WORK INCENTIVES, POVERTY AND WELFARE IN IRELAND

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EXECUTIVE SUMMARY

Context

Public policy in Ireland aims for "…the efficient development of the economy and social justice".[1] These goals can be complementary, but there are also times when policy faces trade-offs between equity and efficiency. Striking a balance when goals come into conflict depends in part on the relative weight placed on the objectives, but also on the nature of the trade-off between them. Providing better information on the nature of the trade-off between income support and financial incentives to work is a central theme of this study.

A series of reports monitoring poverty outcomes – both in terms of "consistent poverty" and the "at risk of poverty" measure based on relative income poverty lines – has been undertaken as inputs to the National Anti-Poverty Strategy.[2] This study complements that body of work by focusing on the evolution of financial incentives to work over the same period. The trade-off between income support and financial incentives to work can be particularly sharp for families with children. For this reason we focus in particular on international comparisons relating to child poverty and the level and structure of child income support, to glean lessons for Irish policy.

Measuring Work Incentives

Our analysis of work incentives is built around two main measures. The first is the incentive to take up employment or to remain in employment. The most widely used measure of this aspect of financial incentives is the replacement rate, measuring the ratio of net family income when unemployed to net family income in employment. The second is the incentive, when in employment, to increase earnings – whether by working additional hours, increasing work effort, adding to skills, or otherwise seeking promotion or a higher paying job. Recent UK debate has paid particular attention to this "incentive to progress".[3]

Looking first at replacement rates, we use two different approaches to gain insights into how these have evolved over time. The first is to examine the replacement rate facing a hypothetical worker, with standard unemployment payments if out of work, and a job at the average industrial wage. Family circumstances affect the level of the replacement rate so we consider a number of different cases (single, married without children, married with 2 or with 4 children). The second approach is to estimate replacement rates for a sample of actual families, using *SWITCH*, the ESRI tax-benefit

[1] Part of the terms of reference of the National Economic and Social Council.

[2] Layte *et al.* (2001); Nolan *et al.* (2002); Whelan *et al.* (2003); Maître *et al.*, (2006).

[3] Adam *et al.* (2006).

model. Under this approach we can take account of the different levels of earnings individuals can expect from the labour market, depending on their educational qualifications and age. We can also take account of variation in family composition and other factors affecting the replacement rate. The approach yields a distribution of replacement rates, which is of particular value as it may be that high or very high replacement rates are of particular interest. By contrast, the earlier method yields replacement rates at a particular income level, usually average earnings; this can, however, be useful in tracking changes in replacement rates over time.

To date, measures of replacement rates in Ireland have focused on standard cash benefits (Unemployment Benefit and Unemployment Assistance). Here we extend the microsimulation approach by modelling entitlements to two "auxiliary" benefits, which are received by much higher proportions of the unemployed than of the employed, and may, therefore, have a significant influence on the balance of resources as between in-work and out-of-work situations. The *SWITCH* model has been extended:

- to model eligibility for a medical card, and to allow for an addition to income to take account of the "expected" value of the card;
- to model entitlements under the Rent and Mortgage Interest Supplement scheme, which can involve substantial payments towards housing costs.

Replacement Rates

We report, first of all, on "cash" replacement rates facing the unemployed; in order to maintain comparability with results for earlier years, which do not include the extensions to deal with medical cards and Rent and Mortgage Interest Supplement. The microsimulation evidence points to a rise in the incidence of high replacement rates between 2000 and 2005, though levels are still lower than in the late 1980s and early 1990s. Calculations of replacement rates at the average industrial wage (and at half of that wage) confirm this picture, with the growth in Unemployment Benefit and Assistance payment rates outpacing growth in net earnings over the period.

Results also indicate that the incidence of high replacement rates may be significantly higher when the value of medical cards and of rent/mortgage interest supplement are taken into account. However, recent policy initiatives in each of these areas (the GP visit card or "doctor-only" medical card, and the Rental Accommodation Scheme) will have acted to moderate this effect, by making it more likely that persons in low-income employment can obtain some benefit. Indeed, it should be noted that there are transitional concessions, particularly for the long-term unemployed, which act so as to ensure that loss of benefit is not complete and immediate. The replacement rates calculated here can be thought of as either an "upper bound" to the true but unknown replacement rate, or an

approximation to the long-term incentives faced by unemployed individuals, when transitional concessions are withdrawn.

Turning to the incentive to remain in work, as measured by the replacement rates facing those currently in employment, we find that the distribution for Ireland is broadly similar to that in the UK, as measured by Adam *et al.* (2006). However, it seems likely that the incentive to take up employment, as measured by replacement rates facing the unemployed, is somewhat weaker in Ireland.[4]

Evidence on the extent to which replacement rates influence the duration of unemployment spells, and thereby the level of unemployment, is mixed. Both in Ireland and elsewhere, some time-series studies indicate quite a strong association between the level of replacement rates and the level of unemployment. As against this, there is evidence from three sources indicating that high replacement rates are compatible with low unemployment. First, during recent years in Ireland replacement rates have risen quite markedly, but unemployment has remained low. Second, studies at household level in Ireland (Layte and Callan, 2001) and elsewhere have found that while the impact of replacement rates on unemployment is statistically identifiable and significant, it is also rather small, and accounts for rather small proportions of the large movements in unemployment actually observed during the 1980s and 1990s. Third, the policy and labour market regime in Denmark and some other Scandinavian countries clearly demonstrates that high replacement rates, providing effective income support to the unemployed, can coexist with low unemployment rates (OECD, 2006). A key element in achieving this combination is a strong policy on activation – an area in which Irish policy has developed significantly over recent years.

Effective Marginal Tax Rates

We also use microsimulation techniques to provide a more comprehensive measure of the "incentive to progress" for those in employment. Much attention is focused on headline numbers such as the standard and top tax rates. But the highest effective tax rates tend to arise from the withdrawal of welfare benefits, including withdrawal of such benefits from a spouse or partner. Our study shows that the distribution of effective marginal rates of tax, including withdrawal of welfare benefits where applicable, is rather similar in Ireland and the UK. One of the main differences is that the more extensive use of an income-targeted child payment (Child Tax Credit) in the UK leads to a significantly higher proportion of the UK's working population facing high effective marginal tax rates.

[4] Up to date figures are not available for the UK, but see Duncan and Giles (1997) and Callan and Nolan (1997).

Child Poverty

In Ireland, as in the UK and the US, there have been particular difficulties in providing income support to families with children, while maintaining a strong incentive to work. Much attention has been given to the "in-work benefit" approaches of the US (Earned Income Tax Credit) and the UK (Family Credit and its successors). We take a broader approach here, looking at a wider range of countries, and identifying those which have achieved low child poverty rates. We then try to find commonalities between their policy regimes, as against the regimes of countries which are less successful.

Comparing the "at risk of poverty" measure across EU and other industrialised countries, we find that there are strong links between the risks of child income poverty and the overall poverty risk. In particular, the countries with the best record on the reduction of child poverty – the Scandinavian countries – also tend to have the lowest rates of overall poverty. The "best practice" approach to improving EU performance in this area suggests close attention should be given to the policies and structures of the best-performing countries. The logic of the approach is that other countries should compare their approaches with those of the Scandinavian countries – which are the best performers in this regard not only in Europe but in global terms.

By contrast, much of the debate on child poverty has focused on restructuring income-tested income support for families with children, with attention centring on recent initiatives in English-speaking countries. While some reductions in poverty have been achieved by these initiatives, it is clear that rates of child income poverty in the English speaking countries remain above those in most European countries, and well above Scandinavian levels. This approach is associated with a tendency to view child poverty as a problem to be dealt with, in the main, through child income support. The problem with this is that children are not poor on their own – they have a parent or parents living in poverty with them. So avoidance of poverty requires that parents have adequate incomes too.

Tackling child income poverty requires a strategy that takes a broad view of welfare income supports, and "activist" measures to increase participation in employment. Solutions lie not with welfare alone, or employment alone, but a combination of both.

Child Income Support

If, for whatever reasons, a shift in the direction of a Scandinavian policy regime is ruled out then the issue becomes one of policy design under "second-best" conditions. Even in these circumstances, policy to combat child poverty must extend beyond child income supports and encompass measures which seek to facilitate parents in obtaining employment. But here we explore the impact of recent changes in child income support policy, and the potential impact of a policy innovation currently under discussion at partnership level.

Looking first at the *impact of recent changes in child income support policies*, we examine the impact of changes since 2000. These include very substantial increases in Child Benefit payments, coupled with a freeze on the Child Dependant Addition rates, and the introduction of the Early Childcare Supplement. In order to isolate the impact of policy changes we need to hold constant the population, and all policies other than child income support. We do this using the *SWITCH* tax-benefit model. This analysis suggests that changes in child income supports led to a reduction of just over 4 percentage points in the incidence of child income poverty,[5] or a fall of one-fifth in the head count measure of poverty. The "poverty gap" measure which takes account of the depth of income poverty for those experiencing it falls rather more, by about one-third, because it also takes into account those who are brought closer to but not above the poverty threshold.

Turning to *potential future policy changes,* we examine an innovation along the lines currently under discussion at partnership level: an income-tested child income support, replacing the child dependant addition payments, and (partly) replacing the Family Income Supplement with a more automatic payment. For ease of reference, we term this structure a "Child Benefit Supplement" as Child Benefit continues to be paid in respect of all children, while the Supplement is payable on an income-tested basis. A Child Benefit Supplement set at €33 per week, with an income limit of about €500 per week and a withdrawal rate of 20 per cent is found to have the following "cash" or first-round impact:

- Such a policy change is estimated to cost more than €450 million per annum – equivalent to the cost of a 20 per cent rise in universal Child Benefit.

- The direct impact of the introduction of a Child Benefit Supplement on this scale is estimated as reducing child income poverty (at 60 per cent of median income) by almost 4½ percentage points.

- Expenditure on Family Income Supplement would be reduced by about one-third, still leaving a substantial FIS scheme in place.

How is this reduction in relative income poverty achieved? One key difference with respect to the existing structure is that it is assumed that the new Child Benefit Supplement is paid to all those who qualify, and only to those who qualify. Thus, it is assumed that the Child Benefit Supplement does not experience the problems with take-up which have dogged the Family Income Supplement scheme On the other hand, there is also an implicit assumption that the new benefit will be given only to those who are entitled to receive it. The UK experience with tax credits suggests that this is not easily achieved. The House of Commons Treasury Committee (2006) noted that about one-third of all tax credit awards were

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[5] This is at the 60 per cent of median income cut-off.

overpaid, at an average cost per family of about UK£1,000. Careful attention to these administrative dimensions of a Child Benefit Supplement is clearly warranted if the potential benefits are to be gained.

It is important also to remember that in the broader picture, countries emphasising such income-tested schemes fare less well than those operating the Scandinavian model of a welfare state, with generous welfare payments and a strong activation policy which encourages unemployed persons to undertake training and seek employment. This combination helps to improve the trade-off faced by policy, and can lead to outcomes which rank well internationally in terms of both equity and efficiency.

GLOSSARY

"Basic" deprivation: being unable to afford basic necessities, measured by a set of eight non-monetary deprivation indicators including a warm overcoat, a second pair of shoes, or heating the house adequately in the winter.

Child Benefit: a monthly payment, payable regardless of a person's income or social insurance record, to the parents or guardians of children under 16 years of age, or under 19 years of age if the child has a disability or is in full-time education or FÁS Youthreach training. The same monthly rate applies for the first and second child, with an increased rate applying to third and subsequent children. It is payable at one and a half times the monthly rate for twins, and at double the monthly rate for triplets and other multiple births.

Consistent poverty: a household that is both below a relative income threshold and reports "basic deprivation" is considered to be consistently poor.

Equivalence scale: a measure of household size and composition used in adjusting household income for the differences in "needs" associated with differing size and composition; for example, a value of 1 can be assigned to the first adult in the household, a value of 0.66 to each additional adult, and a value of 0.33 to each child, and these summed to give the number of "adult equivalents" it contains; equivalised income is then derived by dividing household disposable income by that number. Disposable income is all income received by household members from earnings, self-employment (including farming), rent, interest, dividends, and social welfare transfers, after deduction of income tax and employee social insurance contributions.

European Community Household Panel (ECHP): a longitudinal survey organised by Eurostat, the Statistical Office of the European Communities, and carried out in most of the then member states of the EU-15 from 1994 to 2001.

EU-SILC: EU Survey on Income and Living Conditions, a common framework for the systematic production of statistics on income and living conditions, across the Member States; the survey to produce the statistics required for Ireland is being carried out by the CSO since the second half of 2003.

Family Income Supplement (FIS): a weekly tax-free payment for families, including one-parent families, at work on low pay. To qualify for this payment recipients must:

- be an employee in paid full-time employment which is expected to last for at least 3 months;
- work at least 19 hours every week, or 38 hours every fortnight;

- have at least one qualified child (any child under age 18 or aged 18 to 22 years if in full-time education) who normally lives with them and/or is supported by them;
- have an average weekly family income below the income limits set for their family size.

If two people are married or living together as husband and wife they can combine their hours worked and their income will be added together when determining the family income limit.

Increases For Dependants: most weekly social welfare payments are made up of a personal rate for the recipient and extra amounts for their spouse/partner or any child. These extra amounts are known as an Increase for a Qualified Adult (IQA) and Child Dependant Increase (CDI) respectively. (Terms formerly used to describe these increases in payments include Child Dependant Additions (CDAs), Adult Dependant Additions (ADAs) and Qualified Adult Additions (QAA)).

If a welfare recipient has a spouse or partner who is considered a Qualified Adult they may receive an IQA. This may be the case if the spouse or partner's sole income is from certain social welfare or Health Service Executive (HSE) payments, including Child Benefit and Supplementary Welfare Allowance (SWA). If the welfare recipient is divorced or separated and they support their former spouse, they may claim an IQA for them if they are paying them a certain amount of maintenance a week, if they are not living with someone as husband and wife, and if their income does not exceed certain limits. Where the spouse or partner earns over the limit (currently €88.88 per week) but less than a specified amount (currently €220.00 per week), the welfare recipient continues to get an IQA but at a reduced rate.

An IQA may also be paid if the welfare recipient is wholly or mainly maintaining their child(ren) if they are age 16 years or over, are living in their household, and do not have a weekly income of more than the specified limit. Only one increase for a qualified adult is payable on a claim.

Most social welfare payments provide for an increase in respect of children who are ordinarily resident in the State and who satisfy the condition as to age. A full rate CDI is payable where the claimant has no spouse or partner, is separated, or is in receipt of an IQA (whether it is at the full rate or at the reduced rate) in respect of the spouse. A half-rate CDI is payable where the claimant is living with a spouse or partner who is not a Qualified Adult. A CDI is not payable if the child is getting a social welfare payment or if the recipient's spouse or partner has a weekly income of €350 (from January 2005) or more.

Mean: the arithmetic average.

Median: the point which divides a distribution in two – for example, the income level above and below which half the recipients fall.

Relative income poverty: falling below an income threshold derived as a proportion (for example, 50 per cent or 60 per cent) of mean or median income.

Rent or Mortgage Interest Supplement (RMIS): a weekly supplementary payment under the Supplementary Welfare Allowance (SWA) scheme. SWA provides a basic weekly allowance to eligible people who have little or no income. If someone has claimed a social welfare benefit or pension but it has not yet been paid and they have no other income, they may qualify for SWA while they are awaiting payment.

People with an income, whether from the basic SWA or otherwise, that is too low to meet certain special needs may also qualify for a weekly supplement payment. One such need is rent/mortgage interest payments. The amount of the supplement is calculated by the HSE's Community Welfare Officer and generally ensures that the recipient's income after paying their rent or mortgage interest does not fall below a minimum level.

Unemployment Assistance (UA) and Unemployment Benefit (UB): people who are aged 18 years or over and are unemployed in Ireland may be paid either Unemployment Assistance (UA) or Unemployment Benefit (UB). To qualify for either UA or UB, recipients must be unemployed (i.e. for at least 3 days in each period of 6 consecutive days), be under 66 years of age and be capable of, available for and genuinely seeking work.

UB is a weekly payment made to people who were paying Pay Related Social Insurance (PRSI) before they lost their job. To qualify for UB people must have lost at least one day's employment including a loss of income.

If an unemployed person does not qualify for UB because they have not made sufficient PRSI contributions, or if they have used up their entitlement to UB, they may be paid UA, which is also a weekly payment but is means tested.

1. INTRODUCTION

Strong growth over the past decade has seen living standards rise, a sharp fall in the proportion of the population experiencing "consistent poverty"[6] i.e., falling below a fixed proportion of median income and also experiencing deprivation of one or more of a set of basic items or activities.[7] Over the same period the proportion of the Irish population "at risk of poverty"[8] i.e., having incomes below a fixed proportion of average or median income, has risen somewhat. As the consistent poverty measure forms the basis of targets adopted by the National Anti-Poverty Strategy (NAPS), it has received most attention.[9] There are, however, several reasons why the "at risk of poverty" measure should also be considered:

1. The National Anti-Poverty Strategy's "poverty impact assessment" procedures play a key role in implementing the strategy. Under these procedures policy proposals are assessed not only to gauge their likely impact on poverty, but also their impact "…on inequalities which are likely to lead to poverty" (Office for Social Inclusion, 2006). The "at-risk-of-poverty" measure is clearly relevant in this context.

2. While the NAPS targets are set in terms of the "consistent poverty" measure, there are commitments at EU level which relate to the EU "best practice" in terms of the "at risk of poverty" measures.

3. More fundamentally, the "at risk of poverty" measures provide a way of measuring poverty which automatically ensure that poverty standards rise in line with real income growth. Most would agree that poverty standards of a century ago could no longer be used to define what constitutes poverty in present-day society: it is not enough that the poor have experienced real income gains over the past century (welcome though this is) if they have not got the resources to participate fully in contemporary society. A corollary of this is that poverty standards must also be

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[6] The concept of consistent poverty was developed by Nolan and Whelan (1996) and adopted as the basis for measuring and monitoring poverty levels by the National Anti-Poverty Strategy.

[7] For details see Whelan, Nolan and Maître (2006).

[8] The term "at risk of poverty" was adopted by the EU to describe the proportion of the population falling below certain proportions of median income, recognising that not all of those falling below such income cut-offs would be classed as "poor".

