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ECONOMIC BOOM AND SOCIAL MOBILITY: THE IRISH EXPERIENCE

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Abstract

In this paper we examine the consequences for social mobility patterns of the unprecedented period of economic growth experienced in Ireland over the 1990s and the implications of developments for current theories of social fluidity. Contrary to suggestions that the "Celtic Tiger" experience has been associated with a deepening problem of marginalization we found evidence for a substantial upgrading of the class structure and increased levels of social mobility. We also found evidence for increased social fluidity in relation to long-range hierarchical mobility. Such increased openness could not be explained by changes in the manner in which education mediates the relationship between origins and destinations. There is no necessary relationship between economic growth and social fluidity. However, the pattern of change over time in the Irish case suggests that both long-term factors associated with the upgrading of the class structure and short-term factors reflected in the unprecedented tightness of the labour market have produced a situation where employers have increasingly applied criteria other than education in a manner that has facilitated increased social fluidity. The Irish case provides further support to the argument for reconsidering the balance that mobility research has struck between social fluidity and absolute mobility and encouraging increased attention to the evolution of firms and jobs. It also provides support for the conclusion, that in circumstances where policies in advanced industrial societies have shown an increasing tendency to diverge, increased social fluidity may come about as a consequence of very different economic and social policies.

I Introduction

It has been recognised for some time that, in terms of the key hypotheses in the social mobility literature, the Republic of Ireland constitutes a particularly interesting case. Erikson and Jonsson (1996:46) observe that it constitutes perhaps the most appropriate test of the hypothesis of a movement from ascription to achievement associated with the liberal theory of industrialization. [1] This is so because late industrialization allows us to study the process as it unfolds rather than retrospectively. Earlier work based on surveys covering the period from 1973 to 1994 concluded that, while economic change created increased opportunities for class mobility, there was no evidence that the underlying process involved in allocating rewards had changed in a manner that could be characterised as a move towards meritocracy (Whelan and Layte, 2002 and Layte and Whelan, forthcoming). However, there are other reasons why Ireland might prove to be an interesting test case. As Breen (forthcoming) notes the most influential theories of social mobility were developed to account for patterns of mobility in the advanced industrial nations during the so called 'Golden Age of Capitalism' when these countries followed broadly similar trajectories in relation to economic growth, educational reform, welfare state expansion and economic management. Over the last two decades however, trajectories have become more variable as English speaking countries have followed policies of deregulation and the extension of market principles. These policies increasing unemployment and greater risks of unemployment for manual social classes and Breen

[1] See Lipset and Bendix (1959), Blau and Duncan (1967), Treiman (1970) and Treiman and Yip (1989).

(forthcoming) raises the issue of whether national variations in institutions and polices may have come to have greater consequence for patterns of social mobility than before. Viewed in this context the opportunity offered by the recent availability of data that allow us to extend our analysis of Irish mobility patterns to 2000 is of considerable interest.

The Irish strategy of economic development has involved an opening up labour, goods and capital markets (Bradley, 2000, Fitzgerald, 2000). The consequences in terms of economic performance have been what Blanchard (2002:58) describes :as "quite miraculous-especially when one looks not only at productivity but also at employment". A number of other interpretations of the Celtic Tiger experience have stressed the role of long-run factors whose impact may have been deferred due to policy mistakes and suggest that the period from 1973 to 2000, which our data now cover, can be viewed as a long business cycle with a deep and prolonged trough for a good part of the first half of the 1980s. (FitzGerald, 2000 and Honohan and Walsh, 2002).[2]

The availability of the extended data series thus provides a number of reasons for taking the opportunity to reconsider issues relating to the relationship between economic growth and social mobility in the Irish case. First, as we have noted, a number of interpretations of the Celtic Tiger experience have stressed the role of the lagged effect of long-run factors. Notwithstanding the significance of longer-run influences, it also remains true that the period 1994-2000, witnessed a dramatic expansion of the Irish

[2] This line of argument to suggest that Aesop's hare may well be a more appropriate metaphor in the Irish case for the widely touted "Celtic Tiger"

economy. Whichever, interpretation of recent Irish economic experience one favours, our ability to asses the consequences of Irish economic growth for patterns of social fluidity and develop an appreciation of the relevance of the Irish case for the wider theoretical debate will be enhanced by analysing the longer period of industrialisation as well as the period of exceptional growth that was the second half of the nineteen-nineties.

Our expectations in relation to trends in Irish social mobility will be influenced both by our understanding of the nature of Irish economic experience and our theoretical expectations pertaining to the consequences of these developments. Turning to the former first, we may note that the period from 1993-2000 was one of unprecedented economic growth. Irish living standards in terms of GNP per head began the 1990s at two-thirds of the European average but by the end of the decade most of that gap had been closed. The most striking development in the period was an increase in the level of employment of over forty per cent. Unemployment fell from 16% to less than 4%. In the course of a decade the Irish labour market moved from a position of significant labour surplus to a situation of labour shortage. In addition, as our analysis will show, educational levels among the adult population rose substantially during this period.

