorly and unqualified subsequently return to complete second-level and/or pursue further educational/training courses is particularly important. To what extent are such second-chance and recovery programmes operating to correct for such initial educational disadvantage? Recent work (Hannan, McCoy, Doyle, 2003) suggests that great strides have been made in recent years to promote the educational opportunities of the less qualified (Figures 10.1 to 10.4). Over 10 per cent of those leaving school prior to Leaving Certificate standard were found to subsequently return to achieve the Leaving Certificate in the six years after they initially left school.

However, findings also suggest that much of the post-school educational and training provision continues to build on existing second-level inequalities rather than correct for them. For instance, while vocational training courses were found to be re-distributive in participation and volume, with almost 40 per cent of those without any qualifications taking at least one such course compared to 28 per cent of those with a Leaving Certificate, the equalising process was not found to extend to successfully completing high-skill recognised courses. Such achievements were found to be



Figure 10.2: % Obtained Higher Educ Qualifications (of those not immediately proceeding to third level)



Source: ESRI Annual School Leavers' Surveys and Follow Up Surveys of School Leavers, 1986, 1992, 1998. See Hannan et al. (2003) for further details.





Figure 10.4: % Completed course & obtained recognised qualification (of those not immediately proceeding to third level) 25 20 Percentage 15 10 5 0 JC LC NQ □ 1982-87 cc Second-Level Qual 🖾 1992-97 co

Figure 10.3: % Ever participated in FT Vocational Training

1992-97 cohort

disproportionately concentrated amongst those with a Leaving Certificate. As a result the degree of occupational differentiation 5-6 years after school between those with no qualifications and others has increased over time as the unqualified become increasingly restricted to unskilled positions (Hannan *et al.*, 2003).

Longer-Term Outcomes

The implications of educational failure for longer-term social and economic outcomes in Ireland are also well documented. Drawing on the Living in Ireland Panel Survey, Layte *et al.* (2003, 2001) note the implications of poor qualifications on long-term labour market integration and success. For instance, households where the reference person was unqualified were found to be six times more likely to be persistently work poor than those where the reference person had a third level qualification. Several studies have documented the clear long-term earnings gain from educational attainment. Overall, estimates typically show that earnings returns to education in Ireland are around 8 per cent per school year, with some evidence that such returns may be increasing over time (Denny *et al.*, 2000; Barrett *et al.*, 1999; Callan and Harmon, 1999).

Other work has documented the implications of early educational departure for the risk of poverty and associated health and psychological distress indicators (Nolan *et al.*, 2002; Layte and Whelan, 2002; Layte *et al.*, 2001, 2000). In their study of poverty risk across a number of European countries, for example, Layte and Whelan (2003) illustrate the particularly strong impact of earlier (educational) disadvantage on later life chances in Ireland. Further, there is evidence that the chances of escaping poor condition and poverty actually decline over time for those without educational qualifications: their life chances deteriorated over time (Layte *et al.*, 2001, p.96).

5.3. SOCIAL COSTS OF EDUCATIONAL FAILURE

The costs associated with educational failure and early educational departure can also be assessed on the basis of the social costs, both economic (such as productivity levels and welfare dependency) and non-economic (crime levels, health, social cohesion, and so on).

Morgenroth (1999) estimates the social returns to successful educational interventions which would significantly reduce the number of young people who leave school without qualifications. The social return is calculated as the exchequer saving from resulting improvements in labour market performance, reduction in the number of lone mothers and the reduction in crime which might be achieved through such educational interventions.

The study finds substantial potential cost savings. Assuming that no student leaves school prior to Junior Certificate standard the cost savings are estimated at over 14 million euro (based on the exchequer cost saving from the resulting improvement in labour market performance, reduction in number of lone mothers and the reduction in crime). The bulk of the saving is accounted for by reductions in the costs incurred though unemployment. The study does not include health costs and housing costs which are also substantial. Finally, the study does not include the very substantial private returns to education as discussed. The study does however point to the considerable exchequer savings that could be achieved by effective interventions to counter educational disadvantage and early school leaving.