[9] It should be noted that Ireland is one of a small number of countries which has set a target for poverty reduction in this way. More recently the UK has set a target for the reduction of child poverty, but has no specific target for the general population.

adjusted over shorter periods of time. The "at risk of poverty" measure incorporates a clear and consistent approach to this issue.

These arguments make a strong case for including the "at risk of poverty" measure alongside the consistent poverty measure. Nolan (1999, 2000) proposed a set of tiered and inter-related poverty reduction targets along these lines:

(a)   Priority is given to ensuring that those on low incomes see their real incomes rise, and their deprivation levels (using a fixed set of indicators) decline.

(b)   Next, relative incomes and deprivation levels using a set of deprivation indicators which changes as far as possible in line with expectations should produce a decline in the combined income/deprivation measure.

(c)   Finally, the proportion of the population falling below relative income poverty lines should be declining (Nolan, 2000, p.14)

These considerations make it clear that the "at risk of poverty" or "relative income poverty" measure merits attention. In this paper, we will concentrate exclusively on this measure, for practical reasons. When assessing proposed policy changes it is possible, using a tax-benefit model, to simulate the first-round impact of tax and welfare policy changes on disposable incomes and on measures of financial work incentives. These changes in disposable income may, of course, have an impact on deprivation. But this indirect effect cannot be readily quantified, so in this analysis we focus exclusively on the impacts on income and financial work incentives.

Relative income poverty rates in Ireland have, over a sustained period, been towards the high end of the EU spectrum. The analysis in Callan *et al.* (2004) indicated that a key factor explaining the performance of the "low poverty" countries – the Scandinavian countries together with some continental European countries such as the Netherlands and Austria – is the strong and comprehensive income support system in place in those countries. Comparison between Ireland, one of the countries with the highest relative income poverty, and Denmark, one of the countries with the lowest poverty risks, found that differences in the welfare and income tax systems could account for about half of the gap between Irish and Danish relative income poverty rates.

Moving towards a Danish-style system would require changes not only in tax and welfare parameters. High income supports in Denmark involve high "replacement rates" (the ratio between out-of-work to in-work income, a measure of the financial incentive to work). However, the financial disincentive to work is offset by a strong and effective activation policy. As a result, Denmark combines high participation and employment rates with high replacement rates and a low risk of poverty. Sapir (2005) finds that Sweden, Finland and Norway have similar systems and outcomes.

In Ireland, as in several other countries, there has been concern that very high replacement rates could create an "unemployment trap" whereby the financial reward for taking up employment was so

reduced that individuals tended either (a) to spend longer on unemployment compensation while waiting or searching for a sufficiently rewarding job offer or (b) to opt for unemployment on a more sustained basis. The evidence on this is mixed, both nationally and internationally, as will be discussed. In these circumstances, it is advisable to monitor what has been happening to financial work incentives in Ireland, as the labour market has been transformed over the past decade or more.

1.2
Scope of the Study

Unemployment in Ireland has fallen from close to 18 per cent in 1987 down to 4 per cent, with long-term unemployment down to 1 per cent. What has happened to replacement rates over this time? And what light does this shed on the debate concerning their impact? What about the incentives to work extra hours or work harder to progress in a job? As documented by NESC (2005), the fall in unemployment during the 1990s was more than offset by increasing numbers in receipt of One-Parent Family Payment and Disability and Illness payments. Thus, while the numbers in receipt of unemployment payments have fallen, the total number of welfare recipients of working age has not declined. The Council also notes the survival or reappearance of "benefit traps" which make it more difficult to cease relying on social assistance. NESC (2005) concluded that there were:

> …several weaknesses in how income support is currently provided to those of working age in Ireland. High benefit withdrawal rates create significant disincentive effects in certain instances. There is no systematic process for monitoring and redressing the erosion over time in the value of earnings disregards and income eligibility thresholds and the emergence of new benefit traps (NESC, 2005, p. 114).

In this context, it is of particular interest to examine how key aspects of the financial incentive to work have evolved.

In order to shed light on these issues, this study looks at measures of financial incentive to work and how they have evolved. We focus here on two distinct measures of the financial incentive to work. The first type of measure, known as a "replacement rate", measures the extent to which out-of-work income replaces income from work. This is particularly relevant to individual decisions as to whether or not to take up or remain in employment, and/or the duration of a spell of unemployment. (Adam *et al.* (2006), refer to this as the "incentive to work at all"). The second measure, the "effective marginal tax rate" encompasses the impact of both taxes, social insurance contributions and withdrawal of benefits (including those of a partner, if relevant) on the take-home pay of an individual. This measure is particularly relevant to decisions concerning hours of work or the extent of employment (e.g. part-time as against full-time). (Adam *et al.* (2006), term this the "incentive to progress"). While no one measure of financial incentive to work is ideal for all purposes, the combination of the

replacement rate measure and the effective marginal tax rate measure covers many aspects of labour supply.

When looking at replacement rates, we focus particularly on the unemployed, for whom there is a base of previous research on which to build. Thus, we can examine how measures of replacement rates for the unemployed have changed since 1987. While the numbers unemployed have declined over time, the replacement rates they face are still of interest for two reasons. First, there is a concern that increased welfare payments – such as might be involved in reaching a target of 30 per cent of gross average industrial earnings for the lowest social welfare rates by 2007 – could involve substantially higher replacement rates, which might induce significant behavioural responses. Second, the structure of the means tests for disability and illness payments is broadly similar to that for unemployment payments. Hence, the levels and trends in replacement rates for the unemployed may provide useful indicators of the levels and trends for those in receipt of illness or disability payments – though more detailed work on these groups would also be of interest in future.

Our analysis makes extensive use of *SWITCH*, the ESRI tax-benefit model[10] in order to measure financial incentives to work for a nationally representative sample of individuals, The model is also used to analyse the cost, distributional and incentive implications. A brief account of *SWITCH* is given in Chapter 2; further detail is available in Callan *et al.* (2005). One key feature of the *SWITCH* microsimulation model is that it means we can go beyond calculations of what happens at average wages and examine what happens to those with different levels of income; and also that we can examine how the impact of tax and welfare policy varies across family types. Like Adam *et al.* (2006) in the UK, we do not aim to predict behavioural responses to changed incentives,[11] but to identify the incentives and how they would be affected by policy changes.

The remainder of the report is structured as follows. Chapter 2 provides an overview of the main concepts and measures used in documenting financial incentives to work. Chapter 3 reports new results on the evolution of replacement rates – a measure of the balance between in-work and out-of-work incomes – which can be linked with earlier results going back to 1987. The impact of the inclusion of medical cards in the definition of income is also examined, as this has often been viewed as a significant obstacle to taking up employment. Similarly, we examine the potential impact of the Rent and Mortgage Supplement under the Supplementary Welfare Allowance scheme. Chapter 4 deals with effective marginal tax rates, measuring the incentive to work extra hours. The approach taken here provides new results which go beyond the use of rates of income tax and social insurance contributions to allow for the

[10] The acronym stands for Simulating Welfare and Income Tax Changes.

[11] For estimates of behavioural responses see Callan *et al.* (2003).

impact on disposable income of the withdrawal, in whole or in part, of benefits from a spouse or partner.

We then consider some of the issues arising in the design of child income support policies. We review comparisons of child poverty in industrialised countries and examine some of the differences in welfare structures and payment levels which contribute to these differences. The special partnership initiative on Ending Child Poverty under Sustaining Progress has, as described in NESC (2005), has been seeking to explore whether and how child dependant additions (paid mainly to welfare recipients who are not in paid work) and Family Income Supplement (an in-work benefit) "…could be merged into a single programme that would provide a seamless source of child income support to low income families". (NESC, 2005, p. 154). Chapter 5 contributes further to this exploration, using both microsimulation modelling and some graphic illustrations of the key features involved. The main findings are drawn together in the concluding chapter.

2. MEASURING FINANCIAL INCENTIVES TO WORK

2.1 Introduction

The level and structure of income-related taxes and of welfare benefits affects the net financial rewards which individuals can obtain from various labour market choices.[12] Broadly speaking, these choices can be divided into two main classes. The first class comprises choices related to participation/non-participation in the labour market, or whether to seek or accept job offers. The second class concerns the *extent* of labour market participation – hours of work can be varied by working full-time or part-time, or by working overtime or in a second job. [13]

In this chapter (Section 2.2) we sketch briefly the basic structure of the tax and welfare systems as it affects such choices, and describe the measures that will be used to assess the impact of the system on financial incentives to work. Measures of the incentives facing married couples in their decisions regarding labour market participation were the subject of detailed study in Callan *et al.* (2003) and this work will not be repeated here. We will draw on these findings in the concluding chapter. Instead, when assessing the balance between income in-work and out-of-work, we focus on measurement of replacement rates – the most widely accepted and most often used measure of the financial incentive to work facing unemployed people. Section 2.3 considers some of the key choices entering into the construction and estimation of replacement rates. Then, when considering the financial incentive to work additional or fewer hours, we concentrate on a measure termed the "effective marginal tax rate", which includes the impact of benefit withdrawal as well as of taxes in arriving at the net financial reward from additional earnings. Section 2.4 draws together the key points of the chapter.

2.2 Tax, Welfare and the Financial Incentive to Work

2.2.1 KEY ASPECTS OF THE IRISH TAX AND BENEFIT SYSTEM

The balance between disposable income in employment and income when out of work depends not only on the gross earnings an individual can command in the labour market, but also on the

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[12] Motivation to work is, of course, also affected by non-financial incentives such as self-esteem and social contact. But our focus here is on financial rewards, or their near equivalent in non-cash benefits

[13] Adam *et al.* (2006) use the terms "the incentive to work at all" and "the incentive to progress" to distinguish the two types of incentive.

benefits to which he or she may be entitled when out of work, and the taxes and PRSI deducted from gross pay. Typically, the literature on measurement of work incentives and estimation of their effects treats unemployment benefits as if they were payments which were automatic and conditional only on not being in employment. As Atkinson and Micklewright (1991) point out, this is far from an accurate representation of reality. Social security schemes impose conditions on recipients regarding work search, availability for training and so on. Indeed, the strength of the "conditionality" on the payment, or the degree to which "activation" of the unemployed is promoted may be of critical importance in determining the overall impact of the scheme on labour market behaviour. We will return to these issues in the final chapter, but for the moment we focus on how the financial structure of welfare benefits and taxes affects the cash balance between in-work and out-of-work situations.

The main cash benefits associated with being unemployed are Unemployment Benefit (UB), for those meeting the relevant conditions (regarding length of insurable employment etc.) and Unemployment Assistance (UA) for those who do not qualify for UB. Maximum payment rates under the two schemes are similar, but the UA scheme is more strongly means tested. A key feature of each of these schemes is that there may be increased payments in respect of a qualifying adult (increase for a qualified adult, IQA, formerly termed Qualifying Adult Addition, QAA) and/or a qualifying child (Child Dependant Increase, CDI, formerly Child Dependant Addition, CDA). As labour market earnings do not, usually, have supplements in respect of a person's spouse and/or children, this feature of the benefit system tends to reduce the financial work incentive for married persons, especially those with children.

The Family Income Supplement (FIS) was set up in large measure to counteract this tendency, and reinforce the financial incentive to work facing those with children. FIS is an in-work benefit, which closes 60 per cent of the gap between the net family income of an employee with children and a target income that rises with family size.

The structure of income tax and PRSI deductions will also have a strong influence on the financial incentive to work. *SWITCH*, the ESRI tax-benefit model, is used to account for both the tax and benefit influences on disposable income in a systematic way; a brief description is given the box.

SWITCH, THE ESRI TAX-BENEFIT MODEL

Tax-benefit models are needed for a comprehensive assessment of the effects of tax and welfare policy changes, taking into account the wide variation in individual and family circumstances relevant to welfare entitlements and tax liabilities. *SWITCH*, the ESRI tax-benefit model, is a well-established tool for analysing the "first-round" effects of tax and welfare policy changes. It has been based on a large-scale nationally representative survey of households undertaken by the ESRI (most recently the Living in Ireland

Survey). The model database is adjusted each year to ensure that it reflects recent changes in incomes, employment, unemployment and population – and draws on projections of such changes for some years ahead, in order to provide a framework for medium-term analysis of budgetary issues.

- The model uses detailed information on individual and family circumstances (including information on wages and hours of work for those in paid employment, and on labour force status and receipt of social welfare benefits for those not in paid employment) to assess the social welfare entitlements and tax liabilities of each family in the database. The model can, therefore, simulate for each family the disposable income they would receive under actual policy, or under alternative policies of interest.

- Using these detailed calculations it is possible to summarise the impact of policy changes in many different ways. Here we focus in particular on how the average gain or loss varies depending on the income of the family. Family units are ranked by income, adjusting for differences in family size and composition using a simple equivalence scale: 1 for the first adult in the family, 0.66 for a second adult and 0.33 for children. Thus, a married couple with a disposable income of £200 per week would have an "equivalised" income of just over £120 (i.e., £200 divided by 1.66). A married couple with one child would have an equivalised income of just over £100 (i.e., £200 divided by 1.99 (=1+0.66+0.33)). Families are then divided into 10 equal sized groups or "deciles", from poorest to richest.

- One underlying technical assumption is that labour market behaviour and wage rates are the same under each policy; but the model can shed light on how such behaviour may change by identifying the impact of policy changes on financial incentives to work. For structural estimates of labour supply and estimates of the impact of tax policy changes on labour supply behaviour see Callan *et al.* (2003).

2.2.2 REPLACEMENT RATES

The financial incentive for an individual to move from unemployment into employment can be viewed as depending on the family's disposable income when the individual is unemployed and the family's disposable income when the individual is employed. A narrow focus on the individual's own net income would fail to take account of the possible impact of an individual's taking up employment on the social welfare entitlements and/or income tax liabilities of his or her spouse or partner. The replacement rate summarises this information by taking out-of-work income as a proportion of in-work income at the level of the family unit:

$$RR = 100 * \frac{Out \ of \ work \ family \ disposable \ income}{In \ work \ family \ disposable \ income}$$

For example, an individual might find that his or her income when unemployed is €150 per week, but that on taking up a job that disposable income would rise to €300 per week. The replacement rate in this situation would be 50 per cent. The same basic information can also be used to construct an "average tax rate" on taking up a job (Pearson and Whitehouse, 1997). But as Adams *et al.* (2006) indicate, "In general, the replacement rate better captures the strength of the incentive to work at all".

A more general view of the relationship between these alternative summary measures and the larger picture of work incentives is provided by Duncan and Giles (1997).[14] They point out that standard microeconomic theory suggests that an increase in the wage rate faced by an individual has two distinct effects. The higher net wage means that the individual would have more to gain from an additional hour of employment (a positive substitution effect). But the wage increase also means that individual needs to work fewer hours to obtain the same net income (a negative income effect). In general, the balance between these opposing effects is ambiguous. But where the individual is unemployed (or not employed) there is no income effect, as there is initially no wage income. Thus theory predicts a positive incentive effect, and this is reflected in both the replacement rate and the average tax rate measures. However, in the case of an income increase (e.g., an increase in child benefit), theory predicts that the impact on labour supply will be negative – though the size of the impact is an empirical matter. The replacement rate measure is in line with the theoretical prediction (a higher replacement rate is associated with a negative impact on labour supply); but the average tax rate and the cash gap in this case is unaffected, contrary to the theoretical prediction.

Replacement rates seem, therefore, to have some advantages over the ATR and cash gap measures, and have also been the widespread currency in the debate on work incentives facing the unemployed. Consequently, the remainder of the report focuses on replacement rates. In the next section, we consider some of the elements required in the construction and estimation of these measures. But it should also be clear from this discussion that replacement rates are simply a summary measure of the incentives facing the unemployed, comparing only the in-work and out-of-work scenarios. If the overall effects of policy changes on labour supply are to be predicted, a broader perspective is required. This would involve paying greater attention to the impact of policy on the overall budget constraint and on those in employment as well as those who are unemployed, and examining the responsiveness of labour supply to changes in work incentives.

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[14] See Duncan and Giles (*ibid*) for a graphical illustration of the argument below.

2.2.3   EFFECTIVE MARGINAL TAX RATES

The term "marginal tax rate" is most commonly used to refer to the income tax rate applying to extra earnings or other income. Rates of social insurance contribution are often taken into account as well. But in terms of the overall financial reward for additional earnings, welfare recipients and their spouses or partners often face an additional factor. Some or all of a benefit paid to one partner may be withdrawn (either smoothly or in a "stepped" fashion) as the earnings of the other partner increase. For a more comprehensive measure of financial incentives to work, therefore, it is necessary to go beyond measures based purely on direct taxes and to take into account rules governing the withdrawal of benefits.

The "effective marginal tax rate" (EMTR) is designed to provide such a comprehensive measure. The exact size of the margin – the increase in gross earnings – could be chosen in various ways. For a particular margin, the EMTR tells us how much of an increase in earnings is absorbed by increased tax payments, PRSI deductions and/or withdrawal of social welfare benefits (including those of a spouse or cohabiting partner). This provides a measure of the strength of the incentive for individuals to increase their earnings somewhat – whether by increasing the extent of working time (e.g., increased hours, a second job) or the intensity of work effort (e.g., seeking promotion, piece-work bonuses).

2.2.4   EXTENDING THE MEASURES

In addition to standard "cash" benefits, the replacement rate and effective marginal tax rate measures can be extended to take into account the withdrawal (in full or in part) of certain income-related non-cash benefits. For example, if an individual's earnings increase so as to bring his or her family above the income limit for a medical card, the family will, in time, lose the benefits associated with medical card coverage. The net financial reward from an increase in earnings may be reduced or eliminated by this. Recent policy changes mean that the withdrawal of medical card benefit is not so sharp. Depending on income, an individual or family may move from having a full medical card to a "GP only" card on a higher income, while others may move from a "GP only" card to having no card. Our analysis at this stage is based on the older system, without a GP only card, but serves to illustrate the importance of the issues – and an extension to cover the GP only card is also planned for the future.