Economists' interpretations of recent Irish experience have been broadly sanguine and consensual, despite differences about the balance to be struck between long-run convergence and 'economic miracle' arguments. In contrast, the predominant sociological view has been that globalisation, as

typified in recent Irish economic development, fuels economic inequality. From this "radical perspective" the benefits of the 'Celtic Tiger' are largely illusory and a focus on conventional economic indictors conceals a picture of increased inequality, erosion of employment security and marginalisation.[3] Kirby (2002) concludes that levels of income inequality have increased with higher levels of economic growth and the overall upgrading of Ireland's class structure masks a persistent and deepening problem of marginalization and blocked mobility.[4] However, while the theme of polarisation during a time of plenty has also been prominent in accounts of the 'Celtic Tiger'. The reality has proved more complex than the rhetoric.

In Ireland between 1994-2000 the bottom of the earnings distribution did not fall behind the median. This is consistent with evidence of the difficulties employers had in retaining labour and the relatively scarce supply of less skilled workers as the labour market tightened. This situation contributed to the smooth introduction of the national minimum wage in April 2000. Furthermore, dispersion in the top half of the earnings distribution remained relatively stable due partly to the return of skilled Irish migrants. Ireland's household income distribution is among the more unequal in the EU, but the level of inequality remained relatively stable during the 1980s and into the 1990s with no suggestion of the marked increase in inequality seen in the USA or the UK.[5] It is true that the overall impact of income tax and social welfare policies disproportionately benefited those towards the top of the distribution and those households dependent on welfare, although

[3] See Allen (2001), O'Hearn, (2001 and 2002), Kirby (2001)
[4] See Kirby (2002, p60 and pp 172-3)
[5] Nolan, B and Maitre, B. (2000); Nolan, B. (2003)

experiencing real gains, saw their relative position deteriorate. [6] Therefore, in evaluating trends, we should bear in mind that the pre-boom starting point was already one of a highly unequal society characterised by a liberal welfare state and a history of exporting social problems through emigration of marginalized groups.

Given such an understanding of economics trends in Ireland, what are our expectations in relation to mobility trends? In relation to absolute mobility, understood as the proportion of individuals who have been mobile from their class of origin, we would expect that Ireland, from a historically low level, would converge towards the European norm. This expectation is consistent with the fact that the Irish experience of structural change follows the familiar two phase pattern of change, with the first stage involving a movement from agricultural to industrial society and the second involving the transition to post-industrial society.

In the case of social fluidity it is less easy to establish expectations in the Irish case. Industrialisation theory with its emphasis on processes relating to the consequences of competition between firms and nations would lead us to expect increased fluidity. On the other hand, the Erikson and Goldthorpe's (1992) modification of the Featherman-Jones-Hauser (FJH) hypothesis of basic similarity in mobility regimes draws attention to the ability of those in positions of power and privilege to maintain their position against encroachment, even in the face of the functional requirements of industrial or

[6] Callan, T and Nolan, B. (2000); Keeney, M. and Walsh, J. (2002)

post-industrial society, in the absence of direct political intervention of a social democratic or socialist nature. Reviewing the more recent evidence relating to comparative fluidity patterns, Breen and Luijck (forthcoming) comment that, notwithstanding significant communalities, there is evidence of significant variation in fluidity across countries and over time but not of a systematic nature.

Over and above the limitations of the empirical evidence relating to increased *levels* of inequality and polarization, with presumed consequences in terms of blocked mobility, the argument for a clear *association* between income inequality and increased openness is also empirically weak. Breen and Luijkx (forthcoming) conclude that, while social fluidity is not invariant across developed societies, no clear relationship is found to economic development or inequality. Understanding the consequences of Ireland's economic boom for class mobility and equality of opportunity thus requires detailed empirical study.

In addressing the issue of trends in social fluidity in Ireland, we use a model that specifically refers to the resources possessed by one generation to enable the following generation to overcome barriers to desirable class positions. As with most studies of social fluidity, we lack sufficient information to develop a measured variable approach that would do full justice to the variety of parental resources and characteristics of destinations that have

been deemed theoretically relevant. [7] In the absence of such measures we shall proceed to operationalise a theoretically informed model in an indirect manner. Furthermore, we follow the recommendation of Breen and Luijck (forthcoming) that, in the absence of well developed and testable behavioural theories of the social fluidity regime, one should seek to determine the extent to which trends of over time are driven by changes in the paths of the origin-education-destination (OED) triangle. In their review of comparative evidence they identify four such changes in this process that have been found to be associated with increased social fluidity. The first involves change in the distribution of education towards higher levels in circumstances where social fluidity is stronger among the better educated. The second involves a weakening of the origins-education relationship. An alternative route involves a reduction in the positive partial association between education and destination where education continues to be positively associated with class origins. Finally increased social fluidity is associated with a weakening of the direct impact of class origin on destination when controlling for the effect of education.

In addressing these issues in the Irish context, our discussion will proceed as follows. In section II we will provide details of data and measurement procedures. In section III we will provide a discussion of the changing distribution of class origins and destinations produced by economic change. In section IV we will deal with the changing patterns of mobility chances. Section V focuses on the relation between class origins and educational qualifications

[7] For a discussion of the former see Bowles and Gintis (2002) and the latter Hout (194) and Jackson (2003)

and in section VI we examine the impact of such qualifications on class destinations. In section VII we examine the manner in which the relationship between class origins and destinations are mediated by educational qualifications. In section VIII we present our conclusions.