5.4. INTERNATIONAL CONTEXT

Recent work as part of a European TSER project (Hannan *et al.*, 1999; Smyth *et al.*, 2001) examined the cross-national experience of the least qualified in their transition to the labour market. In particular analysis was undertaken of the extent to which least educationally qualified groups are exposed to labour market disadvantage in different institutional systems (Scotland, the Netherlands, France, Sweden and Ireland) and the manner in which this varies according to the educational category examined and the measure of labour market disadvantage adopted.

There was some disparity in the findings with the implications of early educational departure varying according to the measure of labour market disadvantage employed with different results emerging for social exclusion/unemployment and employment quality (McCov, 2000a). Unemployment risk mirrors educational attainments across all countries. With the exception of less differentiation in France, the extent of disadvantage does not appear to vary systematically cross-institutionally. Regarding the quality of employment secured by school leavers in the different countries, findings vary according to the measure of employment quality in operation. Entry into manual-type jobs is relatively greater among the less qualified in Ireland, Scotland and the Netherlands. Entry into service class positions is significantly curtailed among the least qualified group in Ireland and Scotland. In viewing employment quality in terms of employment in the secondary sector (poorly paid, insecure jobs with few promotion or training opportunities), less qualified leavers in the Netherlands are disadvantaged. In addition, the level of earnings disadvantage experienced by the least qualified is greatest in Ireland, the Netherlands and Scotland.

In terms of changes over time (Ireland, Scotland and the Netherlands), the degree of disadvantage in terms of labour market access by the least qualified declined in the Netherlands and Scotland since the early 1980s. Some evidence of declining disadvantage in terms of employment quality is also apparent in Scotland and the Netherlands, relative to Ireland.

Publications by the OECD and arising from the International Adult Literacy Survey (IALS), further illustrate how the least qualified in the Irish labour market fare in an international setting. Figure 11 shows that the disparity in unemployment rates between the unqualified and those achieving upper-secondary or postsecondary non-tertiary levels of educational attainment are particularly strong in Ireland.



Figure 11: Unemployment Odds Ratios Less than Upper Secondary: Upper Secondary/Post Secondary Non Tertiary, 30-44 year olds, 2001

Source: OECD Education at a Glance (2002).

In addition, OECD (2002) data points to some variations in levels of labour force participation of those least qualified. Overall, labour force participation rates for females with less than upper secondary attainment are generally low relative to males and those more qualified, although inter-country variation is evident. In particular, female withdrawal from, or non-entry to, the labour market relative to males is relatively high among the least qualified in Ireland (Figure 12). While unqualified females in Ireland have a labour force participation rate which is just 63 per cent of the rate for those who have attained the Leaving Certificate, the OECD average figure is 71 per cent. Furthermore, as the OECD observe, in countries where fewer women work such as Ireland, as well as Spain and Turkey for example, upper secondary graduates and, more notably, pre-upper secondary leavers are considerably underrepresented in the labour market.

Overall, while some disparity is apparent, the position of the least qualified in Ireland is less than favourable and levels of polarisation according to educational level are relatively high in a European and international context.



Figure 12: Ratios of Labour Force Participation Rates of Women by Educational Attainment 25-64 years, 2001

Source: OECD Education at a Glance (2002).

5.5. SUMMARY: CONSEQUENCES OF INEQUALITY IN EDUCATIONAL OUTCOMES

This paper has reviewed a range of literature indicating the significant consequences of education for a range of short- and long-term outcomes, including access to employment, employment quality, mobility, earnings and experience of poverty. Importantly the discussion has also looked at changes over time in such relationships, particularly in the context of rapidly increasing educational participation, greater retention levels and the expansion of 'two-and-a-half' level and second-chance provision. The implications of educational qualifications for successful labour market integration have, if anything, become more pronounced over time. As a result, those leaving school unqualified or poorly qualified are facing increasing difficulty in securing (quality) employment. Their initial transition difficulties are compounded by the nature and provision of post-school and second-chance education/training opportunities which tend to reinforce, rather than compensate for, initial inequalities in educational outcomes.

In an international context, levels of polarisation in labour force participation (particularly for women) and labour market success and the disadvantage experienced by the least qualified are particularly strong in Ireland. While such gender differentials partly reflect lower overall levels of female labour force participation in Ireland, other factors also appear to be operating.