In addition, long-term unemployed persons availing of a number of different schemes for re-entry to the employment can benefit from retention of their medical card for a period of 3 years, and retention of rent/mortgage interest supplement on a reducing scale over a 4 year period.[15] While these are very favourable options, they are not available to short-term unemployed persons, who constitute

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[15] Child dependant payments may also be continued for a 13 week period.

the majority of the unemployed. Our analysis does not take account of these transitional arrangements, nor of the new Rental Accommodation Scheme. The results can, therefore, be seen as "telescoping" the long-run balance of income faced by the long-term unemployed, while accurately representing both short-run and long-run incentives for the short-term unemployed. Another perspective is that the "cash" and "extended" replacement rate measures provide lower and upper bounds for the replacement rates facing long-term unemployed individuals.

In practice, there can be a trade-off between the incidence of high replacement rates and the incidence of high effective marginal tax rates. If policy focuses on reduction or elimination of the "unemployment trap"[16] posed by very high replacement rates, then this may require considerable support for those with low earnings potential. But in order to reduce the cost of such support, it may be withdrawn at a high rate (as is the case, for example, with the Family Income Supplement scheme), thereby imposing high effective marginal tax rates on those at low incomes.

2.3 Estimating Replacement Rates

The definition of replacement rates offered in the previous section is a broad one. When implementing replacement rates, a number of key choices have to be made. For example, how can the out-of-work incomes of those in employment be simulated? And how can the in-work incomes of those without jobs be predicted? This section describes the general choices that have been made in deriving replacement rates in the present study. Further detail is provided in Chapter 4. We do not claim that the definitions used here are the best for all purposes, and variations on the assumptions used may be of interest in future work.

Microsimulation modelling provides a means of analysing the replacement rates facing individuals and families on the basis of detailed micro-level data gathered in a large-scale household sample. Essentially, the tax-benefit model is first used to simulate the disposable income of the tax unit when the individual is unemployed. This involves simulation of the relevant social welfare unemployment compensation and of income tax liabilities, as well as the universal child benefit. The counterfactual situation, where the individual is employed, is then modelled. Again, the tax-benefit model is used to estimate the disposable income the tax unit would have in that situation, taking into account changes in social welfare entitlements and tax liabilities, and, where relevant, entitlement to Family Income Supplement (FIS) – the social welfare benefit targeted at low income families depending on wage earnings. In these calculations the gross earnings of the spouse are held constant, but their net earnings or benefit receipt may be affected by their partner's employment status. The replacement rate is then calculated

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[16] This term has commonly been used to describe situations in which unemployed persons would gain little, if anything, in cash terms, by taking up employment.

as the ratio of family income when out-of-work to family income when in work.

The first issue in measuring replacement rates is what level of earnings should be assumed for those currently not in paid work? That is, what is the appropriate earnings counterfactual for this group? One approach is to use a particular gross earnings level – such as (some proportion of) average industrial earnings, or the mean, median or lowest decile of earnings in the sample – as the prospective earnings for all those not currently in work. This approach can be of interest if the concern is to identify those for whom jobs at particular levels of pay are likely to be financially unattractive. Atkinson and Micklewright (1985) suggest that, from an incentive point of view, the ratio of unemployment benefits to net earnings in the last job may be of interest. This ratio may play a role as a "rule of thumb" which influences the reservation wage of the unemployed (some results based on this measure from the 1987 ESRI sample were presented in Callan and Nolan, 1994). However, in empirical studies employing micro-data to examine incentive effects and search behaviour, the most common definition is after-tax income when unemployed compared with after-tax income in a prospective job. This is the concept employed in estimating replacement rates from the 1987 ESRI sample in Callan, O'Donoghue and O'Neill (1994), using for the unemployed the predicted gross earnings from estimated earnings functions. Similarly, in this report we focus on a profile of replacement rates for the unemployed, at wages that reflect the individual's age, sex, marital status and educational qualifications. There is a well-established correlation between these variables and potential earnings, as is confirmed by the wage equations reported in the Appendix to this chapter.

The second key issue is what unemployment compensation to attribute to those recorded as employed in the sample when estimating their counterfactual situation. Here the replacement rate is calculated on the basis that income support when unemployed would be provided by long-term Unemployment Assistance (UA). While some would in fact receive Unemployment Benefit (UB) for a time if they became unemployed, we continue to use the long-term UA rate as a simplifying assumption, also adopted in previous Irish analyses with *SWITCH* and in the UK results by Duncan and Giles (1997). The amount that would be received from UA is simulated in the model by application of the means test and the amounts payable for families of differing composition.

Third, the appropriate treatment of FIS is also an issue. Entitlement to FIS is modelled by *SWITCH* on the basis of the parameters of the scheme, and FIS entitlements can be included in the calculation of replacement rates. However, the take-up of this scheme appears to be particularly low, with perhaps only one-third of those entitled actually in receipt of the payment (Callan *et al.*, 2005). For this reason we present detailed results on the basis of a low take-up assumption, under which one in three of those entitled to FIS is attributed that benefit. Because FIS is a small scheme, the

numbers in receipt of FIS in the Living in Ireland Survey (and, indeed, in EU SILC) are rather small. This means that detailed analysis of the determinants of non-take-up, such as can be undertaken with the UK's large-scale Family Resources Survey, is not possible here. So although take-up is likely to be higher for larger entitlements, our analysis is based on a simple random assignment to the take-up and non-take-up categories.

A final issue to be addressed is the treatment of non-cash benefits, such as the value of medical card entitlement and differential rent for local authority tenants. Callan, Nolan and Whelan (1996) find that for an unemployed couple with 4 children, the value of secondary and non-cash benefits can be as much as 20 per cent of the basic payment rate. But there can be considerable variation across schemes and across individuals and families in the relative importance of such benefits. The next chapter explores some of the issues relating to the impact of non-cash benefits on replacement rates, focusing in particular on entitlement to a medical card and also including the cash benefit from the Rent and Mortgage Supplement under the Supplementary Welfare Allowance scheme. The non-cash benefit due to differential rent is excluded: extension of the analysis to include this scheme, which determines the rent paid by most local authority tenants, is a priority for further research.

2.4 Conclusions

In general, predicting an individual's response to a change in tax and benefit rules requires a knowledge of the full budget constraint faced by the individual. That is, how much disposable income his or her family would end up with by taking a job at a given wage, for various hours of work. Estimation of labour supply responses to tax and benefit policies has received considerable attention in the international literature, and is a complex and growing area. One notable development in recent years has been a tendency to represent the budget constraint by a limited set of options e.g., choices of hours of work at four or eight-hour intervals. This simplification has considerable benefits in allowing other features of labour supply to be modelled (see, for example, Van Soest (1995), a seminal article in this field). Walker (1997) adopts a similar approach, reducing the options considered to zero hours of paid work, part-time work, or full-time work. Measurement of replacement rates can be seen in this light as a summary measure, concentrating on the option of zero hours of paid work against that of full-time employment. As a summary measure, it cannot capture the full complexity of the issues involved, but it does help to represent one key aspect of the situation.

While measurement of replacement rates and of effective marginal tax rates can be undertaken independently, tax and welfare policy must take account of a fundamental interconnection between the two. For a given level of resources, there can be a trade-off between reducing replacement rates and reducing effective marginal tax rates. For example, an in-work benefit (such as FIS) could be

designed to target resources for those facing high potential replacement rates, using a high withdrawal rate. But this high withdrawal rate itself implies raising the effective marginal tax rate on additional earnings. Conversely, a scheme which maintained a low withdrawal rate so as to minimise the increase in effective marginal tax rates would not have as great an impact on high replacement rates.

APPENDIX 2.1 PREDICTING HOURLY WAGES FOR THE UNEMPLOYED

Table A2.1: Wage Equations for Single and Married Men and Women, 2000

2000	Single Men (N=789)	Married Men (N=1107)	Single Women (N=670)	Married Women (N=896)
Age	0.09	0.02	0.07	0.02
	(0.01)	(0.01)	(0.01)	(0.01)
(age_2)/1000	-1.02	-0.12	-0.71	-0.15
	(0.14)	(0.11)	(0.14)	(0.15)
edcat2	0.05	0.15	0.21	0.10
(Junior Certificate)	(0.07)	(0.03)	(0.07)	(0.05)
edcat3	0.08	0.35	0.38	0.41
(Leaving Certificate t)	(0.07)	(0.03)	(0.06)	(0.05)
edcat4	0.14	0.56	0.58	0.66
(3rd Level Diploma)	(0.08)	(0.04)	(0.07)	(0.06)
edcat5	0.53	0.87	0.71	1.12
(Degree)	(0.07)	(0.04)	(0.07)	(0.05)
Constant	0.20	1.38	0.22	1.24
	(0.18)	(0.22)	(0.17)	(0.28)

Note: Standard errors of coefficients in parentheses.

We report above regressions of the log of hourly wages on key personal characteristics, age and highest educational qualification attained. Typically wages first rise with age, but then decline, a phenomenon captured by a positive coefficient on age and a negative coefficient on the square of age. The wage that can be commanded in the labour market also rises with the highest educational qualification attained. While the returns from holding a Junior Certificate are relatively modest, and have declined since 1994, returns from Leaving Certificate and third level qualifications remain strong. Separate equations for the sex and marital status groupings allow for the fact that there can be differences in the wage structure for these groups, for whatever reasons.

3. Measuring Replacement Rates

As outlined in Chapter 2, replacement rates summarise the financial incentive for an individual to move from unemployment into employment by taking out-of-work income as a proportion of in-work-income. In this chapter the alternative approaches that have been used to measure Irish replacement rates are discussed (Section 3.2). We then focus on shifts in the replacement rates faced by those who are unemployed (Section 3.3). We first present the changes in cash replacement rates from 1987 to 2005, drawing both on example ("hypothetical") households, and on analysis of a sample of actual households using the *SWITCH* tax-benefit model. In Section 3.4, the issues involved in modelling both the Medical Card and Rent and Mortgage Interest Supplement are detailed before presenting their impact on the distribution of replacement rates facing the unemployed. Section 3.5 then compares estimates for Ireland and for the UK of the distribution of replacement rates for persons in work (drawing on Adam *et al.,* for the UK, and our own analysis for Ireland). The main findings are drawn together in the concluding section.

Three distinct approaches have been used to measure Irish replacement rates:

(1)   Using social welfare payment rates and average industrial earnings to calculate replacement rates for a set of hypothetical cases and constructing indices by weighting these different cases. Examples include Hughes and Walsh (1983), Blackwell (1986), and calculations by the Department of Finance reproduced by e.g., NESC (1993).

(2)   Constructing average replacement rates from the average receipt of UA and UB, calculated from aggregate expenditure and claimant numbers, compared with average earnings per employee. Browne and McGettigan (1993) and McGettigan and Browne (1993) used this method, which is intended only to provide a measure of the overall trend in replacement rates over time.

(3)   Microsimulation modelling of in-work and out-of-work incomes for a large sample of households to estimate replacement rates for those currently unemployed or employed based on actual or predicted versus actual or predicted in-work income.

Callan, Nolan and O'Donoghue (1996) compared the different approaches used to measure Irish replacement rates over time. Their results from microsimulation showed that the average replacement rate facing unemployed persons was roughly constant between 1987 and 1994, with a small rise for those on UA offset by a decline for those on UB. Similar findings obtain for method (1) based on hypothetical cases. But method (2) which uses aggregate data sources such as national accounts produced rather different findings. The most likely explanation for this is that such expenditure and rates based series focus on mean unemployment compensation divided by mean employment income per employee which bears no necessary relationship to the mean of replacement rates for either the employed or the unemployed.

Comparing the approaches on ability to study the distribution of replacement rates, they showed that a detailed matrix of hypothetical cases can be of some help in identifying trends in mean replacement rates but is not likely to be able to identify shifts in the distribution of replacement rates of the type that policy may be aimed at achieving – a rise in unemployment compensation for those on lowest incomes, while reducing replacement rates for those facing the greatest disincentives to work. However, microsimulation modelling, in addition to providing a better measure of the overall trend in replacement rates, offers the best chance of monitoring the achievement of such targets, and can be used to assess the likely impact of policy changes on work incentives in advance of their implementation. They presented results from *SWITCH* showing that the incidence of cash replacement rates of over 80 per cent fell between 1987 and 1994 but the numbers facing rates between 70 and 80 per cent rose.

Unemployed persons typically had lower educational qualifications than the average, and a work history that included longer spells out of the labour market. For these reasons, the wages that they can command in the labour market tend to be below the average. Thus the concentration of the other two approaches on evaluating replacement rates at average wages may not capture factors which are important at the lower wages typically relevant to the unemployed.[17] The study found that the mean predicted wage facing the unemployed was about two-thirds of the average industrial wage. Microsimulation methods, which use predicted wages based on individual labour-market relevant characteristics, take account of the lower than average wages facing the unemployed, and allow further for individual differences in the wages that can be expected, based on age and education levels.

[17] In recent years, the examples used by the OECD in its analyses of replacement rates have included cases at different proportions of average wages, rather than simply the average wage itself.

**3.3
Changes in
Cash
Replacement
Rates, 1987 to
2005**

Some of the studies reported in Section 3.2 focus on constructing a single indicator of replacement rates. This involves "weighting" the individual components by their prevalence in the unemployed population. Such presentations of the data lose valuable information about whether or not replacement rates have been evolving in similar directions for all cases.

By examining replacement rates for different hypothetical cases it can be seen whether or not the trends are similar for families with varying set of circumstances. Hypothetical cases are defined first by their family type (e.g. single women; a married man with two children) and then by their income (e.g. average industrial wage; minimum wage).

Figure 3.1, which is a graphical representation of the numbers given in Appendix 3.1, shows the replacement rates based on the average industrial wage for each year from 1976 to 2005 for five hypothetical cases:

- a single man;
- a single woman;
- a married man with no children;
- a married man with two children; and
- a married man with four children.

Figure 3.1: Replacement Rates for Hypothetical Cases: Unemployment Benefit Compared with Disposable Income from Average Industrial Wages for Selected Family Types, 1976-2005
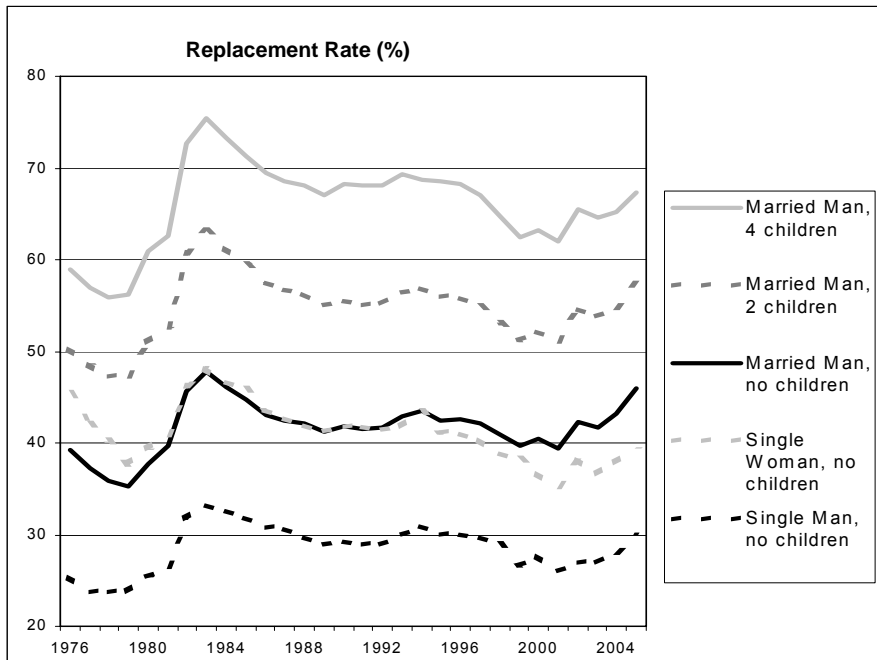
Notes: All series based on average earnings for male/female industrial workers in manufacturing industry, June of each year. In-work disposable income takes account of income tax, PRSI and levies and includes Child Benefit and Family Income Supplement where applicable. Out of work income is based on (flat-rate) Unemployment Benefit, and also includes Child Benefit. See Callan, Nolan and O'Donoghue (1996) for details of construction of the series.

From 1976 to 2005 replacement rates for all five cases generally followed the same trend. All cases experienced a fall in replacement rates from 1994 to 2000 and then an increase in their rates between 2000 and 2005. For single men, and married men with two or four children the end result of this fall and rise was that their replacement rates in 2005 almost equalled their 1994 rate. This was not the case for single women and married men with no children. These two cases faced very similar rates from around 1981 to 1994. Then between 1994 and 2000 the rates for single women fell by the largest proportion out of the five cases and between 2000 and 2005 the rates for married men with no children rose by the greatest proportion. The result was a divergence in the replacement faced by these two cases.

Part of the explanation for these movements in replacement rates between 2000 and 2005 is given in Tables 3.1 and 3.2. Table 3.1 shows that the rates of Unemployment Benefit (UB) for singles, couples and couples with children increased by relatively more than the increase in the average industrial wage between 2000 to 2005. This change in the ratio of UB to the average industrial wage is one reason why replacement rates for all five cases rose in those years. The fact that the increase in this ratio was proportionately greater for couples explains at least part of the divergence in the replacement rates for single women and married men.

Table 3.1: Headline Wage and Benefit Comparisons, 2000 and 2005

	2000 €per week	2005 €per week	Per Cent Increase
Average Industrial Wage (AIW)	423.24	562.77	33.0
National Minimum Wage (NMW)	223.47	306.00	36.9
UB personal rate	98.40	148.80	51.2
UB couple rate	158.08	247.50	56.6
UB couple & 2 children rate	191.60	281.10	46.7
UB couple & 4 children rate	225.12	314.70	39.8
	%	%	
UB personal rate as % of AIW	23.2	26.4	
UB couple rate as % of AIW	37.3	44.0	
UB couple & 2 children rate as % of AIW	45.3	49.9	
UB couple & 4 children rate as % of AIW	53.2	55.9	

Table 3.2 enables a comparison of the replacement rates based on the average industrial wage, which is discussed above, with those based on another hypothetical scenario, those earning the minimum wage. As expected, replacement rates are higher for cases on the minimum rather than the average industrial wage. The increases in the rates from 2000 to 2005 are also greater for those on the minimum wage. Under both income circumstances presented here, married men with no children experience the greatest proportionate change in their replacement rates. This reflects the fact that since child dependant additions to welfare payments were frozen in nominal terms from 1995 onwards the UB rate for a couple with no children increased by the greatest proportion, as shown in Table 3.1.