II. The Data and Variables

Four data sets from different periods are used in this paper, one from the 1970s, one from the late 1980s and one from the mid-1990s and one for the year 2000. All are nationally representative samples and were conducted by the Economic and Social Research Institute.[8] In each case we restrict our analysis to men aged between 20-64. The sample sizes are 2291, 2471, 3065 and 2,481 for 1973, 1987, 1994 and 2000 respectively. The data from the 1970s come from the 1973 'Survey of the Determinants of Occupational Status and Mobility' that have been described in detail by Hout (1989). For 1987 the data come from The Survey of Income Distribution and Poverty, details of which can be found in Callan *et al* (1989). The 1994 and 2000 data come from the first and seventh waves of the Living in Ireland Survey (LII) and are described in detail in Callan *et al* (1996) and Whelan *et al* (2003).

In this paper we will focus on the mobility of men. The 1973 data do not contain representative data for women since they relate to men and partners. Furthermore, it is necessary to restrict the analysis of women's mobility to those who are currently in the labour force thus creating problems of

[8] The authors gratefully acknowledge the work of John Jackson and the ESRC in the provision of the 1973 data and James Williams and Dorothy Watson and Brendan Whelan of the ESRI's Survey Unit who were responsible for the survey design, data collection and database creation of the 1987,1994 and 2000 data sets.

interpretation rather different from those that apply in the case of men. For that reason we will deal with trends in social mobility for women in a separate paper. [9]

Both the social class variables and education variables are coded using the classifications employed in the CASMIN study (Konig *et al*. 1998). Thus the origin and destination class variables are seven category groupings of the original eleven classes in the following manner:

I+II	Service class
IIIa+IIIb	Routine non-manual class
IVa+IVb	Petty bourgeoisie
IVc	Smallholders
V+VI	Skilled manual workers, lower grade technicians and supervisors
VIIa	Non-skilled workers not in agriculture
VIIb	Agricultural labourers

The aim of the class schema is to differentiate positions in terms of the employment relations they entail. The crucial dimensions along which work is differentiated are the degree of asset specificity involved and ease or difficulty of measuring performance (Goldthorpe, 2000:13). In response to such variation employers offer different forms of employment relations,

[9] Analysis of both 1987 and 1994 national surveys shows that, while gender differences in absolute mobility exist, patterns of social fluidity are largely unaffected (Breen and Whelan, 1996, Whelan, 1999 and Layte and Whelan (forthcoming),

Education in the CASMIN schema (König *et al* 1988) distinguishes between eight categories according to level and to some degree the type of schooling involved. In the Irish context however, we have chosen to disregard some of the distinctions that are meaningless in the Irish context and thus collapse the eight categories into a four-fold classification. Irish educational qualifications fit into this four-fold typology in the following manner:

CASMIN Category	Irish Education Level or Qualification
Primary or less (1a, 1b and 1c)	Primary Certificate, or no qualifications
Lower Secondary (2a and 2b)	Group or Intermediate Certificate
Higher Secondary (2c)	Leaving Certificate or equivalent
Tertiary (3a and 3b)	Any post second level qualification at sub-degree, primary or higher degree level

One influence that we cannot measure is migration. This will affect our conclusions to the extent that migration is selective within classes with respect to factors that influence mobility and that such selectivity operates differentially among people from different class origins (Breen and Whelan, 1999).

III: The Changing Class Structure

In Table 1 we show the changing distribution of class origins and destinations between 1973 and 2000. The lateness and rapidity of industrialization in

Ireland is reflected in the trends that emerge. In the early 1970s, Ireland was still very much in transition from agricultural to industrial society (Whelan, Breen, & Whelan 1992), whereas by the end of the century Ireland had progressed further toward 'post-industrial' society than many other European nations (O'Connell 1999, 2000). This provides the changing structural context within which mobility is observed. These changes are reflected in changing origin distributions and more particularly changing destination distributions. For both origins and destinations we see reductions in the importance of farmers, agricultural workers and unskilled manual workers and increases in the relative importance of the service class, routine non-manual workers and skilled manual workers. The only class to remain relatively stable is the petit-bourgeoisie. In 1973 property-owning classes accounted for almost half the origin distribution by 2000 this comprised less than one-in-five of the destination distribution. In contrast, white collar and skilled manual occupations, which made up less than one-in-three of the origin positions in 1973, accounted for two out three destination positions by 2000. Ireland never developed the heavy industries or large factory system common to the 'golden period' of industrialisation in other countries and in many respects moved directly from an agricultural society into a post-industrial one (or perhaps this should be termed late-industrial). The restructuring that occurred among protected Irish industries in the 1980s as they were exposed to international competition in a global recession encouraged this process. This is reflected in the fact the pattern of change was rather different in the later phase from that observed earlier. Between 1973 and 1987 the structural context of changes in mobility patterns was one in which a significant decline in numbers in farming

was accommodated by increased opportunities in manual and non-manual work. From 1987 to 2000 the decline in farming was a good deal more modest and change was driven mainly by a substantial increase in non-manual work.