Some discussions have related the polarisation in labour market success to overall labour market conditions and the type of labour market operating, i.e. whether it is highly regulated. As the OECD observe (1998), in some countries high unemployment among the less qualified reflects generally difficult labour market conditions (such as in Hungary and Poland), while in others differentials are greater where labour markets are less regulated (such as the US). Conversely, they note where labour market conditions are particularly favourable (including Austria, Iceland, the Netherlands, Norway), jobs appear to be available for workers with low as well as high educational attainment. This pattern does not hold for Ireland, however, where strong labour market conditions do not correspond with lower unemployment differentials between more and less educated workers. Rather other factors appear to be important in Ireland in increasing levels of polarisation. First, the nature of the educational system: the hierarchical and vertically differentiated nature of the system has traditionally created few 'alternative' nonacademic opportunities for young people and allowed few secondchance or alternative routes into further and alternative education and training for those leaving the system early (see Hannan et al., 2003). In addition, provision of in-firm training for those less qualified is also lacking (O'Connell and Lyons, 1995; Hannan et al., 2003).

Second, the linkages between the educational system and the labour market: there has been a persistent reliance by employers on the terminal Leaving Certificate examination results and a strong visibility of Leaving Certificate grades. In addition, there is evidence that employers select the most qualified, even for relatively routine jobs, thereby giving the least qualified little opportunity to establish themselves on the labour market. In addition, there is a tendency for employers in the secondary sector to fill positions through hiring highly qualified school and college leavers often on a temporary basis as they search for 'suitable' employment. More recently, less qualified leavers may have to compete with more highly qualified foreign workers and students working on a parttime basis, which may further expose the relative position of the least qualified.

6. Conclusions

In the Irish context, socio-economic inequalities persist in educational participation and achievement levels. The period since the early 1990s has seen a shift in Irish educational policy from a concern with equality of educational opportunity to a focus on compensatory measures to counter educational disadvantage. This shift has, at least in part, been reflected in increased educational expenditure over the period. The identification of 'best practice' in countering disadvantage in the Irish context has been hindered by the lack of systematic evaluation of the effectiveness of existing measures. However, a number of priorities for action can be highlighted:

- 1. There is a need for greater co-ordination of existing measures to counter educational disadvantage. The fact that the programmes fall under the jurisdiction of several government departments and State agencies and apply different criteria in identifying disadvantage reduces the potential for the development of an effective approach to tackling educational inequality.
- 2. International experience has shown that early intervention has positive effects on student outcomes and is a cost-effective way of countering educational disadvantage (see, for example, Grissmer *et al.*, 2000). However, early childhood education for disadvantaged groups remains limited in scope in the Irish context. The provision of high quality early childhood education, particularly for children from more disadvantaged backgrounds, must be a priority for future policy development.
- 3. Because of the importance of early intervention, a continued reduction in the disparity between per capita spending at the tertiary and primary levels should take place.
- 4. At primary and secondary level, the focus has mainly been on targeting disadvantaged schools which means that students in non-disadvantaged schools do not receive extra resources. A more gradated approach should be used in which schools are allocated additional resources on the basis of the number of students from disadvantaged backgrounds. The adequacy of existing resources for disadvantaged schools should be examined.
- 5. Any interventions within the educational system should be underpinned by tax and social welfare measures designed to bring about greater equity in life-chances.

In the Irish context, initial educational qualifications are highly predictive of employment chances, quality of employment and pay levels not only in the early labour market career but throughout adult working life. The benefits of education accrue not only to individuals but to the broader society with increased educational investment associated with a reduction in welfare costs and crime levels. It is clear, therefore, that continuing to increase educational expenditure, particularly on younger age groups, will have positive benefits for the life-chances of individuals as well as for society as a whole.