Table 3.2: Replacement Rates for Hypothetical Families at Average and Minimum Wages, 2000 and 2005

	2000	2005	Change in Percentage Points
At average male industrial wage			
Single man	27.6	30.3	2.8
Married man	40.5	47.0	6.5
Married man, 2 children	52.2	58.5	6.4
Married man, 4 children	63.1	68.6	5.4
At minimum wage			
Single man	38.7	50.9	12.3
Married man	57.7	82.8	25.1
Married man, 2 children	72.5	95.1	22.7
Married man, 4 children	85.3	103.6	18.3
At average female wage			
Single woman	36.7	41.2	4.5

Turning from hypothetical cases to the population as a whole, Table 3.3 gives the distribution of replacement rates for 1987, 1994, 2000 and 2005. The figures given here are based on the assumption of a 33 per cent take-up of Family Income Supplement (FIS). This rather low rate of take-up for FIS is in accordance with latest results (Callan *et al.*, 2005) which suggest that take-up of this benefit for low-income working families is not much higher than 30 to 40 per cent. The higher the take-up of such an in-work benefit, the lower replacement rates would expected to be. These figures show that the proportion of the population with high replacement rates fell from 1987 through 2000, but rose again in 2005. Although replacement rates rose in 2005 in relation to 2000, the proportion of unemployment compensation recipients with rates over 70 per cent is much lower in 2005 when compared with both 1987 and 1994, as illustrated in Figure 3.2.

Table 3.3: Distribution of Replacement Rates Estimated Using Predicted Wages, Assuming 33 Per Cent Take-up of FIS, 1987, 1994, 2000 and 2005

	1987	1994	2000	2005
0<10	1.0	1.7	3.1	0.7
10<20	1.7	2.4	4.1	7.2
20<30	4.3	3.3	10.2	3.7
30<40	9.3	8.5	15.5	7.9
40<50	11.7	11.8	46.2	10.4
50<60	16.4	15.3	6.4	42.4
60<70	19.1	19.6	5.3	5.7
70<80	13.9	22.0	4.8	8.1
80<90	13.1	9.1	3.9	9.8
90<100	5.4	4.6	0.2	2.4
Over 100	4.0	1.6	0.3	1.8
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Callan, Nolan, O'Donoghue (1996) and own estimates using *SWITCH* 2000 and 2005.

Figure 3.2: Proportion of Unemployment Compensation Recipients with Estimated Replacement Rates Above Alternative High Cut-Off Values

% of Recipients with Replacement Rate Above Cut-Off
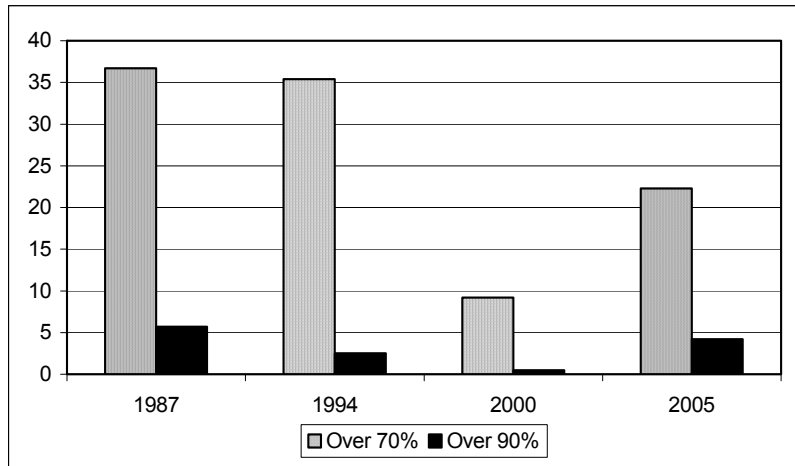
Table 3.4 gives the distribution of replacement rates for the population of unemployed for 2000 and 2005, classified by family type. These results for actual families can be related to Table 3.2, which is based on hypothetical families. As with the hypothetical analysis, these microsimulation results show that replacement rates tend to be higher for married people, especially those with children, and the distribution for all three family types has shifted upwards, i.e., replacement rates have risen from 2000 to 2005. Several influences are at work here, sometimes working in opposing directions. The fact that personal rates of payment for UA and UB have risen more rapidly than earnings has tended to raise replacement rates. As against this, there have been changes in the structure of child income supports, with a greater proportion being provided through child benefit. This has exerted a strong downward pressure on replacement rates. Non-policy factors, relating to the labour market characteristics of the unemployed and the wages they can command, have tipped the balance towards an upward shift in replacement rates facing the unemployed.

Unlike hypothetical family analysis which assumes full take-up of FIS the microsimulation analysis is based on a take-up rate of 1 in 3. In order to examine the impact of differences in take-up assumptions on the distribution of replacement rates, Tables 3.5 and 3.6 show distributions of replacement rates under alternative take-up assumptions (33 per cent take-up, in line with the most recent estimates, and 100 per cent or full take-up of the benefit).

Table 3.4: Distribution of Replacement Rates Classified by Family Type, 2000 and 2005

Replacement Rate Category	Single, No Children		Married, No Children		Married with Children	
	2000	2005	2000	2005	2000	2005
0 <10	4.7	1.2	0	0	0	0
10 <20	5.7	12.2	0	0	2.0	0
20 <30	15.2	6.1	0	0	0	0.6
30 <40	18.3	13.4	0	0	9.5	0
40 <50	55.4	13.4	34.2	0	18.9	3.2
50 < 60	0.6	53.8	17.7	42.9	21.4	14.7
60 < 70	0.1	0	20.1	24.4	15.2	10.9
70 < 80	0	0	19.5	16.7	12.8	23.6
80 <90	0	0	8.5	16.0	16.9	30.7
90 < 100	0	0	0	0	1.2	9.4
Over 100	0	0	0	0	2.2	7.0
	100.0	100.0	100.0	100.0	100.0	100.0

Table 3.5 focuses on the family type "married with children", one of the key target groups for FIS.[18] The table compares results for this family type based on a take-up rate of 33 per cent with a full take-up scenario, for both 2000 and 2005. Then, looking only at 2005, Table 3.6 compares the impact of full-take up on the distribution for all those on UA/UB and for those who are married with children. Overall the results suggest that non-take-up of FIS has a substantial impact on the distribution of replacement rates. The number of cases with higher replacement rates decreases when full take-up is assumed.

Table 3.5: Distribution of Replacement Rates for the Family Type Married with Children Under Alternative Take-up of FIS Assumptions, 2000 and 2005

Replacement Rate Category	33% Take-up of FIS		Full Take-up of FIS	
	2000	2005	2000	2005
0 <10	0	0	0	0
10 <20	2.0	0	2.1	0
20 <30	0	0.6	0	0.6
30 <40	9.5	0	9.5	0
40 <50	18.9	3.2	18.9	2.8
50 < 60	21.4	14.7	18.7	9.9
60 < 70	15.2	10.9	22.6	32.5
70 < 80	12.8	23.6	14.4	34.4
80 <90	16.9	30.7	12.6	11.5
90 < 100	1.2	9.4	1.2	8.3
Over 100	2.2	7.0	0	0
	100.0	100.0	100.0	100.0

[18] Lone parents are, of course, a substantial proportion of FIS recipients but as explained earlier, they are outside the scope of the present analysis.

Table 3.6: Distribution of Replacement Rates in 2005 Under Alternative Assumptions Regarding Take-up of FIS

Replacement Rate Category	All on UA or UB		Married, No Children	
	33 Per Cent Take-Up of FIS	Full Take-Up of FIS	33 Per Cent Take-Up of FIS	Full Take-Up of FIS
0 <10	0.7	0.7	0	0
10 < 20	7.2	7.2	0	0
20 < 30	3.7	3.7	0.6	0.6
30 < 40	7.9	7.9	0.0	0
40 < 50	10.4	12.4	3.2	2.8
50 < 60	42.4	39.1	14.7	9.9
60 < 70	5.7	11.3	10.9	32.5
70 < 80	8.1	10.9	23.6	34.4
80 < 90	9.8	4.8	30.7	11.5
90 < 100	2.4	2.2	9.4	8.3
Over 100	1.8	0	7.0	0
All	100.0	100.0	100.0	100.0

3.4 Allowing for Additional Cash and Non-Cash Benefits

Low income individuals may be eligible for a number of other benefits besides their main social welfare payment. Perhaps the two most significant such benefits are the income-tested medical card, providing free GP care and prescription drugs, and the rent/mortgage interest supplement, designed to provide support for housing costs. The proportion of unemployed persons qualifying for medical cards and rent/mortgage interest supplement payments is much greater than the corresponding proportion of employees. For this reason, it is of interest to examine how the rules governing entitlements under these schemes may affect the financial incentive to work. Individuals who would qualify for a benefit when unemployed but fail to do so when employed face an additional obstacle to taking up employment; the size of this impact is quantified in the following analysis.

3.4.1 MODELLING MEDICAL CARD ELIGIBILITY AND VALUE

A medical card entitles a person to a range of health services free of charge. The loss of a medical card can be a significant factor in the choices people make about moving from social welfare to employment or return to education and employment schemes. Therefore, it is important to model eligibility for a medical card, and take into account the expected value of a card, when examining replacement rates.

For people in the main working age categories, the key feature governing medical card eligibility is a means-test.[19] Income

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[19] All those aged 70 years or over are entitled to a medical card irrespective of income.

guidelines for the award of medical cards are drawn up each year, previously by the Health Boards, and now by the Health Services Executive (HSE). People whose income is below the guideline figure for their circumstances get a medical card. In general, those whose income is above the guideline figure do not qualify. When modelling eligibility, *SWITCH* uses this income limit approach. Once eligibility is established, the value of the medical card is modelled taking into account the estimated value of hospital nights and the estimated value of GP services and medicines for each family. In each case, the predicted usage of services is based on the average usage level for an individual in the same age band.

However, medical cards may also be granted to people whose income is above the guideline figure. For instance, to tackle the problem of the effect of the medical card on replacement rates, people who are long-term unemployed, and who take up employment or go on certain "back to work" or "back to education" schemes may be entitled to retain their medical card for a period. Also, the law governing the medical card scheme provides that adults and their dependents have full eligibility for health services if they are "unable without undue hardship to arrange general practitioner, medical and surgical services". So the HSE may use their discretion to grant medical cards to people who, for example, have particularly high medical expenses or if there is other evidence of hardship. It is not possible to model such discretionary granting of medical cards; however, it has been indicated that medical card holders qualifying through the income limits and the age condition (over 70 years) form "the vast bulk of medical card holders".[20]

The income test for the medical card is modelled as closely as possible. Nevertheless, one would expect that some of those deemed eligible for a medical card by the model would not hold a card, and that some of those holding cards would be deemed ineligible. This could arise for a number of reasons e.g., because of differences in the time at which income was measured by the model database and by the authorities. In about four out of five cases, however, the model's allocation of a case to an eligible or non-eligible category coincides with possession/non-possession of a card.

The procedure for valuation of the benefit attached to possession of a medical card follows that introduced by Nolan and Russell (2001). It is based on the "expected" usage of the card, based simply on age. The average cost of provision of GMS services (both GP and prescription drugs) and the cost of hospital nights (valued at the charge per night for public patients) is allocated in proportion to the expected usage of these services for five age bands.

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[20] Comptroller and Auditor-General, in evidence to the Dáil Committee on Public Accounts, 27 March 2003. In any event, medical cards issued on a "health needs" basis are likely to have little impact on financial incentives to work, as they are likely to be retained when in employment.

3.4.2 MODELLING RENT AND MORTGAGE INTEREST SUPPLEMENT (RMIS)

If a person's income, whether from basic Supplementary Welfare Allowance (SWA) or otherwise, is too low to meet certain special needs, they may be granted a weekly SWA supplement. Rent or mortgage interest payments count as such a special need. One of the entitlement conditions of RMIS is that people will not normally qualify for it if they are in full-time employment, i.e., working for more than 30 hours per week. Moving from unemployment to working more than 30 hours per week means that an individual would lose RMIS. Therefore, RMIS raises out-of-employment income relative to in-work income i.e., it tends to raise replacement rates.

Account had to be taken when modelling RMIS of the fact that the different health boards set differing levels of payment. Also, disregards for having a part-time job, being on a training scheme, or receiving disability allowance, one-parent family maintenance or an old-age pension needed to be included. The model's predictions for the year 2005 (59,000 recipients and expenditure of €353 million on the Rent and Mortgage Interest Supplement scheme) are remarkably close to the latest published statistics, for the year 2004 (61,000 recipients and expenditure of €360 million).

3.4.3 IMPACT OF RENT SUPPLEMENT AND MEDICAL CARD ON THE DISTRIBUTION OF REPLACEMENT RATES, 2005

When the value of Rent and Mortgage Interest Supplement and the Medical Card are included, the incidence of high and very high replacement rates faced by those receiving unemployment compensation increases quite sharply. Table 3.7 shows the impact on the full distribution of replacement rates, while Table 3.8 focuses on the incidence of high and very high replacement rates.

Table 3.7: Impact of Rent and Mortgage Supplement and Medical Card on Distribution of Replacement Rates, 2005

	2005 without Rent and Mortgage Supplement or the Value of Medical Card	2005 with Rent and Mortgage Supplement	2005 with Rent and Mortgage Supplement and Including Value of Medical Card with Cash Incomes
0<10	0.7	0.7	0.0
10<20	7.2	7.2	0.1
20<30	3.7	3.6	1.6
30<40	7.9	7.2	8.5
40<50	10.4	9.9	5.6
50<60	42.4	35.5	9.4
60<70	5.7	4.3	34.1
70<80	8.1	6.5	9.2
80<90	9.8	10.7	9.1
90<100	2.4	5.5	13.6
Over 100	1.8	9.0	9.0
Total	**100.0**	**100.0**	**100.0**

Table 3.8: Impact of RMIS and Medical Card on Proportion of Cases with Replacement Rates Above Alternative High Cut-Off Values for 2005

	2005 without RMIS or Medical Card	2005 with RMIS	2005 with Medical Card	2005 with RMIS and Medical Card
Above 70	22.1	31.7	34.1	40.9
Above 80	14.0	25.2	22.1	31.7
Above 90	4.2	14.5	15.3	22.6
Above 100	1.8	9.0	1.8	9.0

The incidence of high replacement rates (over 70 per cent) is almost doubled, from 22 per cent to over 40 per cent. The prevalence of higher replacement rates (over 100 per cent) also increases very sharply, with the proportion of the unemployed having replacement rates above 90 per cent rising from 4 per cent to over 20 per cent. There are, of course, many more recipients of medical cards than there are of the rent and mortgage supplement. However, the value to the individual of the rent and mortgage supplement can be substantially greater than the value of a medical card. Overall the broad scale of impact on the incentives facing the sub-population of unemployed is not dissimilar – the rent and mortgage supplement has a greater impact on the incidence of the highest replacement rates (over 100 per cent).

Given that these figures do not include travel to work costs or childcare costs, they indicate potentially severe obstacles to taking up employment. However, there have been recent policy changes which are designed, in part, to address these issues and these are not yet taken into account in this analysis. On the housing side, the Rental Accommodation Scheme means that those with a long-term housing need are transferred from the Rent and Mortgage Supplement scheme to a system more like the local authorities differential rent scheme. Under this arrangement the implicit tax rate on taking up employment is less severe. On the medical card side, the inception of the "Doctor Visit Card", sometimes referred to as a "GP-only medical card", for those with incomes up to 20 per cent higher than the income limit for the full medical card means that the withdrawal of the benefit of a medical card is no longer so sharp. Instead of losing the full benefit at the medical card income limit, a part of the benefit – dealing with prescription drug costs – is withdrawn, with the remainder of the benefit (relating to GP visits) being withdrawn at a higher income level. Teasing out the full implications of this "two-step" withdrawal is a task for further work.

As indicated earlier (Chapter 2) long-term unemployed individuals are allowed to retain a medical card for a period of 5 years. This is designed to encourage long-term unemployed persons to gain a foothold in the labour market, and progress from there. The picture given here can be thought of as one in which these stages are "telescoped" and the final outcome in employment is compared with the initial situation when unemployed. The difference between this picture and the true dynamic picture

depends on the extent to which the individual progresses up the wage distribution.

3.5 Replacement Rates Among Adult Employees, Ireland and the UK

Incentives to remain in employment, as against exits to unemployment or out of the labour force, are also of interest. Indeed, a recent UK study (Adam *et al.*, 2006) focuses very strongly on replacement rates facing those currently in employment. Here we derive results on a very similar basis and compare them with UK figures. In order to make the comparison more accurate, we include the extensions to deal with Rent and Mortgage Interest Supplement and the Medical Card. This is because Housing Benefit is a substantial and important benefit in the UK and the exclusion of cash supports for housing costs in Ireland might, therefore, distort the comparison. Similarly, the fact that the UK has a universal health coverage through the National Health Service contrasts with the income-related provision of medical cards in Ireland. Again, the wider measure of resources is needed to provide a more accurate comparison.

Table 3.9: Distribution of Replacement Rates Among Employees, Ireland and UK, 2005

	Ireland	UK
0<10	2.7	2.9
10<20	3.5	9.2
20<30	14.9	13.5
30<40	20.1	12.3
40<50	16.7	14.8
50<60	16.7	15.5
60<70	11.2	11.8
70<80	8.1	9.5
80<90	4.0	7.1
90<100	1.3	3.1
Over 100	0.8	0.2
Total	100.0	100.0

Source: UK: Adam *et al.* (2006) Table 3.1.
Ireland: Authors' estimates using *SWITCH* model, and incorporating rent/mortgage interest supplement and the value of a medical card as described in earlier sections.

Table 3.9 sets out the basic results on replacement rates facing employees in Ireland and in the UK. There is a broad similarity between the distributions for the two countries, but Irish employees typically face somewhat lower replacement rates than their counterparts in the UK. This pattern is similar to that observed by Duncan and Giles (1997) and Callan and Nolan (1997) in their analysis of the 1993/1994 situation. These earlier findings also noted a contrast between the replacement rates facing employees (for whom financial incentives to work were somewhat stronger in Ireland) and those facing the unemployed (for whom replacement rates were significantly lower in the UK).