Table 1*: Distribution of CASMIN Origin and Destination Social Classes 1973 and 1994*

	1973		**1987**		**1994**		**2000**	
	Org	**Dest.**	**Orgs**	**Dest.**	**Org**	**Des**	**Org**	**Des**
Service (I+II)	5.9%	12.9%	8.1%	17.1%	10.6%	22.0%	11.4%	23.3%
Routine Non-Manual (IIIa+IIIb)	4.4%	8.3%	6.8%	10.2%	9.9%	17.4%	9.8%	14.1%
Self-Employed with or without Employeess (IVa)	10.3%	8.2%	5.8%	7.3%	7.0%	8.1%	9.9%	9.9%
Small-Holders (IVc)	37.5%	20.0%	26.3%	10.1%	22.9%	9.0%	25.4%	8.2%
Tech/Supervisory and Skilled Manual (V+VI)	14.0%	19.4%	20.2%	27.6%	21.3%	23.6%	17.5%	25.3%
Semi-Skilled and Unskilled (VIIa)	20.8%	24.1%	27.4%	24.3%	25.3%	17.2%	23.3%	16.6%
Agricultural (VIIb)	7.2%	7.2%	5.4%	3.4%	2.8%	2.8%	4.4%	2.6%
Total	100	100	100.	100.0	100.0	100.0	100	100

These large changes in class structure must inevitably have profound consequences for the patterning of social mobility, as the impact of direct inheritance on life-chances diminished and educational qualifications increasingly became a prerequisite of access to the new position. These findings are entirely consistent with analysis based on Census data. Thus contrary to the claims by authors such as O'Hearn (2000:78-81) that employment growth has been concentrated in routine low-paying services,

O'Connell (2000:75-76) concludes that there has been a general upgrading in the quality of positions in the labour market.

IV. Trends in Class Mobility Over Time

In this section we examine the changing pattern of outflows from class origins over time. Table 2 provides a breakdown over time of the outflow patterns from class origins to class destinations. The first important feature to which we wish to draw attention actually relates to stability rather than to change. For those originating in the service class the percentage remaining immobile in this class remains constant over time at a level in the mid-fifties. For all other classes there has been a significant reduction in immobility. In each of these cases there has also been a significant increase in the outflow to the service class, involving a doubling of the rate for the non-skilled manual and farming classes between 1973 and 2000. Increased flows to the routine non-manual class were also observed for manual workers and the petit-bourgeoisie and to the skilled manual class for farmers.

Table 2: Class Destination by Class Origin

Current Class	Class Origins (per cent by column)													
	Professional and Managerial (*I+II*)		Routine Non-Manual *(III)*		Petty Bourgeoisie *(IV a+b)*		Farmers *(IV c)*		Skilled Manual *(V-VI)*		Non-skilled Manual *(VII a)*		Agricultural Workers *(VII b)*	
Professional and Managerial (*I+II*)	1973	54.0	1973	23.9	1973	21.1	1973	7.2	1973	13.9	1973	7.7	1973	3.3
	1987	57.0	1987	27.0	1987	36.0	1987	11.2	1987	12.7	1987	10.6	1987	3.9
	1994	56.5	1994	33.3	1994	28.2	1994	16.3	1994	18.0	1994	12.1	1994	5.0
	2000	56.0	2000	36.9	2000	24.9	2000	16.2	2000	18.6	2000	14.6	2000	2.9
Routine Non-Manual *(III)*	1973	14.5	1973	23.9	1973	7.8	1973	4.1	1973	9.5	1973	10.4	1973	6.5
	1987	15.5	1987	20.2	1987	8.6	1987	4.3	1987	13.3	1987	10.7	1987	5.4
	1994	21.2	1994	28.0	1994	21.1	1994	9.3	1994	19.9	1994	16.8	1994	9.0
	2000	20.9	2000	19.7	2000	19.2	2000	6.0	2000	17.4	2000	13.0	2000	10.3
Petty Bourgeoisie *(IV a+b)*	1973	5.6	1973	6.5	1973	27.5	1973	6.2	1973	4.7	1973	5.4	1973	9.8
	1987	6.2	1987	6.7	1987	20.1	1987	8.9	1987	6.2	1987	5.2	1987	2.3
	1994	2.9	1994	4.7	1994	18.9	1994	10.1	1994	6.5	1994	7.4	1994	14.0
	2000	3.5	2000	6.6	2000	23.3	2000	10.3	2000	8.3	2000	9.9	2000	10.3
Farmers *(IV c)*	1973	2.4	1973	2.2	1973	2.3	1973	49.1	1973	0.7	1973	2.5	1973	5.9
	1987		1987		1987	2.2	1987	36.2	1987	0.6	1987	0.9	1987	1.6
	1994	1.2	1994	1.9	1994	1.8	1994	33.9	1994	0.9	1994	2.3	1994	1.0
	2000		2000	2.0	2000	2.0	2000	29.2	2000	1.1	2000	0.5	2000	
Skilled Manual *(V-VI)*	1973	17.3	1973	22.8	1973	14.2	1973	7.6	1973	43.9	1973	29.8	1973	13.1
	1987	17.1	1987	22.7	1987	23.0	1987	18.2	1987	42.6	1987	30.0	1987	31.8
	1994	12.9	1994	21.5	1994	16.3	1994	13.2	1994	35.2	1994	30.2	1994	25.0
	2000	12.8	2000	24.2	2000	19.2	2000	21.1	2000	34.6	2000	31.3	2000	35.3
Non-skilled Manual *(VII a)*	1973	6.2	1973	19.6	1973	25.7	1973	15.1	1973	27.0	1973	38.1	1973	37.9
	1987	4.1	1987	21.5	1987	9.4	1987	14.8	1987	23.9	1987	40.4	1987	39.5
	1994	12.8	1994	10.0	1994	11.0	1994	11.7	1994	18.2	1994	29.5	1994	30.0
	2000	6.7	2000	10.2	2000	11.0	2000	13.0	2000	16.7	2000	29.0	2000	27.5
Agricultural Workers *(VII b)*	1973		1973	1.1	1973	1.4	1973	10.6	1973	0.3	1973	6.1	1973	23.5
	1987		1987	1.8	1987	0.7	1987	6.4	1987	0.6	1987	2.3	1987	15.5
	1994	4.6	1994	0.6	1994	2.6	1994	5.6	1994	1.4	1994	1.6	1994	16.0
	2000		2000	0.4	2000	0.4	2000	4.3	2000	3.2	2000	1.7	2000	13.2