REFERENCES

- ADVISORY COMMITTEE ON THIRD-LEVEL STUDENT REPORT/DE BUITLEIR Report 1993. Report of the Advisory Committee on Third-Level Student Support. Dublin: Stationery Office.
- AREA DEVELOPMENT MANAGEMENT (ADM), 2000. Preventive Education Strategies to Counter Educational Disadvantage. Dublin: ADM Ltd.
- BARRETT, A., T. CALLAN, B. NOLAN, 1999. "Returns to Education in the Irish Youth Labour Market", *Journal of Population Economics*, Vol. 12, pp. 313-326.
- BERNARDO, J. and I. NICAISE, 2000. "Educational priority policies", in Ides Nicaise, (ed.), *The Right to Learn: Educational Strategies for Socially Excluded Youth in Europe*, Bristol: Policy 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*, Vol. 3, No. 4.
- BOUDON, R., 1974. Education, Opportunity and Social Inequality. New York: Wiley.
- BREEN, R., D.F. HANNAN and R. O'LEARY, 1995. "Returns to Education: Taking Account of Employers" Perceptions and Use of Educational Credentials", *European Sociological Review*, Vol. 11, No. 1, pp. 59-74.
- CALLAN, T. 1992. "Who Benefits from Public Expenditure on Education?" Dublin: ESRI Working Paper No. 32.
- CALLAN, T. and C. HARMON, 1999. "The Economic Return to Schooling in Ireland", *Labour Economics*, Vol. 6, No.4, pp. 543-550.
- De GRAAF, P.M. and H.B.G. GANZEBOOM, 1993. "Family Background and Educational Attainment in the Netherlands for the 1891-1960 Birth Cohorts", in Y. Shavit and H.P. Blossfeld (eds.), *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*, Boulder: Westview Press.
- DENNY, K. and C. HARMON, 2000. "The Impact of Education and Training on the Labour Market Experiences of Young Adults". Institute for Fiscal Studies, Working Paper 00/08.
- DENNY, K., C. HARMON and P.J. O'CONNELL, 2000. *Investing in People*, Policy Research Series No. 38. Dublin: The Economic and Social Research Institute.
- DENNY, K., C. HARMON and S. REDMOND, 2000. "Functional Literacy, Educational Attainment and Earnings: Evidence from the International Adult Literacy Survey". Institute for Fiscal Studies, Working Paper 00/09.
- DEPARTMENT OF EDUCATION, 1995. Charting Our Education Future: White Paper on Education. Dublin: Stationery Office.
- DEPARTMENT OF EDUCATION AND SCIENCE, 1998. The Education Act 1998, Dublin: Stationery Office.
- DEPARTMENT OF EDUCATION AND SCIENCE, 1999, Ready to Learn: White Paper on Early Childhood Education, Dublin: Stationery Office.
- DEPARTMENT OF EDUCATION AND SCIENCE, 2001. Key Education Statistics, Dublin: Stationery Office.
- DEPARTMENT OF EDUCATION AND SCIENCE, 2001. *Statistical Report*, Dublin: Stationery Office.

- DEPARTMENT OF EDUCATION AND SCIENCE, 2001. "The Allocation of Teachers to Second Level Schools". Report of the Expert Group to the Minister for Education and Science, Dublin: http://www.education.ie/servlet/blobservlet/pp_teacher_allocations. pdf.
- DEPARTMENT OF EDUCATION AND SCIENCE, 2003. Summary of All Initiatives Funded by the Department to Help Alleviate Educational Disadvantage. Dublin: Department of Education and Science.
- DEPARTMENT OF FINANCE, 2003. Revised Estimates for Public Services, Dublin: Stationery Office.

DRUDY, S. and K. LYNCH, 1993. Schools and Society in Ireland, Dublin: Gill and Macmillan.

- EDUCATIONAL DISADVANTAGE COMMITTEE, 2003. Identifying Disadvantage for the Purpose of Targeting Resources and Other Supports. Submission to the Minister for Education and Science. Dublin: Educational Disadvantage Committee.
- 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.
- ERIKSON, R., 1996. "Explaining Change in Educational Inequality Economic Security and School Reforms", in R. Erikson and J.O. Jonson (eds.), *Can Education Be Equalized? The Swedish Case in Comparative Perspective*, Boulder: Westview Press.
- ERIKSON, R. and J. O. JONSSON, 1996. "Explaining Class Inequality in Education: the Swedish Test Case", in R. Erikson and J.O. Jonson (eds.), *Can Education Be Equalized? The Swedish Case in Comparative Perspective*, Boulder: Westview Press.
- ESF PROGRAMME EVALUATION UNIT, 1997. Preventive Actions in Education. Dublin: ESF Evaluation Unit.
- EURYDICE, 2001. Key Topics in Education in Europe, Volume 2: Financing and Management of Resources in Compulsory Education. Brussels: Eurydice.
- EXPERT GROUP TO THE MINISTER FOR EDUCATION AND SCIENCE, 2001. *The Allocation of Teachers to Second-level Schools*. Dublin: Department of Education and Science.
- 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.
- GAMORAN, A., 1996. "Student achievement in public magnet, public comprehensive and private city high schools", *Educational Evaluation and Policy Analysis*, Vol. 18 No. 1: pp. 1-18.
- GOMBY, D.S., M.B. LARNER, C.S. STEVENSON, E.M. LEWIT and R.E. BEHRMAN, 1995. "Long-term outcomes of early childhood programs: analysis and recommendations", *The Future of Children*, Vol. 3, No. 5, pp. 6-24.
- GOVERNMENT OF IRELAND, 1999. Ready to Learn: White Paper on Early Childhood Education, Dublin: Government Publications.
- GREENWALD, R., L.V. HEDGES, R.D. LAINE, 1996. "The effect of school resources on student achievement", *Review of Educational Research*, Vol. 66, No. 3, pp. 361-396.
- GRISSMER, D.W., A. FLANAGAN, S. WILLIAMSON, 1997. Does Money Matter for Minority and Disadvantaged Students? Assessing the New Empirical Evidence. California: Rand.
- GRISSMER, D.W., A. FLANAGAN, J. KAWATA, S. WILLIAMSON, 2000. Improving Student Achievement: What State NAEP Test Scores Tell Us. California: Rand.