3.6
Conclusions

The microsimulation evidence points to a rise in the incidence of very high replacement rates on a cash basis between 2000 and 2005, though levels are still lower than in the late 1980s and early 1990s. Results also indicate that the incidence of very high replacement rates may be a good deal higher when the value of medical cards and rent/mortgage supplement are taken into account; though recent policy initiatives (the Rental Accommodation Scheme and the Doctor-only Visit Card) will have acted to moderate this effect.

How strong is the likely behavioural responses to such a shift in replacement rates? Layte and Callan (2001) found that there is a significant negative relationship between unemployment compensation and duration. However, while an effect was identifiable, it was very small in comparison with those found in other national contexts. Furthermore, estimated effects varied between those receiving different types of benefit with the disincentive effects appearing to be confined to UB recipients. So the disincentive effect that was found was among the group who are relatively more advantaged in the labour market and who thus have shorter average unemployment spells that are more likely to end in employment

These results also raise some further questions of interest. Replacement rates for the unemployed have risen between 2000 and 2005, driven by a rise in unemployment compensation relative to average earnings. At the same time, the risk of relative income poverty (or the "at risk of poverty" measure) has risen (on the basis of EU SILC, 2004 figures compared with LII, 2000), suggesting that incomes of welfare recipients have fallen relative to general incomes. Are these findings in conflict, or can they be reconciled? We can point to a number of features which explain how these findings can coincide.

- First, and most obviously, the unemployed are now a much smaller component of the total population sub-group "at risk of poverty". Over the period in question, rates of payment for the unemployed rose faster than those for pensioners, who constitute a much bigger proportion of the "at risk of poverty" group.

- Second, as shown in Figure 3.4, while unemployment compensation payments[21] rose in relation to average earnings (both gross and net), they fell between 2000 and 2004 in relation to average household disposable income per adult equivalent – the income measure used as the basis for poverty calculations.[22] The causes and consequences of

[21] Unemployment compensation payment rates are identical for the Unemployment Benefit and Unemployment Assistance schemes.

[22] This is true whether the mean income or the median (middle-ranking) income is used as the indicator of "average" income.

this pattern lie outside the scope of the present study, but are the subject of ongoing study at present.

- Third, analysis using *SWITCH* indicates that tax/welfare policy changes exerted an equalising effect over the 2000 to 2004 period, reducing relative income poverty. The fact that the outturn between 2000 and 2004 involved an increase in the "at risk of poverty" measure indicates that factors other than tax/welfare policy were responsible for the rise in the risk of relative income poverty.

Figure 3.3: Unemployment Benefit Payment Rate (Single Person) as a Proportion of Average Earnings and Average Household Disposable Income Per Adult Equivalent, 1994-2004
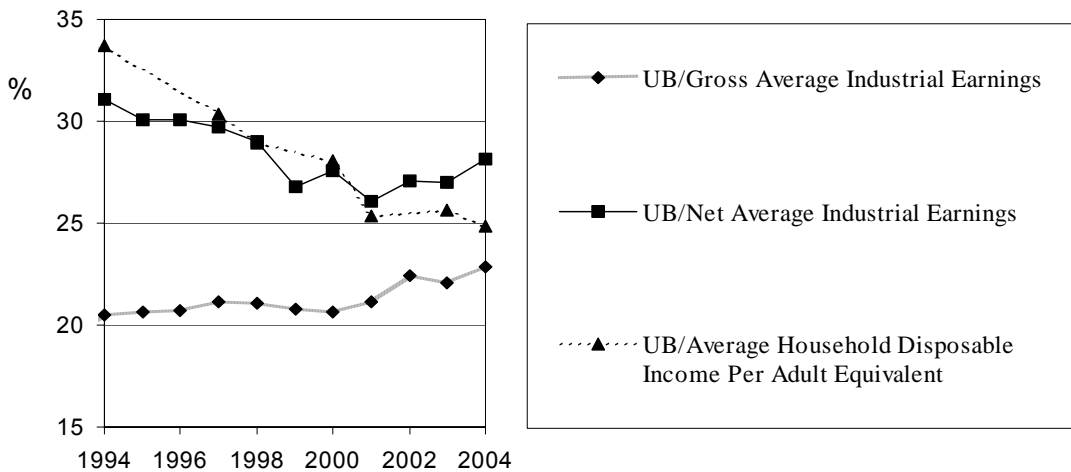
APPENDIX 3.1 REPLACEMENT RATES FOR HYPOTHETICAL CASES AT AVERAGE INDUSTRIAL EARNINGS, 1976-1994, 2000, 2005

Table A3.1: Replacement Rates for Hypothetical Cases, Flat-Rate Unemployment Benefit and Average Earnings of Industrial Workers in Manufacturing, 1976-1994, 2000, 2005

Year	Single Man	Single Woman	Married Man	Married Man, 2 Children	Married Man, 4 Children
1976	25.3	45.5	39.2	50.3	58.9
1977	23.8	42.2	37.2	48.6	57.0
1978	23.9	40.4	35.9	47.4	55.9
1979	23.8	37.7	35.3	47.4	56.2
1980	25.5	39.3	37.7	50.9	60.9
1981	26.5	40.9	39.7	52.7	62.6
1982	31.7	46.2	45.7	60.7	72.6
1983	33.3	48.1	47.7	63.2	75.5
1984	32.7	46.8	46.1	61.2	73.3
1985	32.0	45.9	44.8	59.5	71.3
1986	30.8	43.7	43.1	57.6	69.5
1987	30.7	42.8	42.4	56.7	68.5
1988	29.7	42.1	42.1	56.3	68.0
1989	28.9	41.4	41.2	55.0	67.0
1990	29.3	41.8	41.8	55.6	68.2
1991	29.0	41.8	41.5	55.1	68.1
1992	29.0	41.5	41.7	55.3	68.1
1993	30.1	41.9	42.9	56.4	69.3
1994	31.0	43.5	43.4	57.0	68.7
1995	30.1	41.2	42.5	56.0	68.6
1996	30.0	41.1	42.6	55.9	68.2
1997	29.7	40.3	42.2	55.0	67.0
1998	29.0	38.9	41.0	53.2	64.7
1999	26.8	38.4	39.7	51.3	62.4
2000	27.6	36.7	40.5	52.2	63.1
2001	26.1	35.3	39.5	51.2	62.0
2002	27.1	38.1	42.2	54.6	65.5
2003	27.0	36.6	41.7	53.8	64.5
2004	28.1	37.9	43.1	54.9	65.2
2005	29.8	39.6	46.0	57.4	67.4

4. EFFECTIVE MARGINAL TAX RATES

4.1 Introduction

Much attention is paid to headline numbers like the standard tax rate and the top tax rate as indicators of the strength of the incentive to work. These headline policy parameters are important, but they do not give the full picture as regards the incentive to work additional hours, to increase work effort, or to obtain additional skills and/or qualifications which would be rewarded in the labour market. The net reward from increased hours or work effort depends on other factors as well, including the withdrawal of welfare benefits (from the person concerned or from his/her spouse) as income rises.

The effective marginal tax rate (EMTR) is designed to take account of this phenomenon. It measures what part of additional earnings is "taxed away" through the combined effect of increasing tax and full or partial withdrawal of benefit. Replacement rates, examined in the last chapter, measure financial incentives by comparing situations in which an individual is either "in work" or "out of work". The effective marginal tax rate measure is directed instead at situations where an individual may choose either to work more or less, in terms of work hours and/or work effort.

The EMTR is calculated using the formula:

$$EMTR = 1 - \frac{Change \quad in \; Net \; Income \quad after \quad Taxes \quad and \quad Benefits}{Additional \quad Earnings}$$

By definition EMTRs are not directly observable. The simulation approach of tax-benefit models, for example *SWITCH*, can be used to numerically compute EMTRs by altering income variables observed in the micro-data, re-computing tax liabilities and benefits entitlements and comparing disposable income in the pre- and post-change situations. The EMTRs computed by *SWITCH* are presented in the final section of this chapter. *SWITCH* enables effective tax rates to be computed under a range of policy configurations, so the impact of both the medical card and Rent or Mortgage Interest Supplement are also discussed. Before these new measures of EMTRs for Ireland are discussed, existing international and Irish evidence is first outlined.

Γhe accurate measurement of EMTRs is important for a range of policy related questions. Measurements of effective tax rates have, for instance, been used as explanatory variables in studies concerning the influence of tax burdens on unemployment (Daveri and Tabellini, 2000; Martinez-Mongay and Fernández-Bayón, 2001), economic growth (Agell *et al.*, 1997, 1999) and wage setting behaviour (Sørensen, 1997).

The OECD (2004) report on *Benefits and Wages* uses the OECD tax-benefit models to give the EMTRs for part-time employees increasing their working hours by different amounts. The findings show that in a number of countries there are very high EMTRs for a doubling of working-hours from one-third to two-thirds of full-time hours. This particularly holds for larger households which are more likely to receive means-tested benefits such as social assistance. EMTRs are low in counties where tax burdens are small (e.g. Korea) or where means-tested benefits play less of a role (e.g. Greece, Italy, Spain). Table 4.1 presents the OECD's results for Ireland.

Table 4.1: Effective Marginal Tax Rates for Part-Time Employees in Ireland, Different Working-Hours Transitions in Per Cent, 2002

| | | No Children | | | 2 Children | |
	Single Person	1-Earner Married Couple	2-Earner Married Couple	Lone Parent	1-Earner Married Couple	2-Earner Married Couple
½ time to full-time	30	38	30	75	50	30
⅓ time to ⅔ time	48	81	25	58	77	25
⅔ time to full-time	30	27	30	69	42	30

Source: OECD (2004).

Note: 1. It is assumed that the children are aged 4 and 6 years.

Immervoll (2004) uses EUROMOD, an EU wide tax-benefit model, with national models similar in structure to *SWITCH*, to derive distributions of EMTR measures for fourteen countries, including Ireland. The tax and benefit rules and the data used by Immervoll relate to 1998. In the case of the EMTR calculations sample sizes range from 3,000 to 17,000 per country, depending on the country. This study considers the impact of increasing income by 3 per cent of gross earnings, which corresponds to slightly above one additional working hour for the typical full-time employee (and somewhat less for part-time workers). Figure 4.1 shows the results for the working population aged 18-64 years as a whole.

Figure 4.1: Effective Marginal Tax Rates Faced by the Working Population in Fourteen European Countries, 1998
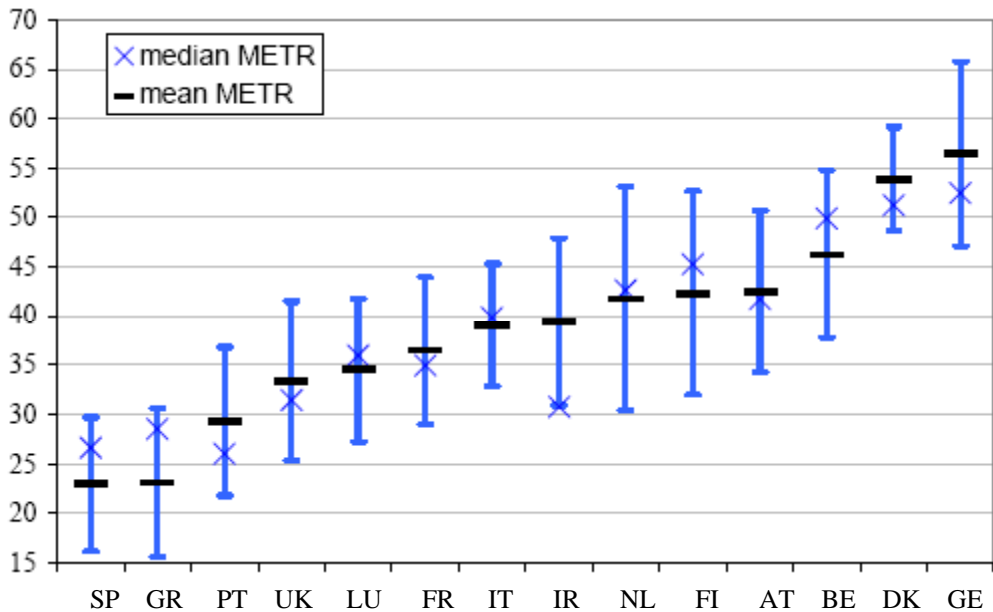
Source: Immervoll (2004). Error bars show standard deviation.

Median EMTRs range from under 30 per cent (Spain, Greece and Portugal) to more than 50 per cent (Denmark and Germany). Ireland is at the lower end of this range with a median EMTR of just over 30 per cent, although Ireland's mean EMTR of just under 40 per cent gives Ireland a middle-ranking position. The fact that the mean is so much higher than the median value for Ireland suggests that there are significant numbers of high and very EMTRs, which would tend to increase the mean without affecting the median value. Our analysis later in this chapter considers the full distribution of EMTRs, and pays close attention to values which are high or very high.

Some of the other interesting results from this study relate to gender and the role of benefits. Immervoll finds that across the working population as a whole EMTRs are generally lower for women. However, once earnings differentials between men and women are controlled for, in countries with joint income tax filing, like Ireland, women tend to face higher EMTRs than men in the same earnings group. In relation to benefits, Immervoll finds that the withdrawal of means-tested benefits is the major contributor to very high (>80 per cent) EMTRs in almost all countries and that the influence of both benefit claw-back rates and contribution thresholds is strongest for low-wage individuals.

4.3
Existing Irish
Evidence

The trade-off between increased welfare payments and tax rate increases (or tax cuts foregone) was examined by Callan *et al.* (1996). As well as identifying the aggregate tax rate required to finance various welfare payment levels, the analysis measured the impact of increases in social welfare payments and the resultant increases in taxes on effective marginal tax rates for those in employment. It should be noted, however, that the only "welfare withdrawal" included in this analysis was for Family Income Supplement. This represented a first step in moving from marginal tax rates which only included tax and PRSI deductions towards a wider effective marginal tax rate concept, but did not allow for the impact of benefit withdrawal on spouses and partners.

Four possible policy packages were examined. These involved increases in the basic social welfare payment rate to Ir£68, Ir£75, Ir£82 and Ir£90 respectively. The corresponding policy packages were constructed to be revenue-neutral i.e., the standard and top rates of income tax were raised to generate the revenue to cover the cost of the additional welfare payments. The Ir£68 payment rate package involved an increase of about 1.25 percentage points in tax rates, affecting over 400,000 standard rate taxpayers and about 300,000 top tax rate taxpayers. It also resulted in about 15,000 cases experiencing an increase in their EMTRs of over 10 percentage points. The Ir£75 payment package, which required a tax rate increase of close to 5 percentage points, would have led to over 100,000 families facing a EMTR increase of more than 10 percentage points. The Ir£82 and Ir£90 payment rate packages gave rise to much greater impacts on the distribution of marginal tax rates. Under the Ir£82 package tax rates rose by 8 percentage points and over 800,000 tax units faced EMTR increases of about 8 percentage points, with about 200,000 facing increases of over 10 percentage points. Under the Ir£90 payment package, well over a million tax units faced increases in EMTRs of over 10 percentage points, with the majority facing a marginal rate increase of more than 12 percentage points. These results illustrated the nature of the trade-off between welfare increases and EMTRs for those in employment.

4.4
New Measures
of Effective
Marginal Tax
Rates

The EMTRs that are calculated here are for those in the population that get earnings from work i.e., employees, apprentices, the self-employed, farmers and those on either temporary employment or state training schemes. So additional earnings get added to current gross pay or current self-employment/farm income depending on the labour force status of each case. Before computing the effective tax burden on marginal income changes, issues arise relating to the exact features of the change. The approach taken to model the EMTR depends on what change is made to income. Three possible approaches are outlined below.

Probably the most appealing approach is to take as the margin the change in gross earnings resulting from additional hours of work. Thus, one could, for example, look at the impact of an

additional hour's work, or an additional day or half-day of work for each individual. This requires knowledge of the hourly wage for each individual, but this is not available for all cases. Hourly wages are not available for the self-employed and farmers, so they would probably have to be excluded under this approach. Also, the hourly wage data for some employees is missing. While wage predictions based on relevant characteristics could be used to overcome this problem, two simpler approaches offer alternative starting points which can include farmers and the self-employed. These approaches define the increase in income as either a fixed percentage of base income, or a fixed money amount to be added to base income.

The OECD and some EUROMOD analyses (including Immervoll (2004) who adds on 3 per cent of gross income) use the "fixed percentage" approach. While this is useful when comparing increases in income for the full-time employed, it is less so when considering increases in income for those who are working part-time. The fixed percentage approach attributes a smaller increase in income to those working part-time – but in fact it may be part-time workers who are more likely to raise hours by a substantial amount. A larger proportionate rise in income is required if this is to be analysed. This can be achieved by examining an increase in income which is simply a fixed money amount. The results presented here are based on adding €61.20 per week to the earnings of each individual. This figure is the gross pay for 8 hours of work at the 2005 minimum wage (€7.65 per hour.)

Using this definition, the mean and median effective marginal tax rates are very close, at about 38 per cent. Table 4.2 presents the distribution of EMTRs in 2005. This shows that 94 per cent of the population face EMTRs below 50 per cent in 2005. About 40 per cent face a effective marginal tax rate of between 40 and 50 per cent. A significant proportion of those facing high effective marginal tax rates must do so because of the operation of benefit withdrawal in the welfare system. Simply counting the numbers of high-rate taxpayers does not provide an adequate guide to the incentive effects of the overall tax-transfer system.

Table 4.2: Distribution of Effective Marginal Tax Rates in 2005

EMTR	Number of People (000s)	Percentage (%)
0	51.6	2.8
<= 10	54.8	3.0
<= 20	107.4	5.9
<= 30	522.6	28.5
<= 40	208.2	11.3
<= 50	783.6	42.7
<= 60	29.2	1.6
<= 70	12.9	0.7
<= 80	12.2	0.7
<= 90	5.6	0.3
<= 100	16.5	0.9
> 100	31.5	1.7
Total	1,836.7	100.0

Source: *SWITCH*.

Table 4.3 examines how the distributions of effective marginal tax rates are affected by the inclusion or exclusion of Rent and Mortgage Supplement and/or the inclusion of the value of a medical card in the income measure used. The inclusion of Rent and Mortgage Supplement leads to a small rise in very high replacement rates (the proportion above 100 per cent rises from 2 to 2.6 per cent) but makes little difference otherwise. Differences are likely to arise only for those who are in part-time employment (less than 30 hours per week) and are eligible for Rent/Mortgage Supplement. The inclusion of this scheme has a much greater impact on the distribution of replacement rates, as in this situation the key factor is that many of those unemployed are eligible for support, but few would be if in employment. Similarly the impact of the medical card scheme on effective marginal tax rates appears to be slight.