It is clear that over time, consistent with the general upgrading of the class structure, there have been significant changes in the mobility patterns of all origin classes other than the service class. There is no evidence that barriers to mobility have risen for groups at the bottom of the class hierarchy. In fact the opposite is clearly the case and consistent with our expectation, absolute mobility has increased significantly from a historically low level.

Such improved mobility prospects are entirely consistent with the persistence of substantial inequalities of opportunity. Thus even by 2000 those whose origins were professional and managerial continued to have four times the chance of access to that class than those originating in the non-skilled manual class. In order to establish whether there has been a change in the underlying pattern of fluidity we have to go beyond reporting outflow percentages and seek to model the set of odds ratios that capture the underlying pattern of relativities. To do so it is necessary to develop an explicit model of the mobility process. We take as our basic theoretical model that outlined by Goldthorpe (1980:99). Under this model the pattern of social fluidity is considered to be shaped by three factors. These are the relative desirability of different class destinations; the resources available to individuals within each origin class which help them gain access to more desirable destinations; and barriers to movement between classes. Typically we think of resources as ‘economic, cultural and social resources’ (Erikson & Goldthorpe 1987:64), although following Bowles and Gintis (2002:5) we may note that any trait that affects access to class destinations and for which parent off-spring association is

strong will contribute to intergenerational transmission of outcomes. Barriers to mobility would include the necessity to own the means of production and educational and other qualifications needed for entry to the occupations that comprise a class grouping.

Ideally we would like to have measures of the above variables available to us. In the absence of such measures we proceed to operationalise the model, in a manner similar to Erikson and Goldthorpe (1987a&b), through the use of dummy variables. Our model, however, differs in certain respects from theirs and is based on an attempt to simulate the earlier Breen and Whelan (1992) model, which we refer to as the Agriculture, Hierarchy and Property Model or AHP. As with Breen and Whelan (1993) and Ishida, Müller and Ridge (1995) we distinguish between different kinds of class effects that are likely to be differentially mediated by education and proceed to estimate gross and partial effects. The model includes the following elements.

Agriculture: AGB: the term reflecting the barrier to movement into agricultural destinations from non-agricultural destinations.

Hierarchy: H1, H2, H3: These terms are intended to capture the effect of generalised resources, desirability and barriers conceptualised in a hierarchical fashion and Reflecting the extent of movement up or down the class hierarchy. We distinguish four levels of hierarchy

(i) I+II

(ii) III

(iii) IVa+b+c, V/VI

(iv) VIIa+b

H1 captures movements involving one step across this hierarchy; H2 indicates the additional effect of a two-step movement and H3 the further effect of a three-step shift. The coefficients are thus cumulative.

Property: PB: This term captures the tendency for movement between the farming and petty bourgeois classes.

SLP: the term for movement between petty bourgeois origins and the service class. Together the terms PB and SLP capture the pattern of movement within the classes that own the means of production.

Inheritance: INH1, INH2, INH3, INH4, INH5: The inheritance effects capture tendencies towards immobility over and above those accounted for by other factors in the model. The processes involved include the reasons for this are diverse but include direct inheritance of the means of production, family tradition and access to social networks. The five inheritance parameters constitute a set of cumulative terms that capture these effects. INH1 is the term for all cells on the main diagonal. IN2 reflects the departure of immobility in the non-skilled manual class from the overall level, INH3 to INH5 capture the additional effects required to capture immobility in the skilled manual class, the petty bourgeoisie and farming classes respectively.