- HANNAN, D.F., B. McCABE and S. McCOY, 1998. *Trading Qualifications for Jobs: Overeducation and the Irish Youth Labour Market*. Dublin: The Economic and Social Research Institute in association with Oak Tree Press.
- HANNAN, D.F., S. McCOY and A. DOYLE, 2003. *Expanding Post-School Learning Opportunities: Nature and Effects of Growth in Post-School Education/Training in the 1990s.* Dublin: The Economic and Social Research Institute.
- HANNAN, D.F., E. SMYTH and B. McCABE, 1997. "Educational Achievement and Labour Market Exclusion in Ireland", Paper presented at Network on Transitions in Youth, Dublin, September.
- HANNAN, D.F., E. SMYTH, S. McCOY, *et al.*, 1999. "A Comparative Analysis of Transitions from Education to Work in Europe (CATEWE)". Dublin: ESRI Working Papers nos. 118(a) & (b).
- 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 in association with The Economic and Social Research Institute.
- HANUSHEK, E.A. 2002. "The Failure of Input-based Schooling Policies". Cambridge, MA: NBER Working Paper 9040.
- HEDGES, L.V, R.D. LAINE, and R. GREENWALD, 1992. "Does money matter?: metaanalysis of studies of the effects of differential school inputs on student outcomes", *Educational Researcher*, Vol. 23, No. 3, pp. 5-14.
- IACOVOU, M., 2001. Class Size in the Early Years: Is Smaller Really Better? Colchester: ISER Working Papers.
- JONES, J.T. and R.W. ZIMMER, 2001. "Examining the impact of capital on academic achievement", *Economics of Education Review*, Vol. 20, No. 6, pp. 577-588.
- 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.
- LAYTE, R. and C.T. WHELAN, 2002. "Cumulative Disadvantage or Individualisation? A Comparative Analysis of Poverty Risk and Incidence", *European Societies*, Vol. 40, No. 2, pp. 209-233.
- LAYTE, R., B. MAÎTRE, B. NOLAN, D. WATSON, C.T. WHELAN, J. WILLIAMS and B. CASEY, 2001. *Monitoring Poverty Trends and Exploring Poverty Dynamics in Ireland*, Policy Research Series Paper No. 41, Dublin: The Economic and Social Research Institute.
- LAYTE, R., B. NOLAN and C.T. WHELAN, 2000. "Trends in Poverty", in B. Nolan, P.J. O'Connell and C.T. Whelan (eds.), *Bust To Boom? The Irish Experience of Growth and Inequality*, Dublin: Institute of Public Administration.
- LAYTE, R., H. RUSSELL, P. O'CONNELL, B. MAÏTRE and C.T. WHELAN, 2003. The Dynamics of Household Joblessness in a Booming Economy, Dublin: The Economic and Social Research Institute Seminar Paper.
- LYNCH, K., 1999. Equality in Education. Dublin: Gill and Macmillan.