Table 4.3: Distribution of Effective Marginal Tax Rates, With and Without Rent Supplement and Medical Card, 2005

EMTR	2005 No Rent or Mortgage Supplement	2005 With Rent and Mortgage Supplement	2005 With Medical Card
0	2.9	2.8	2.2
<= 10	3.2	3.0	2.9
<= 20	6.0	6.0	6.4
<= 30	28.6	28.3	28.2
<= 40	11.4	11.3	11.5
<= 50	42.7	42.6	42.8
<= 60	1.6	1.6	1.4
<= 70	0.7	0.7	0.7
<= 80	0.6	0.7	0.8
<= 90	0.3	0.3	0.3
<= 100	0.6	0.9	0.9
> 100	1.4	1.7	1.8
Total	100.0	100.0	100.0

Source: SWITCH.

The evolution of cash EMTRs (excluding the effect of medical cards and rent or mortgage supplement) between 2000 and 2005 is presented in Table 4.4. A downward shift in EMTRs between these two years is evident. The proportion of individuals with EMTRs above 50 per cent fell from about 20 per cent to about 5 per cent.[23]

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[23] However, there is a small rise in the proportion of cases with an effective marginal tax rate above 70 per cent.

Table 4.4: Distribution of Effective Marginal Tax Rates, Percentages, 2000 and 2005

EMTR	2000	2005
0	1.0	2.9
<= 10	3.5	3.2
<= 20	3.8	6.0
<= 30	22.1	28.6
<= 40	21.8	11.4
<= 50	27.2	42.7
<= 60	15.4	1.6
<= 70	2.7	0.7
<= 80	0.6	0.6
<= 90	0.2	0.3
<= 100	0.6	0.6
> 100	1.0	1.4
Total	100	100

Source: *SWITCH*.

What causes EMTRs of over 100 per cent? A look at the characteristics of such cases indicate the reasons behind such high effective tax rates, which act as a strong disincentive to earning the additional €61.20 a week. In general, cases with EMTRs of over 100 per cent are on below average earnings and either they or their partners receive one or more social welfare payments.

For certain benefits, an increase in earnings reduces the amount of welfare the recipient gets. For instance, many of the cases with high EMTRs are lone parents. The One-Parent Family Payment is set up so that such parents may qualify for full, reduced or no payments depending, among other things, on whether their earnings are below, between or above certain limits. If the additional income of €61.20 per week moves a recipient of this payment over the €293 earnings limit, then the increased earnings may be more than offset by the loss of the social welfare payment, leading to a EMTR of over 100 per cent. Increased earnings can also lead to reductions in benefit for recipients of other benefits. For example, Family Income Supplement entails a reduction in benefit of 60 per cent of the net increase in earnings.

Some spouses or partners of welfare recipients are among those with very high EMTRs. Taking those on Unemployment Assistance, in addition to the personal rate of UA, an individual may get an increase for a qualified adult and child dependant additions. The amount of these additions be affected by their spouse or partner's earnings. So as the earnings of the partner of a UA recipient increase, the amounts received in respect of qualified adults or child dependants fall, leading to high EMTRs. This example of a cause of high EMTRs illustrates the fact that when *SWITCH* calculates EMTRs it takes account of full or partial withdrawal of a benefit from a partner because their spouse's earnings exceed a limit. This is relevant for more than just Unemployment Assistance and

Unemployment Benefit – other welfare payments where somewhat similar considerations apply include Disability Allowance and Disability Benefit.

A more detailed look at EMTRs in 2000 and 2005 provides information regarding how the changes outlined in Table 4.4 above reflect changes in EMTRs first, for men and women and second, for income decile groups. First, as regards gender differences, the overall mean is higher for women in both years. However, while the mean EMTR for men was unchanged, the mean EMTR for women fell by 3 percentage points to 38 per cent in 2005. The phasing-in of greater independence of taxation as between husband and wife over this period has contributed to this result.

The results on EMTRs for those in work may be compared with similar analyses for the UK undertaken by Adam *et al.* (2006). Table 4.2 shows the distributions of EMTRs in the two countries. The UK distribution has a very sharp peak corresponding to the standard rate of tax (and standard national insurance contributions) so that more than 60 per pent of those in employment face an EMTR of 30 to 40 per cent, with a lesser peak corresponding to the top tax rate. For Ireland the distribution has two more equally sized peaks corresponding to the standard and top tax rates. As regards high EMTRs, the proportions with EMTRs above 70 per cent are quite similar (the Irish figures are slightly higher), but the UK has many more individuals facing EMTRs of between 60 and 70 per cent. This is linked with withdrawal rates implicit in the UK system of tax credits related to work and children, which will be considered further in the next section.

Table 4.2: Distribution of Effective Marginal Tax Rates in 2005

EMTR	Ireland	UK
0	2.8	3.1
<= 10	3.0	0.6
<= 20	5.9	1.4
<= 30	28.5	9.2
<= 40	11.3	61.2
<= 50	42.7	12.0
<= 60	1.6	1.3
<= 70	0.7	7.8
<= 80	0.7	1.0
<= 90	0.3	1.3
<= 100	0.9	0.7
> 100	1.7	0.2
Total	100.0	100.0

Source: *SWITCH* for Ireland, Adam *et al.* (2006) for the UK.

**4.5
Conclusions**

The headline rates of income tax (the standard rate and the top rate of income tax) are well known, and counts of the numbers facing each of these tax rates are regularly produced. However, these do not provide a comprehensive picture of the financial work incentives faced by those in employment. The net reward for increased hours or work effort is also affected by PRSI contributions and by withdrawal, in whole or in part, of social welfare benefits – including the benefits paid to a spouse. In the international literature, the broader measures which take such factors into account are called "effective marginal tax rates" (EMTRs).

Calculation of these EMTRs requires a simulation methodology which allows net incomes to be calculated for a "base" income and an alternative, increased income associated with additional hours, effort or skill. Applying such methods here using the *SWITCH* model, we find that:

- EMTRs have fallen between 2000 and 2005, reflecting cuts in tax and PRSI contribution rates.
- A small proportion (less than 5 per cent) face EMTRs of more than 60 per cent.
- A significantly higher proportion of the UK working population (over 10 per cent) face EMTRs above 60 per cent. This is largely because of benefit withdrawal rates associated with UK tax credit schemes for low income families with children, which lead to EMTRs of between 60 and 70 per cent.

These UK schemes, and their relationship to proposals for an income-tested child benefit supplement are discussed further in the next chapter.

5. CHILD POVERTY AND CHILD INCOME SUPPORT[19]

5.1 Introduction

We have seen that the highest replacement rates tend to be faced by unemployed persons with children. Targeted in-work benefits, such as the Family Income Supplement, operate to reduce replacement rates, but at the same time lead to some of the highest effective marginal tax rates in the tax-benefit system. Thus, trade-offs between the goals of effective income support and strong financial incentives to work are particularly evident in the area of income supports related to children.[20]

With this backdrop in mind, we review Irish goals relating to child poverty, and consider how they relate to recent developments in UK policy. We then examine outcomes over the past decade or so, and draw on international comparisons to situate Irish policy and performance in a wider setting. In particular we focus on what Ireland may have to learn from countries representing "best practice" in minimising child poverty. This is in line with the EU's approach to social policy development, which under its "open method of coordination" lays great emphasis on countries comparing their performance with best practice in the social policy area.

We then focus more closely on the Irish system of child-related income supports. We examine how it has evolved in recent years, and the impact of such changes on child poverty. The implications of introducing a "second tier" of income-tested child income support, replacing Child Dependant Additions and Family Income Supplement, are then examined. Such a change has been under consideration as part of the Ending Child Poverty Initiative under *Sustaining Progress* and remains on the agenda in the most recent partnership agreement, *Towards 2016*.

5.2 Ending Child Poverty: Irish and UK Targets

Ireland's National Anti-Poverty Strategy has included a specific target for the reduction of child poverty since 2002. (Government of Ireland, 2002). The strategy aims to reduce the numbers of children who are "consistently poor" i.e., live in households with incomes below 60 per cent of the median (middle-ranking) income adjusted for family size and composition *and* are in households which are experiencing "basic deprivation", as indicated by the fact that they

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[19] An earlier version of this chapter was published as Callan *et al.* (2006).

[20] We focus for the most part on cash income supports. Support in the form of services for children is also very relevant, as discussed in NESC (2005) and in Bradshaw and Finch (2002).

are deprived of at least one of a set of indicator items widely regarded as necessities and possessed by a majority of households[21] based on a fixed set of deprivation indicators, below 2 per cent, and if possible to eliminate consistent poverty. This has been the focus of a special initiative to "End Child Poverty" initiated under the *Sustaining Progress* partnership agreement, and continues as a key element of the current partnership, *Towards 2016*.

The UK target for child poverty follows the tiered approach pioneered by Nolan (1999, 2000), already outlined in Chapter 1. Thus, the UK target is summarised by the Department of Work and Pensions (2003) as follows:

> Our new measure of child poverty will consist of:
>
> Absolute low income – to measure whether the poorest families are seeing their incomes rise in real terms.
>
> Relative low income – to measure whether the poorest families are keeping pace with the growth of incomes in the economy as a whole.
>
> Material deprivation and low income combined – to provide a wider measure of people's living standards.
>
> Using this measure, poverty is falling when all three indicators are moving in the right direction.
>
> (Department of Work and Pensions, 2003, Executive Summary).

The rationale for the inclusion of a relative income component in the poverty measure has already been stated in Chapter 1. Here we may simply recap on these issues by citing the rationale as stated by the UK authorities:

> Measures of relative low income are widely used in industrial nations, and this is the most widely watched indicator in the European Union. EU agreements entered into at Lisbon (2000) and Laeken (2002) mean that relative low income is a central yardstick in measuring the success of our drive to increase social cohesion…. Relative income measures are important because when children fall too far behind the typical family, they will not be able to take a full part in the activities that social inclusion demands. So to tackle social exclusion it is essential that as well as increasing incomes, we also help the poorest children narrow the gap with the rest of society as the nation overall grows richer.
>
> (Department of Work and Pensions, 2003, paragraphs 32 to 34).

In this context, it is to international comparisons of rates of child poverty based on relative income poverty lines (or the EU's "at risk of poverty" measure) that we now turn.

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[21] For details on the rationale underlying this measure of "consistent poverty" see Nolan and Whelan (1996).

5.3 Child Poverty and Welfare Policies: Cross-country

5.3.1 CHILD POVERTY IN INTERNATIONAL PERSPECTIVE

The most comprehensive recent study of rates of child poverty in rich countries is reported in UNICEF (2005). Overall results for child income poverty (the risk of living in a household with an income below 50 per cent of median income per adult equivalent) are reported in Table 5.1. The lowest rates of child poverty were found in the Scandinavian countries, where the risk of income poverty was between 2 and 4 per cent. Almost all Continental European countries, along with some of the new member states, had child poverty rates of between 7 and 13 per cent. Ten countries had higher child poverty rates – the highest in the US and in Mexico, with the others at levels of between 14 and 17 per cent. It is striking that all of the English speaking countries had poverty rates well above the average. The six English speaking countries occupied six of the nine worst positions in terms of the prevalence of child poverty. Micklewright (2004) extends this analysis and finds that the English-speaking countries also perform poorly on other indicators of child welfare.

Table 5.1: Rates of Income Poverty for Children in Rich Countries, Around 2000

Country	Rate of Child Poverty (Relative Income Poverty, 50% of Median Equivalised Income)
Denmark	2.4
Finland	2.8
Norway	3.4
Sweden	4.2
Czech Republic	6.8
Switzerland	6.8
France	7.5
Belgium	7.7
Hungary	8.8
Luxembourg	9.1
Netherlands	9.8
Austria	10.2
Germany	10.2
Greece	12.4
Poland	12.7
Spain	13.3
Japan	14.3
Australia	*14.7*
Canada	*14.9*
UK	*15.4*
Portugal	15.6
Ireland	*15.7*
New Zealand	*16.3*
Italy	16.6
USA	*21.9*
Mexico	27.7

Source: UNICEF (2005), *Child Poverty in Rich Countries 2005*, Innocenti Report Card No. 6.
Note: The poverty rates in Table 5.1 refer to the following years: 2001 (Switzerland, France, Germany, New Zealand), 2000 (Denmark, Finland, Norway, Sweden, Czech Republic, Luxembourg, Japan, Australia, Canada, Portugal, Ireland, Italy, USA), 1999 (Hungary, Netherlands, Greece, Poland, UK), 1998 (Mexico), 1997 (Belgium, Austria) and 1995 (Spain).

More recent information on the incidence of child and overall poverty is available for EU countries. This is of particular relevance given the emphasis on trying to match EU best practice in social policy, as set out in the Lisbon strategy. Table 5.2 reports "at risk of poverty" measures for the total population and for children, for EU countries in 2004. The cut-off used is 60 per cent of median income per adult equivalent, one of the key "Laeken" indicators.

The Scandinavian countries had the lowest rates of overall income poverty, and rates of child poverty which were, if anything, somewhat lower (child poverty rates of 8 to 11 per cent). This makes them stand out from Continental European countries where the child poverty rates were between 14 and 20 per cent. The UK and Ireland had child poverty rates of 22 per cent, with higher rates of up to 26 per cent in a group of "southern" countries (Portugal, Spain and Italy).

Table 5.2: At Risk of Poverty Rates for EU15 Countries, 2004

(Cut-off Point: 60 Per Cent of Median Income Per Adult Equivalent)

Country	Total Rate	Child Rate
Norway	11	8
Denmark	11	9
Finland	11	10
Sweden	11	11
Luxembourg	11	18
Netherlands	12	18
Austria	13	15
France	14	14
Belgium	15	17
Germany	16	20
UK	18	22
Italy	19	26
Greece	20	20
Spain	20	24
Ireland	21	22
Portugal	21	23
Unweighted average of EU15	16	18

Note: Figures for Netherlands and for the UK are for 2003.
Source: Eurostat web site, http://www.epp.eurostat.cec.int

For the most part, child poverty rates were close to overall poverty rates.[22] Norway, Denmark and Finland were the only countries with child poverty rates below the overall poverty rate. There were two countries, Luxembourg and the Netherlands, with low overall poverty rates but substantially higher child poverty rates.

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[22] This is in line with Brady's (2004) finding that, for 18 rich Western countries, child poverty is very strongly correlated with overall poverty. Brady finds, on the other hand, that elderly poverty is only moderately correlated with overall poverty.

5.3.2   CHILD POVERTY AND CHILD INCOME SUPPORT POLICIES

The lowest rates of child poverty and of overall poverty shown in Table 5.2 are for the Nordic countries – Denmark, Finland and Sweden among the EU countries, and Norway. The logic of the "best practice" approach dictates that special attention should be paid to these countries in order to understand how they have achieved low rates of child and general poverty, and what lessons may be learned from their experience. This is all the more so because the child poverty outcomes for children achieved in these countries represent "best practice" not just within the EU but in global terms. In seeking to "end child poverty" a closer look at the Scandinavian experience is clearly warranted.

We begin by considering how income support paid by the state in respect of children varies across countries: clearly this has the potential to affect child poverty outcomes. Child income supports can vary according to the age and number of the children concerned, and may also depend on whether one or two parents are present in the household, and on the labour force status and income of the parent(s). Bradshaw and Finch (2002) examine child income support packages for a wide range of family types and labour market/income situations. They choose a subset of these cases, giving greater weight to those occurring more commonly. While this does not provide a fully representative picture of families in any one country, this approach provides a standardised framework with which to assess the nature of the income support packages across countries. Key results are set out in Table 5.3.

Table 5.3: Ranking of the Child Support Package for 22 Countries, 2001

Country	Value of Cash Child Income Supports as % of Average Wage	Country	Value of Child Income Support Package Including Housing and Non-cash Services as % of Average Wage
Austria	16.3	Austria	17.2
Luxembourg	14.2	Finland	13.9
IRELAND	13.2	France	10.9
Belgium	12.1	Luxembourg	10.2
UK	11.6	Sweden	10.2
France	10.4	Norway	9.7
Norway	9.6	Belgium	9.0
Germany	9.0	Germany	8.3
Finland	8.7	Denmark	7.7
USA	8.5	UK	7.5
Australia	7.6	Australia	6.7
Israel	7.3	IRELAND	5.3
Sweden	6.7	Israel	3.9
Portugal	6.6	Canada	2
Denmark	6.2	Italy	2
Canada	5.8	USA	1.6
New Zealand	5.2	New Zealand	-0.4
Japan	4.9	Spain	-1.1
Italy	4.8	Japan	-1.5
Spain	2.3	Portugal	-2
Greece	1.9	Greece	-5.6

Source: Bradshaw and Finch (2002). Figures for Ireland incorporate revisions.
(http://www.york.ac.uk/inst/spru/research/summs/childben22.htm).

The package of cash income supports offered in Ireland, as of 2001, was among the most generous across countries. Ireland ranked third in terms of the value of the cash package of income supports for children – mainly child benefit and child dependant additions. The total value of the package, averaged over a wide range of family situations, was just over 13 per cent of the average industrial wage, compared with 15 per cent for the country with the most generous package. The value of the package in most countries – including the four Scandinavian countries – was between 5 and 10 per cent of the average wage.

The value of Ireland's overall child support package, taking into account housing benefits and provision of non-cash services such as subsidised childcare, was towards the lower end of the international spectrum in 2001. Increases in child benefit since then, and the introduction of the Early Childcare Subsidy will have boosted Ireland's overall child support package, and its position in the country rankings of child supports. Because this support is delivered through a cash mechanism, while other countries typically use non-cash mechanisms for childcare, Ireland's position in the ranking of cash income supports will be further enhanced, while its low ranking in terms of directly provided services will remain unchanged.

It is striking that the four Scandinavian countries, which have the lowest child poverty rates, had child income support packages of between 6 and 10 per cent, in the middle of the international ranking. Thus, their exceptional performance in terms of reducing child poverty is *not* due to exceptionally high child income supports. Indeed, both Ireland and the UK have higher valued cash supports – but as we have seen, child poverty rates in Ireland and the UK are close to the highest in the EU, while those in the Scandinavian countries are among the lowest.