Affinity terms: It is also necessary to add, in Erikson and Goldthorpe's terminology, an affinity term OAF1, which compensates for the fact that our original model consistently overestimates the flow from farming to the routine non-manual class.

We can write this log-linear model as:

$$LogFij = \mu + \lambda^{O} + \lambda^{D} + \lambda^{AGB} + \lambda^{PB} + \lambda^{SLP} + \sum_{i=1}^{3} \lambda^{Hi} + \sum_{i=1}^{5} \lambda^{INHi} + \lambda^{OAF1}$$

Where Fij is the expected value in the ijth cell of the table.

In order to obtain a satisfactory model fit it was necessary to include two additional affinity terms to capture the increased flow from propertied origins to white-collar destinations in the latter half of our observation period. The OAF2 term captures the increased flow from the petty bourgeoisie to the routine non-manual class. OAF3 takes account of the corresponding increased flow from farming to the service class. The final model allows the INH2, INH3 and H3 terms to vary over time.

Model A, which is a model of no mobility differences over time, returns a value of 998.0 with 168 degrees of freedom and misclassifies 11.8% of cases. Model B, which allows for absolute mobility differences produces a value of 263.3 with 132 degrees of freedom and misclassifies 4.8% of cases. In the final model we allow the inheritance parameters for the skilled and non-skilled manual classes and the H3 term relating to long-range mobility to vary and include the additional affinity parameters.

Model C, which allows for absolute and relative variation results in a deviance value of 213.6 with 125 degrees of freedom and misclassifies 3.8% of cases. Six per cent of the mobility variance over time is accounted for by changes in relative mobility with the remainder being attributable to origin and destination variation over time. In Table 3 we present the results of a set of models that enable us to partition the total mobility variance between absolute and relative mobility.

Table 3: Mobility Variance with the AHP Model

I Model Fits Model	G^2	d.f.	Δ	P
A. No Mobility Differences {F}{S}{T}{AHP+OAF1}	988.0	168	11.84	0.000
B. Absolute Mobility Differences {F*T}{S*T}{AHP+ OAF1}	263.32	132	4.76	0.000
C. Absolute and Relative Mobility Differences {F*T}{S*T}{AHP+OAF1+OAF2 +OAF3+INH2*1987/94+ INH3*1987/94 + H3*T}	213.6	125	3.82	0.000
Total Mobility Variance	774.4			
II Partitioning of Mobility Variance				
Absolute Mobility Variance %	93.6			
Relative Mobility Variance%	6.4			

In Table 4 we set out the parameter estimates for the final model. A clear gradient of hierarchy effects is evident with an increasing gap between levels as one proceeds from one to three step movements. The PB, SLP and AGB terms are all highly significant and consistent with theoretical expectations.

Table 4: Results of Applying the AHP Model to Seven Class Intergenerational Mobility Tables for the Republic of Ireland in 1973-1987-1994-2000

Parameter Estimates

Parameter	Estimate	s.e
INH1	-0.041	0.114
INH1*1987/1994/2000	0.255	0.100
INH2	-0.337	0.080
INH3	1.229	0.166
INH3*1987/1994/2000	-0.725	0.174
INH4	1.108	0.127
INH5	0.629	0.175
H1	-0.191	0.049
H2	-0.579	0.040
H3	-1.185	0.166
H3*1987	0.245	0.207
H3*1994	0.284	0.195
H3*2000	0.527	0.200
SLP	0.768	0.101
AGB	-1.816	0.117
PB	0.832	0.087
OAF1	-0.433	0.096
OAF2	0.553	0.135
OAF3	0.295	0.099

Thus the validity of the major hypotheses underlying the AHP model, in terms of hierarchical barriers and the role of property and sector in facilitating and inhibiting mobility, are confirmed. Over time the most significant changes relate to a diminution in the barriers to long-range mobility and increased fluidity between the propertied classes and the white-collar classes. In the former case the H3 parameter declines from –1.185 in 1973 to –0.658 in 2000.[10] Taking into account that the hierarchical terms are cumulative, this implies that, all other things being equal, in 1973 the odds ratio for a pair of origin and destination distributions at opposite ends of the hierarchy was 7.0:1

[10] That change is confined to quite specific parts of the mobility process is shown by the fact that the constant social fluidity model gives a G^2 of 1890.47 with 108 degrees of freedom and misclassifies4.09% of cases. The unidiff or log-multiplicative layer model gives a G^2 of 177.47 with 105 degrees of freedom and misclassifies 3.94% of cases. It provides evidence of increasing social fluidity after 1987 with significant negative coefficients for 1994 and 2000 of –0.092 and –0.126 respectively.

but by 2000 this had declined to 4.2:1. The remaining changes relate to the significantly increased fluidity after 1987 between farming origins and service class destinations and between petty-bourgeois origins and routine non-manual destinations. Thus levels of fluidity between the propertied classes and the white-collar classes strengthened over time.