- McCOY, S. and J. WILLIAMS, 2001. "1999 Annual School Leavers' Survey of 1997/98 Leavers", Dublin: Dept of Education and Science, Dept of Enterprise, Trade and Employment and The Economic and Social Research Institute.
- McCOY, S., 2000a. "Relative Labour Market Disadvantage Amongst the Least Qualified in Ireland, Scotland, the Netherlands, France and Sweden", in A Comparative Analysis of Transitions from Education to Work in Europe Based on National School Leavers' Surveys, Report to the European Commission.
- McCOY, S., 2000b. "Do Schools Count: Key School Structural and Process Influences on Early School Leaving?" The Queen's University Belfast, Unpublished Ph.D. thesis.
- MORGENROTH, E., 1999. "Estimated Social Rates of Return to Educational Interventions to Prevent Early Educational Failure", Report to the Department of Education and Science.
- NESF, 2002. Early School Leavers. Dublin: NESF.
- NOLAN, B., B. GANNON, R. LAYTE, D. WATSON, C. T. WHELAN, J. WILLIAMS, 2002. Monitoring Poverty Trends in Ireland: Results from the 2000 Living In Ireland Survey, Policy Research Series No. 45. Dublin: The Economic and Social Research Institute.
- O'CONNELL, P. and M. LYONS, 1995. Enterprise-Related Training and State Policy in Ireland: The Training Support Scheme, Policy Research Series No. 25, Dublin: The Economic and Social Research Institute.
- OECD, 1998. Human Capital Investment. An International Comparison. Paris: OECD.
- OECD, 2002. Education At A Glance: OECD Indicators 2002. Paris: OECD.
- OECD, 2003. Economic Surveys: Ireland. Paris: OECD.
- PRICEWATERHOUSECOOPERS, 2001. Building Performance: An Empirical Assessment of the Relationship between Schools' Capital Investment and Pupil Performance. London: DfEE Research Report No. 242.
- PUMA, M.J., N. KARWEIT, C. PRICE, A. RICCIUTI, W. THOMPSON, M. VADEN-KIERNAN, 1997. Prospects: Student Outcomes. Final Report. Washington, D.C.: Dept. of Education.
- RAFTERTY, A.E. and M. HOUT, 1993. "Maximally Maintained Inequality: Expansion, Reform and Opportunity in Irish Education, 1921-75", *Sociology of Education*, Vol. 66, pp. 41-62.
- RYAN, S., 1994. Home-School-Community Liaison Scheme: Final Evaluation Report. Dublin: Educational Research Centre.
- SEXTON, J.J., A. CANNY, G. HUGHES, 1996. Changing Profiles in Occupations and Educational Attainment. Dublin: FÁS/The Economic and Social Research Institute Manpower Forecasting Studies.
- SHAVIT, Y. and H.P. BLOSSFELD, (eds.), 1993. Persistent Inequality: Changing Educational Attainment in Thirteen Countries. Boulder: Westview Press.
- SHAVIT, Y. and W. MÜLLER (eds.), From School to Work. Oxford: Clarendon Press.
- SMYTH, E., 1999a. "Educational inequalities among school leavers in Ireland 1979-1994", *The Economic and Social Review*, Vol. 30, No. 3, pp. 267-284.
- SMYTH, E., 1999b. Do Schools Differ? Academic and Personal Development among Pupils in the Secondlevel Sector. Dublin: Oak Tree Press/The Economic and Social Research Institute.
- SMYTH, E., 2001. "Strategies to Counter Educational Disadvantage in Ireland: A Policy Analysis". Paper to the American Educational Research Association Annual Conference, Seattle.

- SMYTH, E., M. GANGL, D. RAFFE, *et al.*, 2001. "A Comparative Analysis of Transitions from Education to Work in Europe (CATEWE): Final Report." Report to the European Commission.
- 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.
- SMYTH, E. and B. McCABE, 1997. Educational Policy for Socially Excluded Children and Young People: Ireland. Report under the Socrates Project.
- SWEETMAN, O., 2002. "College Attendance, Tuition and Family Income," Maynooth University: Working Paper N118/10/02.
- TECHNICAL WORKING GROUP, 1998. Second-Level Funding: Report of the Technical Working Group. Dublin: Brunswick Press.
- WENGLINKSY, H., 1998. "Finance equalization and within-school equity", *Educational Evaluation and Policy Analysis*, Vol. 20, No. 4, pp. 269-283.