5.3.3 WELFARE REGIMES

How then have the Scandinavian countries managed to achieve such low rates of child poverty? A key factor in explaining this is that the income situation of children depends on the *total* income package received by their parents, not just on the elements which are related to the presence of children. The Scandinavian societies combine high employment rates with a welfare regime which gives high levels of payment to those on social protection. Table 5.4 below illustrates for Ireland, the UK and the four Scandinavian countries:[23]

    a.   the unemployment benefit paid to a single person as a proportion of the EU at risk of poverty threshold (60 per cent of median income per adult equivalent);

[23] While individual examples of this type might not be representative we know (e.g., from Callan and Nolan, 2004) that an analysis taking into account the full range of welfare recipients points in a similar direction. Callan and Nolan show that over half of the gap between the overall poverty rate in Ireland and that in Denmark can be accounted for by differences in welfare policies.

b. the poverty threshold as a proportion of the average industrial wage; and

c. unemployment benefit as a proportion of the average industrial wage.

Table 5.4: Poverty Thresholds, Average Wages and Unemployment Benefits, 2004

	Unemployment Benefit as % of Poverty Threshold	Poverty Threshold as % of Average Wage of Production Worker	UB as % of Average Wage of Production Worker
Denmark	147	29	43
Finland	121	34	41
Sweden	89	37	33
Norway[1]	70	42	29
Ireland	65	39	26
UK	40	34	14

[1]As UB is earnings related, and can be payable in respect of quite low levels of earnings, social assistance provides a higher floor – similar to the UB payable to an individual on half the average wage. The minimum wage in Ireland is just over half the average industrial wage.

Source: Poverty threshold from Eurostat web site cited in Table 5.2. Wage for average production worker from OECD *Taxing Wages 2003-2004*. Unemployment benefit for a single person from OECD (2006) *Benefits and Wages: OECD Indicators 2004* and associated online country files.

In Ireland, the rate of Unemployment Benefit in 2004 was about two-thirds of the at-risk-of-poverty threshold for a single person. For Sweden the ratio was almost 90 per cent, while the payment rates in Finland and Denmark were well above the at-risk-of-poverty threshold in those countries. In the UK, by contrast, the payment rate was 40 per cent of the at-risk-of-poverty threshold.

The poverty thresholds represent varying proportions of the average industrial wage across countries. Is this ratio particularly high in Ireland, causing particular labour market difficulties in paying a welfare rate which is high in relation to the at-risk-of-poverty threshold? The Irish rate is 39 per cent, higher than that in Denmark, Finland and the UK. It is also somewhat above the rate in Sweden (37 per cent) but below that in Norway (42 per cent).

Sapir (2005) provides a further perspective on the issue of whether the achievement of a low risk of poverty measure in the Scandinavian countries is at the expense of a trade-off between equity and efficiency. Figure 5.1, drawn from Sapir, plots the EU15 countries in terms of an equity goal (the probability of avoiding poverty, measured by 100 minus the percentage risk of poverty measure) and an efficiency goal (the employment rate, which takes into account not just unemployment but also labour market participation).

Sapir argues that this evidence indicates that the Scandinavian economies and welfare regimes are attaining both equity and efficiency goals. Ireland and the UK score well on the efficiency front, but not on the equity goal. The Continental economies, by contrast, score well on equity but not on efficiency; while the Mediterranean or southern EU countries, by and large, achieve neither efficiency nor equity.

Figure 5.1: Employment Rates and Probability of Avoiding Poverty, EU, 2004
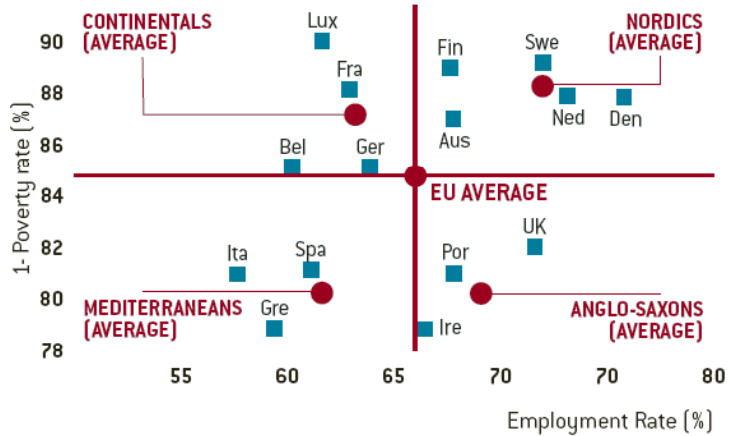
Source: Sapir (2005).

**5.4
Restructuring
Child Income
Supports:
Policy**

The clear message from these international comparisons is that, to date, the most effective policy regimes in countering both child poverty and general poverty have been those of the Scandinavian countries. Furthermore, the success in countering child poverty is *not* due to especially high child income support payments, but to the more general income support regime and to the extent to which the welfare state more broadly reconciles equity and efficiency goals and underpins a high employment rate. However, welfare state expenditures have to be financed. If Ireland, like other English-speaking countries, is unwilling to finance expenditure at the levels seen in Scandinavian countries, then the question arises as to what can be achieved with a more targeted approach to the reduction of child income poverty. In this section, therefore, we concentrate on the recent evolution of policy in Ireland and in other English speaking countries, which relates to the development of more targeted child income supports. It must be remembered, however, that these supports operate in an environment where child income poverty is substantially higher than in the Scandinavian countries.

5.4.1 ASSESSING THE IMPACT ON CHILD POVERTY OF RECENT DEVELOPMENTS IN CHILD INCOME SUPPORT

We consider first the evolution of child poverty outcomes in the UK, where there have been substantial changes in the level and structure of child income support. The proportion of children in households with incomes below 60 per cent of the median has fallen sharply over the past decade, as shown in Table 5.5 below.

Table 5.5: Child Poverty in the UK, 1996/7 to 2004/5

|	Percentage of the Child Population in Households with Incomes Below 60 Per Cent of the Median	
	Before Housing Costs	**After Housing Costs**
1996/7	24.9	33.3
2000/1	21.0	30.3
2004/5	19.5	27.2

Source: Brewer *et al.* (2005). Table 3.3.

While it is clear that this outcome is linked in part to policy changes concerning child income support, it is not possible from the published analysis to derive a decomposition of the total change into a "policy impact" and an effect due to other factors. It is worth noting, however, that on the "before housing costs" measure (closer to that used in Ireland), most of the reduction in UK child poverty occurred between 1996/7 and 2000/1.

There have also been dramatic shifts in Irish child income support over the past decade. Both the level of child income support and the way in which it is structured have changed radically in recent years. Since the mid-1990s, rates of payment for Child Dependant Additions (CDAs) – a payment received only by those in receipt of a weekly social welfare payment – have been frozen in nominal terms, while very substantial additional resources have been used to increase the rate of child benefit paid in respect of all children. The broad rationale for this approach involved a shift to child benefit as a form of support which was neutral with respect to labour market status, and away from payments conditional on being out of work.

The outcome in terms of the balance between payment rates for CDAs and Child Benefit is illustrated in Figure 5.2. The rate of payment for Child Benefit rose from just under 2 per cent of the average industrial wage in 1994 to a level just under 6 per cent of that wage in 2005. While CDA payment rates remained constant in nominal terms, rising real and nominal wages meant that CDA rates declined as a proportion of the average industrial wage from about 5 per cent in 2000 to 3 per cent in 2005. The total income support package rose from 7 per cent of the average wage to 9 per cent, with the net increase concentrated in the period from 2000 to 2002. We have seen in Chapter 3 that the poverty threshold (60 per cent of median income per adult equivalent) has grown more rapidly than average earnings in recent years. As a result, the picture is somewhat different when relating child income support levels to the child element of the poverty threshold. There is still a sharp increase between 2000 and 2002 (about 1.5 percentage points) but this follows a decline of close to 2 percentage points between 1994 and 2000. Our later microsimulation analysis of the 2000 to 2006 period takes this into account.

Figure 5.2: Rates of Child Benefit and Child Dependant Addition as a Percentage of Average Earnings in Manufacturing, 1994 to 2005
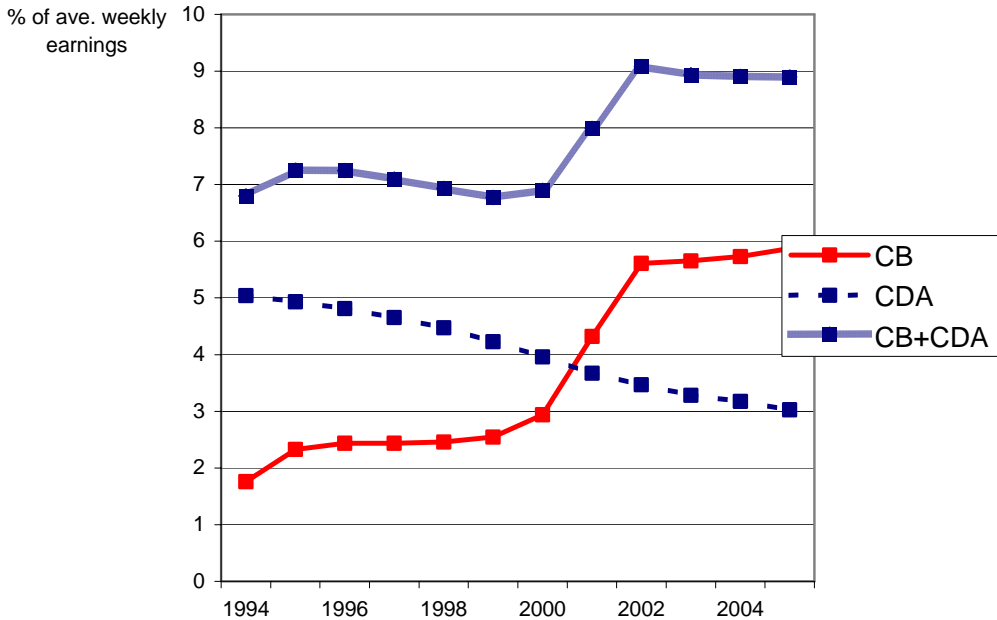
Budget 2006 introduced a further innovation in the form of the Early Childcare Subsidy. This is a cash support, allowing the parent or parents to choose whether to use the money to help purchase paid childcare or to use it as a financial support for a parent to undertake the care.

The head count measure of children living in a household "at risk of poverty" (i.e., below 60 per cent of median income) was close to 24 per cent in 2000, as measured by the Living in Ireland Survey. Estimates for 2004, based on the new Survey of Income and Living Conditions (SILC) conducted by the Central Statistics Office (CSO), are close to 20 per cent. But this fall of 3 percentage points represents the impact of *all* changes over the period (as well as any effect from the change in data source). It includes the influence not only of policy changes, but also of all developments in the economy and society over the period – for example, changes in labour market participation, or in the incidence of different family types. Within the policy domain, it includes the impact of all policies, not just those relating to child income support.

Identifying the impact of changes in child income support policies on the risk of income poverty facing children requires an alternative approach. We need to hold constant the population, and all policies other than child income support. We do this using a microsimulation model – *SWITCH*, the ESRI tax benefit model. The impact of child income support policy changes between 2000 and 2006 is measured by constructing a counterfactual policy for 2006 in which child income supports are simply indexed in line with

earnings from their 2000 levels. We can then simulate the impact of the child income support policy changes on the 2006 population.

This analysis suggests that changes in child income supports (including the sharp increase in Child Benefit in 2001/2 and the Early Childcare Supplement in 2006) led to a reduction of 4.2 percentage points in the incidence of child income poverty (using the 60 per cent median cut-off). This represents a fall of one-fifth in the head count measure. The "poverty gap" measure which takes account of the depth of income poverty for those experiencing it falls rather more, by about one-third, because it also takes into account those who are brought closer to but not above the poverty threshold.

5.4.2 RECENT INTERNATIONAL POLICY DEVELOPMENTS

Policy developments designed to improve in-work incomes relative to out-of-work benefits ("making work pay") have attracted considerable attention in OECD countries.[24] The long experience of the US and the UK in this field, and the fact that much of the evidence on the employment and labour supply effects of making work pay policies centres on US and UK experience has made policy developments in these countries of particular interest. A key feature in both countries is an in-work benefit, paid through the income tax system – Earned Income Tax Credit in the US, and (after several structural changes and renamings) the combination of Child Tax Credit and Working Tax Credit in the UK.

While the development and refinement of these schemes has been closely followed, it should be borne in mind that these are still two of the countries with the highest rates of child income poverty. By contrast, Finland achieves low rates of child and adult poverty with a system that provides generous support through social insurance; a child benefit rate which is somewhat lower than Ireland's; and no income-tested child income support.

A brief summary of how the policies evolved on either side of the Atlantic may be useful, before considering some of the analysis. In the US, the Earned Income Tax Credit (EITC), initially introduced in 1975, has been substantially expanded and revised since then. EITC is a refundable tax credit, typically paid annually in arrears, and administered by the US tax authorities. The level of the credit rises initially with the level of earned income (at a rate of about 35 per cent of earnings), then is capped at a maximum level, and is then withdrawn in gradual fashion or "phased out" (at a rate of about 15 to 20 per cent). While the level of the credit, and its aggregate cost, was initially quite low, EITC now forms a substantial part of the overall income support programme (costing almost as much as Food Stamps and Temporary Assistance to Needy Families).

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[24] For a review of "policy transfer" in the welfare area, with a particular focus on "making work pay", see Banks *et al.* (2005).

In the UK, Family Credit was introduced in 1988 (replacing Family Income Supplement) and has also been expanded and revised in later years. The current system involves a Child Tax Credit (CTC) and a Working Tax Credit (WTC). The child tax credit comprises two elements:

1. a per-family element (UK£10.45 per week in 2003-4); and
2. a per-child element (about UK£28 per week in 2003-4).

Families with annual gross incomes below £13,230 are entitled to the full credit. Entitlements are then reduced by 37 per cent of income above this level until the family is left with just the per-family element. Incomes above £50,000 per annum reduce entitlement to the per family element by 6.7p in the pound until entitlement is exhausted.

The Working Tax Credit operates in parallel. Key parameters include:

3. withdrawal of benefit at a rate of 37 per cent, for incomes exceeding £5,000;
4. benefits are exhausted for a lone parent or couple working full-time at an income of just under £15,000 per annum, or £13,230 if working less than 30 hours per week).

As with EITC, payment of WTC and CTC is now paid through the income tax system and operates on an annual basis. Three recent reports have detailed problems arising from "overpayment" of benefit, in some cases despite recipients' best efforts to rectify the situation. (Parliamentary Ombudsman, 2005; Citizens Advice, 2005, House of Commons Treasury Committee. 2005).

One of the aims of the UK approach has been to "make work pay" for parents with low earnings capacity, and thereby increase labour market participation and long-term attachment to the labour market. Brewer *et al.* (2005) estimated that by 2002, the Working Family Tax Credit scheme had increased the labour supply of lone mothers by around 5 percentage points, with the labour supply of mothers in couples being reduced by 0.6 percentage points, and the labour supply of fathers in couples raised by about 0.8 percentage points. Blundell and Hoynes (2001) compared the US and UK experiences. In the US, a large proportion of the dramatic rise in participation among low educated single parents in the 1990s has been attributed to the increased generosity of the EITC. But estimates suggest that the impact of apparently similar reforms has been smaller in the UK. Blundell and Hoynes argue that four factors help to account for these differences:

5. the impact of interactions with other means-tested benefits in the UK;
6. the importance of workless couples with children in the UK, making up almost 50 per cent of recipients;
7. the level of income support given to non-working parents; and;
8. the strength of the economic upturn in the US during the 1990s.

Bargain and Orsini (2006) explore the possible introduction of an in-work benefit along the lines of the UK's Working Tax Credit

(WTC) to three European countries: France, Germany and Finland. One key feature is that there are substantial increases in marginal effective tax rates for individuals in low to middle income households. Bargain and Orsini's labour supply analysis finds that positive effects on the labour supply of lone parents are outweighed by withdrawals from the labour force for some married women, a reversal of the balance in the UK case. These results indicate the need for careful analysis of such proposals in the context of the national labour market and initial situation.

5.4.3 POLICY ISSUES

There are particular reasons for the special focus on child poverty. One major concern is that the effects of poverty on children are at a vulnerable, formative stage. Poverty may, therefore, have more long-lasting and damaging effects than on adults, who may be more resilient and escape from poverty with more limited after-effects. There are, however, both ethical and practical objections to the consolidation of these concerns into an income support structure strongly tilted towards the elimination of child poverty *at the expense of general poverty*. For example, if the poverty line for a single adult were €200 per week, and the child addition to the income poverty line were €66, a "neutral" structure could set welfare payment rates to be €200 for a single adult and €66 per child. But if this could not be afforded, one interpretation of an emphasis on child poverty could result in a payment of, say, €150 for a single adult, €116 for a first child and €66 for other children. This would mean that families with children were brought up to the poverty line income, whereas single adults would remain below the poverty line.

On the ethical side, one difficulty with such an approach is that many of the adults currently experiencing poverty may themselves have suffered poverty as children, with consequent damage to their later life chances. On the practical side, a structure which guaranteed an income above the poverty line for all children, but not for adults, would mean that poor childless adults would face a situation in which having a child would be a guaranteed route out of income poverty. The extent to which this would affect fertility decisions is unclear, but it seems undesirable to face poor individuals with such incentives. A further objection might be that no country seems to have achieved a low rate of child poverty while having a high rate of poverty in the adult population. Given these considerations, we do not pursue the theoretical possibility of an income support structure strongly biased towards the elimination of child poverty rather than general poverty when examining policy options.

The main child income support instruments at present include Child Benefit, Early Childcare Supplement, and Increases for Child Dependants (formerly called Child Dependant Additions). We consider two possible additions to this structure: an increased, taxable child benefit and a child benefit supplement. A refundable tax credit in respect of children would be equivalent, in real terms, to the current (untaxed) child benefit. It would involve a different delivery mechanism but delivery of child benefit is not thought to be

problematic. For these reasons, a refundable tax credit for children is not considered further here.