V. Trends in the Relationship between Class Origins and Educational Qualifications

In Table 5 we set out the relationship over time between class origins and highest educational qualifications. The main features of such change are fairly straightforward. We observe a dramatic reduction, across all classes, in the numbers with no qualifications, although significant disparities between classes continue to exist. Thus for the professional and managerial class the relevant figure declines from 11 per cent to 2 per cent while for the non-skilled manual class the corresponding figures were 78 per cent and 49 per cent. Thus despite the dramatic improvement in the situation of the non-skilled manual, their comparative disadvantage actually increased. The pattern for Inter Cert is more variable across classes, declining most sharply for the white-collar classes. For the Leaving Certificate we see a downward trend for the service class but an increase for all others. Finally for Third Level we observe a uniform pattern of increase over time.

Table 5: Educational Qualifications by Class Origins
(per cent by column)

Educational Level	Class Origins: Professional and Managerial (*I+II*)		Routine Non-Manual *(III)*		Petty Bourgeoisie *(IV a+b)*		Farmers *(IV c)*		Skilled Manual *(V-VI)*		Non-skilled Manual *(VII a)*		Agricultural Workers *(VII b)*	
No Qualification	1973	11.1	1973	40.4	1973	34.2	1973	65.5	1973	39.3	1973	56.0	1973	77.5
	1987	2.5	1987	22.5	1987	14.8	1987	43.1	1987	25.7	1987	37.9	1987	56.1
	1994	1.6	1994	17.3	1994	17.3	1994	34.7	1994	24.2	1994	43.7	1994	58.8
	2000	1.9	2000	16.8	2000	11.9	2000	26.5	2000	15.7	2000	28.4	2000	49.3
Intermediate and Group Certificate	1973	33.3	1973	36.3	1973	41.6	1973	24.8	1973	44.4	1973	34.4	1973	17.8
	1987	19.2	1987	37.1	1987	33.8	1987	33.7	1987	45.9	1987	48.1	1987	35.6
	1994	11.0	1994	19.9	1994	24.1	1994	26.0	1994	32.9	1994	29.1	1994	31.4
	2000	9.7	2000	22.3	2000	34.1	2000	29.1	2000	34.2	2000	42.7	2000	38.0
Leaving Certificate	1973	51.9	1973	21.5	1973	19.5	1973	8.2	1973	14.5	1973	7.6	1973	3.6
	1987	41.9	1987	23.6	1987	26.8	1987	14.0	1987	18.1	1987	10.0	1987	3.8
	1994	37.7	1994	35.8	1994	34.2	1994	23.1	1994	29.2	1994	19.1	1994	7.8
	2000	37.5	2000	30.1	2000	31.0	2000	29.2	2000	34.4	2000	18.8	2000	9.9
Third level	1973	3.7	1973	1.8	1973	4.7	1973	1.6	1973	1.9	1973	2.9	1973	1.2
	1987	36.4	1987	16.9	1987	24.6	1987	9.1	1987	10.2	1987	3.9	1987	4.5
	1994	49.7	1994	27.0	1994	24.5	1994	16.2	1994	13.7	1994	8.1	1994	2.0
	2000	50.8	2000	30.9	2000	23.0	2000	15.3	2000	15.7	2000	10.1	2000	2.8

The magnitude of the increase ranges from a movement from 4 per cent to 51 per cent for the professional managerial classes to an increase from 3 per cent to 10 per cent for the non-skilled manual.

In order to formally model trends in the class origin-educational attainment relationship, we employ what is known as a row effects model. We assign scores to reflect the ordering of the column. In this model the odds of being in the higher of a pair of adjacent destinations rises with increasing distance between the unequally spaced origin classes. Since the destination classes are equally spaced the advantage enjoyed by one origin class over another in a competition for a pair of destinations is also a simple function of the difference in rank ordering of these destination classes. The row effect model specifies that the log odds on a higher status destination, relative to the next lower status destination, changes by a fixed amount for each shift of origins regardless of the pair of destinations being compared (Breen 1984; Goodman 1979; Hout 1981)

For an I x J table:

$$\log Fij = \lambda + \lambda_i^O + \lambda_j^E + u_i v_j$$

where the $\{v_j\}$ are fixed constants and the $\{u_i\}$ parameters are called *row effects.*

Model B in Table 6 fits a homogenous row effects model to the class origins-educational qualifications-time table. The model fails to provide a satisfactory fit giving a G^2 of 292.5 with 66 degrees of freedom. Model C, which incorporates an additional set of affinity terms, provides a significantly better fit with a $G^2$of 107.8 for 56 degrees of freedom. It reduces the independence deviance by 95% and misclassifies 3.25% of cases. The first pair of affinity terms relate to the educational destinations of manual classes. The EAF1 term adjusts for the fact that the flow from the non-skilled manual class to Inter Cert is consistently underestimated. The attractiveness of this destination for non-skilled manual workers is explicable in terms of the manner in which it mediates access to skilled manual work. EAF2 captures the fact that the flow from skilled manual to no qualifications is consistently over-estimated. The EAF3 captures a reduced flow from farming to the no qualifications category. However, by far the most significant change in the pattern of relative educational advantage involves the interaction between EAF4 and time. This takes into account the fact that the relative strength of the flow from the service class to third level increased substantially over time.