5.4.3.1   An Increased, Taxable Child Benefit

One way of achieving greater "targeting" with child benefit would be to increase it while making the payment taxable. This would give a full payment to those with lowest incomes, a payment reduced by 20 per cent for those on the standard rate of tax, and reduced by 42 per cent for those on the top rate of tax. This option was debated during the 1990s, and would have had much to recommend it. At a time when the basic child benefit payment was being increased so rapidly, all those with children would have seen their Child Benefit increase despite its being made taxable, but there would have been larger net increases for those on lower incomes. This approach was not adopted, instead universal child benefit was increased but without making it taxable (while CDAs were frozen as we have seen). The taxable status of child benefit could have been changed more readily at the same time as substantial increases in payment levels were introduced. In the absence of substantial further increases in child benefit, making the payment taxable would require the "clawing back" of some of the net benefit for high earners. Making the payment taxable would also affect marginal tax rates and how they change as those with children move into the tax net or from the standard to the higher tax band. None the less, it remains a way of introducing some element of targeting to the payment without affecting its essential structure and the way it is paid.

5.4.3.2   A Child Benefit Supplement

A paper prepared for the Tax Strategy Group (Department of Social and Family Affairs, 2004) indicated that "…it has been agreed under the 'Ending Child Poverty' special initiative in *Sustaining Progress* to examine the possibility of combining FIS and CDAs into one payment which might be paid to low income families irrespective of their employment status." This idea – a child-related benefit which would depend on income but not on labour market status – is currently being explored by the NESC as part of the social partnership process. Key factors here include the desire to have an income-tested supplement, so as to maximise the impact on child poverty for a given level of resources; a seamless transition between child income support when out of work and when in employment, in order to facilitate those wishing to take up employment; and the low rate of take-up of Family Income Supplement (FIS), the existing in-work benefit for families with children.

What might such a payment look like? One possibility is that it could take the form of "…a tapered, employment-neutral Child Benefit Supplement".[25] This is the form of unification which is examined here. Other possible designs are not excluded, but the non-categorical, income-tested Child Benefit Supplement provides a clear starting point and benchmark against which other options can be compared.

Here we sketch what such a supplement (CBS) might look like, its likely cost and its potential impact on the risk of income poverty and on financial incentives to take up employment, Our analysis is based on *SWITCH*, the tax benefit model, which contains all the relevant information and can, therefore, calculate each family's entitlement accurately. Implicit in the analysis is that each family has the same income for each week of the year. Difficulties arising from problems of administration and take-up of such a benefit are discussed later.

There are three key parameters to be set in such a Child Benefit Supplement:
1.   the weekly or monthly rate of payment for CBS;
2.   the income level up to which a full payment is made;
3.   the rate of withdrawal (taper, "phase-out") applied to the benefit as income rises above that limit.

We set the level of the Supplement at a rate which bridges the gap between current child income supports and the "…child addition to the at risk of poverty threshold". Thus, the new structure, incorporating CBS, gives a child-related payment which is sufficient to cover child-related expenses (30 per cent of the at risk of poverty threshold of 60 per cent of median income). In cash terms, we estimate that a rate of CBS of €33 per week would be needed to bridge this gap – approximately double the rate of the most common child dependant addition rate. All child dependant addition rates are set to zero, as the logic of the approach is that these are replaced by the CBS.

The situation with respect to replacement of FIS is not so straightforward. A key feature of FIS is that it can provide a very high level of support for those in employment at low incomes – even if there is only one child in the family. The level of *additional* support in respect of second and higher order children ranges between about €12 and €20 per week, similar to the level of support provided by Child Dependant Additions. It is not possible for a fixed, per-child payment such as a Child Benefit Supplement to replicate this structure; and even the addition of a "per family" element to the CBS (equivalent to a higher rate for the first child in the family) would not fully replicate the structure of support provided by FIS.

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[25] The quote is from Combat Poverty Agency (2005), which treats the unification of CDAs and FIS as quite distinct from the Child Benefit Supplement option. Our approach is to analyse the Child Benefit Supplement as one form of unification of CDAs and FIS.

This point was recognised in the analysis of the Tax and Welfare Working Group in its 1996 report. The approach adopted there was to allow for a "residual" FIS scheme to provide this form of income support. The success of a Child Benefit Supplement (CBS) or other such scheme in "migrating" low income working families off FIS could then be gauged by the reduction in the numbers of FIS recipients and FIS expenditure. Some of the schemes examined by the working group resulted in the "residual" FIS scheme becoming very small; but, depending on the design of the scheme and the levels of payment, FIS could remain a significant feature of the overall package. Where any given package lies on this continuum is a matter for empirical investigation, using the simulation techniques employed here.[26]

A CBS set at €33 per week, with an income limit of about €500 per week and a withdrawal rate of 20 per cent is found to have the following "cash" or first-round impact (i.e., before any adjustments to behaviour, which may be induced by changes in the budget constraints caused by the policy change). First, such a policy change is estimated to cost more than €450 million per annum – equivalent to the cost of a 20 per cent rise in universal Child Benefit. The direct impact of the introduction of a CBS on this scale is estimated as reducing child income poverty (at 60 per cent of median income) by almost 4½ percentage points. Expenditure on FIS would be reduced by about one-third, leaving a substantial residual FIS scheme in place.

How is this improvement in poverty reduction impact achieved? One key difference with respect to the existing structure is that it is assumed that the new Child Benefit Supplement is paid to all those who qualify, and only to those who qualify. Thus, it is assumed that the Child Benefit Supplement does not experience the problems with take-up which have dogged the Family Income Supplement scheme On the other hand, there is also an implicit assumption that the new benefit will be given only to those who are entitled to receive it. The UK experience with tax credits suggests that this is not easily achieved. The House of Commons Treasury Committee (2006) noted that about one-third of all tax credit awards were overpaid, at an average cost per case of about UK£1,000.

A useful point of comparison can be provided by examining what the existing income support structure would achieve, if perfect take-up of benefit could be guaranteed. Our analysis finds moving from low take up to full take up of FIS would lead to a 3 percentage

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[26] The Child Benefit Supplement examined here is designed primarily to replace Child Dependant Additions. It will also replace some element of FIS payments, with the exact extent depending on the parameters of the scheme. An example using round numbers may help to clarify. If the FIS income limit for a one child family were €400 per week, and the family's income was €300 per week, then the FIS entitlement would be €60 per week. Now suppose a Child Benefit Supplement of €20 per week is introduced. The FIS entitlement falls to €48 per week, a reduction of €12 per week, or 60 per cent of the amount of the Child Benefit Supplement.

point reduction in the key "at risk of poverty" indicator. Thus, while CBS involves more than just changes in take-up, a key element of its impact in poverty reduction comes from the assumed full take-up. Achieving full take-up, and avoiding overpayments and reclaiming of payment, as in the UK experience, would be vital to the success of the scheme.

5.5 Conclusions

There are strong links between child income poverty and the overall "at risk of poverty". In particular, the countries with the best record on the reduction of child poverty – the Scandinavian countries – also tend to have the lowest rates of overall poverty. The "best practice" approach to improving EU performance in this area suggests close attention should be given to the policies and structures of the best-performing countries. The logic of the approach is, therefore, that other countries should compare their approaches with those of the Scandinavian countries – which are the best performers in this regard not only in Europe but in global terms.

By contrast, much of the debate on child poverty has focused on restructuring income-tested income support for families with children, with attention centering on recent initiatives in English-speaking countries. While some reductions in poverty have been achieved by these initiatives, it is clear that rates of child income poverty in the English speaking countries remain above those in most European countries, and well above Scandinavian levels.

This approach is associated with a tendency to view child poverty as a problem to be dealt with, in the main, through child income support. The problem with this is that children are not poor on their own – they have a parent or parents living in poverty with them. So avoidance of poverty requires that parents have adequate incomes too. As Sutherland (2005) puts it:

> One feature of the "successful" countries in Europe is that relatively large parts of their benefit systems are not child-contingent but nevertheless succeed in keeping children as well as adults out of poverty. Sutherland (2005, p. 32).

Tackling child income poverty requires a strategy that takes a broad view of welfare income supports, and "activist" measures to increase participation in employment. Solutions lie not with welfare alone, or employment alone, but a combination of both.

6. SUMMARY AND CONCLUSIONS

Potential trade-offs between the level and structure of income supports, risks of poverty, and the financial incentive to work have been the focus of much study internationally. In recent years, a series of reports monitoring poverty outcomes – both in terms of "consistent poverty" and the "at risk of poverty" measure based on relative income poverty lines – have been undertaken as inputs to the National Anti-Poverty Strategy. (Layte *et al.,* 2001; Nolan *et al.,* 2002; Whelan *et al.,* 2003; Maître *et al.,* 2006). This study complements that body of work by focusing on the evolution of financial incentives to work over the same period. The trade-off between income support and financial incentives to work can be particularly sharp for families with children. For this reason we focus in particular on international comparisons relating to child poverty and the level and structure of child income support, to glean lessons for Irish policy.

6.1 Work Incentives

Our analysis of work incentives is built around two main measures. The first is the incentive to take up or remain in employment – what Adam *et al.* (2006) call the incentive to be in work at all. The most widely used measure of this aspect of financial incentives is the replacement rate, measuring the ratio of net family income when unemployed to net family income in employment. The second is the incentive, when in employment, to increase earnings – whether by working additional hours, increasing work effort, adding to skills, or otherwise seeking promotion or a higher paying job. This is what Adam *et al.,* refer to as "the incentive to progress".

Looking first at replacement rates, we use two different approaches to gain insights into how these have evolved over time. The first is to examine the replacement rate facing a hypothetical worker, with standard unemployment payments if out of work, and a job at the average industrial wage. Family circumstances affect the level of the replacement rate so we consider a number of different cases (single, married without children, married with 2 or with 4 children). The second approach is to estimate replacement rates for a sample of actual families, using *SWITCH*, the ESRI tax-benefit model. Under this approach we can take account of the different levels of earnings individuals can expect from the labour market, depending on their educational qualifications and age. We can also take account of variation in family composition and other factors affecting the replacement rate. The approach yields a distribution of replacement rates, which is of particular value as it may be that high

or very high replacement rates are of particular interest. This contrasts with the "replacement rate at average earnings" resulting from the other approach; however, it has been found that this can be useful in tracking changes in replacement rates.

To date, measures of replacement rates in Ireland have focused on standard cash benefits (Unemployment Benefit and Unemployment Assistance). Here we extend the microsimulation approach by modelling entitlements to two "auxiliary" benefits, which are received by much higher proportions of the unemployed than of the employed, and may, therefore, have a significant influence on the balance of resources as between in-work and out-of-work situations. The *SWITCH* model has been extended:

- to model eligibility for a medical card, and to allow for an addition to income to take account of the "expected" value of the card;

- to model entitlements under the Rent and Mortgage Interest Supplement scheme, which can involve substantial payments towards housing costs.

We report, first of all, on "cash" replacement rates facing the unemployed; in order to maintain comparability with results for earlier years these do not include the extensions to deal with medical cards and Rent and Mortgage Interest Supplement. The microsimulation evidence points to a rise in the incidence of high replacement rates between 2000 and 2005, though levels are still lower than in the late 1980s and early 1990s. Calculations of replacement rates at the average industrial wage confirm this picture, with the growth in Unemployment Benefit and Assistance payment rates outpacing growth in net earnings over the period.

Results also indicate that the incidence of high replacement rates may be significantly higher when the value of medical cards and of rent/mortgage interest supplement are taken into account. However, recent policy initiatives in each of these areas (the GP visit card or "doctor-only" medical card, and the Rental Accommodation Scheme) will have acted to moderate this effect, by making it more likely that persons in low-income employment can obtain some benefit. Indeed, it should be noted that there are a number of transitional concessions, particularly for the long-term unemployed, which act so as to ensure that loss of benefit is not complete and immediate. The replacement rates calculated here can be thought of as either an "upper bound" to the true but unknown replacement rate, or an approximation to the long-term incentives faced by unemployed individuals, when transitional concessions are withdrawn.

Turning to the incentive to remain in work, as measured by the replacement rates facing those currently in employment, we find that the distribution for Ireland is broadly similar to that in the UK, as measured by Adam *et al.* (2006). However, it seems likely that the

incentive to take up employment, as measured by replacement rates facing the unemployed, is somewhat weaker in Ireland.[27]

Evidence on the extent to which replacement rates influence the duration of unemployment spells, and thereby the level of unemployment, is mixed. Both in Ireland and elsewhere, some time-series studies indicate quite a strong association between the level of replacement rates and the level of unemployment. As against this, there is evidence from three sources indicating that high replacement rates are compatible with low unemployment. First, during recent years in Ireland, as we have seen, replacement rates have risen quite markedly, but unemployment has remained low. Second, microeconometric studies in Ireland (Layte and Callan, 2001) and elsewhere have found that while the impact of replacement rates on unemployment is statistically identifiable and significant, it is also rather small, and cannot account for the large movements in unemployment actually observed. Third, the policy and labour market regime in Denmark and some other Scandinavian countries clearly demonstrates that high replacement rates, providing effective income support to the unemployed, can be combined with low unemployment rates. A key element in achieving this combination is a strong policy on activation – an area in which Irish policy has developed significantly in the recent past.

We also use microsimulation techniques to provide a more comprehensive measure of the "incentive to progress" for those in employment. Much attention is focused on headline numbers such as the standard and top tax rates. But the highest effective tax rates tend to arise from the withdrawal of welfare benefits, including withdrawal of such benefits from a spouse or partner. Our study shows that the distribution of effective marginal rates of tax, including withdrawal of welfare benefits where applicable, is rather similar in Ireland and the UK. One of the main differences is that the more extensive use of an income-targeted child payment (Child Tax Credit) in the UK leads to a significantly higher proportion of the UK's working population facing high effective marginal tax rates.

6.2 Child Poverty and Child Income Support

A natural approach to the improvement of policy regarding child poverty is to look towards countries which have achieved low child poverty rates and try to identify commonalities between their policy regimes, as against the regimes of countries which are less successful. Comparing the "at risk of poverty" measure across EU and other industrialised countries, we find that there are strong links between the risks of child income poverty and the overall poverty risk. In particular, the countries with the best record on the reduction of child poverty – the Scandinavian countries – also tend to have the lowest rates of overall poverty. The "best practice"

[27] Up to date figures are not available for the UK, but see Duncan and Giles (1997) and Callan and Nolan (1997).

approach to improving EU performance in this area suggests close attention should be given to the policies and structures of the best-performing countries. The logic of the approach is that other countries should compare their approaches with those of the Scandinavian countries – which are the best performers in this regard not only in Europe but in global terms.

By contrast, much of the debate on child poverty has focused on restructuring income-tested income support for families with children, with attention centering on recent initiatives in English-speaking countries. While some reductions in poverty have been achieved by these initiatives, it is clear that rates of child income poverty in the English speaking countries remain above those in most European countries, and well above Scandinavian levels. This approach is associated with a tendency to view child poverty as a problem to be dealt with, in the main, through child income support. The problem with this is that children are not poor on their own – they have a parent or parents living in poverty with them. So avoidance of poverty requires that parents have adequate incomes too. As Sutherland (2005) puts it:

> One feature of the "successful" countries in Europe is that relatively large parts of their benefit systems are not child-contingent but nevertheless succeed in keeping children as well as adults out of poverty. (Sutherland, 2005, p. 32)

Tackling child income poverty requires a strategy that takes a broad view of welfare income supports, and "activist" measures to increase participation in employment. Solutions lie not with welfare alone, or employment alone, but a combination of both.

If, for whatever reasons, policy makers rule out a policy regime along Scandinavian lines then the issue becomes one of policy design under "second-best" conditions. Even in these circumstances, policy to combat child poverty must extend beyond child income supports and encompass measures which seek to facilitate parents in obtaining employment. But here we have explored the impact of recent changes in child income support policy, and the potential impact of a policy innovation currently under discussion at partnership level.

Looking first at the impact of recent changes in child income support policies, we examine the impact of the substantial increases in child benefit payments, coupled with a freeze on the Child Dependant Addition rates, and the introduction of the Early Childcare Supplement. In order to isolate the impact of policy changes we need to hold constant the population, and all policies other than child income support. We do this using the *SWITCH* tax-benefit model. This analysis suggests that changes in child income supports led to a reduction of just over 4 percentage points in the incidence of child income poverty,[28] or a fall of one-fifth in the head count measure of poverty. This represents a fall of one-fifth in the

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[28] This is at the 60 per cent of median income cut-off.

head count measure. The "poverty gap" measure which takes account of the depth of income poverty for those experiencing it falls rather more, by about one-third, because it also takes into account those who are brought closer to but not above the poverty threshold.

Turning to potential future policy changes, we examine an innovation along the lines currently under discussion at partnership level: an income-tested child income support, replacing the child dependant addition payments, and (partly) replacing the Family Income Supplement with a more automatic payment. For ease of reference, we term this structure a "Child Benefit Supplement" as Child Benefit continues to be paid in respect of all children, while the Supplement is payable on an income-tested basis. A CBS set at €33 per week, with an income limit of about €500 per week and a withdrawal rate of 20 per cent is found to have the following "cash" or first-round impact:

- Such a policy change is estimated to cost more than €450 million per annum – equivalent to the cost of a 20 per cent rise in universal Child Benefit.

- The direct impact of the introduction of a CBS on this scale is estimated as reducing child income poverty (at 60 per cent of median income) by almost 4½ percentage points.

- Expenditure on FIS would be reduced by about one-third, leaving a substantial residual FIS scheme in place.

How is this improvement in poverty reduction impact achieved? One key difference with respect to the existing structure is that it is assumed that the new Child Benefit Supplement is paid to all those who qualify, and only to those who qualify. Thus, it is assumed that the Child Benefit Supplement does not experience the problems with take-up which have dogged the Family Income Supplement scheme On the other hand, there is also an implicit assumption that the new benefit will be given only to those who are entitled to receive it. The UK experience with tax credits suggests that this is not easily achieved. The House of Commons Treasury Committee (2006) noted that about one-third of all tax credit awards were overpaid, at an average cost per case of about UK£1,000. Careful attention to these administrative dimensions of a Child Benefit Supplement is clearly warranted if the potential benefits are to be gained. But it is important also to remember that in the broader picture, countries placing the emphasis on such income-tested schemes fare less well than those operating the Scandinavian model of a welfare state, with generous welfare payments and a strong activation policy.

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