The row effect model allows us to rank origin classes relative to each other in terms of the odds of attaining a higher rather than a lower educational destination. The reference category against which all others are compared is the service class and this is scored zero. The scores, which are invariant across time, form a hierarchy consistent with our expectations. The routine non-manual class and the petty bourgeoisie lie closest to the service class. The farming and skilled manual class comes next. Below these are the non-

skilled manual class and agricultural workers who enjoy a particularly disadvantaged position. The picture is a very familiar one from previous Irish work with a clear hierarchy emerging alongside a crosscutting agricultural/non-agricultural division.

Over time the change that is observed in class relativities is of a very straightforward kind. Those from service class backgrounds achieved significant gains in access to third level education. Thus, in a period of rapid educational expansion there is no evidence of any general reduction in the scale of class advantage and one avenue to greater social fluidity can be eliminated in the Irish case.

Table 6: Results of Fitting a Row Effects model to the Class Origins-Education Tables for 1973-1987-1997-200

I: Model Fits	G^2	d.f.	Δ	RG^2	P
A. Independence	2.049.80	72	16.21		.000
B. Homogenous Row Effects	292.45	66	6.34	85.73	.000
C. Homogenous Row Effects + EAF1 + EAF2*T + EAF3*T+EAF4*T	107.81	56	3.25	94.74	.000

II: Parameter Estimates	Estimate	s.e
Row Scores		
I+II	0.000	
III	-1.202	0.088
IVa+b	-1.242	0.087
Ivc	-1.578	0.089
V/VI	-1.693	0.089
VIIa	-1.940	0.084
VIIb	-2.435	0.109
EAF1	0.162	0.062
EAF2	-0.487	0.110
EAF3	0.639	0.124
EAF3*1987	-0.075	0.137
EAF3*1994	-0.413	0.133
EAF3*2000	-0.304	0.146
EAF4	-2.640	0.501
EAF4*1987	1.370	0.512
EAF4*1994	1.926	0.499
EAF4*2000	1.986	0.502

VI: Trends in the Relationship Between Educational Qualifications and Class Destination

In Table 7 we set out the trend over time in the relationship between educational qualifications and class destinations. Once again the set of changes are fairly straightforward and are mostly related to the fact that with increased availability of higher-level qualifications goes a reduced capacity of such qualifications to guarantee access to more favourable class positions. Thus the flow from Inter Cert and Leaving Cert to the service class more than halved over time while there were corresponding increases in the flows to the petit-bourgeoisie and the routine non-manual class. Finally, the flow from Third Level to routine non-manual increased over time.

In Table 8 we model the trend in educational category-class destination by means of a column effect model. This treats the row variable as ordinal, represented by ordered scores $\{u_i\}$ and the column variable as nominal with unknown parameters. Thus the situation is the obverse of the row effects model; rows are equally spaced and columns unequally. The reference category is once again the service class and is scored zero. The column effects model specifies that the impact of a higher status educational level, relative to the next lower status origin, changes by a fixed amount for each shift of destination regardless of the pair of origins being compared.

Table 7: Class Destination by Educational Qualifications

Educational level	Class Destination (per cent by row)													
	Professional and Managerial (*I+II*)		Routine Non-Manual *(III)*		Petty Bourgeoisie *(IV a+b)*		Farmers *(IV c)*		Skilled Manual *(V-VI)*		Non-skilled Manual *(VII a)*		Agricultural Workers *(VII b)*	
No Qualification	1973	1.8	1973	4.8	1973	7.6	1973	27.2	1973	15.4	1973	31.3	1973	11.5
	1987	2.8	1987	6.6	1987	5.4	1987	19.7	1987	25.0	1987	35.9	1987	4.6
	1994	3.4	1994	11.5	1994	8.5	1994	17.8	1994	23.5	1994	31.1	1994	4.3
	2000	3.6	2000	8.1	2000	9.0	2000	20.5	2000	25.0	2000	29.1	2000	4.7
Intermediate and Group Certificate	1973	11.4	1973	10.8	1973	9.8	1973	11.8	1973	32.1	1973	19.6	1973	4.6
	1987	6.1	1987	10.3	1987	8.7	1987	6.6	1987	37.8	1987	26.4	1987	4.1
	1994	5.0	1994	13.1	1994	11.6	1994	8.1	1994	38.8	1994	19.5	1994	3.8
	2000	5.7	2000	13.0	2000	15.3	2000	6.3	2000	35.9	2000	21.6	2000	2.2
Leaving Certificate	1973	51.2	1973	20.8	1973	5.2	1973	4.2	1973	8.3	1973	8.7	1973	1.7
	1987	34.8	1987	19.4	1987	6.6	1987	2.8	1987	20.6	1987	13.0	1987	3.3
	1994	20.8	1994	31.1	1994	7.1	1994	4.1	1994	21.2	1994	13.0	1994	2.8
	2000	24.1	2000	23.7	2000	7.7	2000	4.3	2000	24.6	2000	11.9	2000	3.7
Third level	1973	63.5	1973	6.1	1973	8.2	1973	2.0	1973	14.3	1973	2.0	1973	2.0
	1987	64.3	1987	8.5	1987	6.4	1987	2.5	1987	14.1	1987	3.2	1987	1.1
	1994	71.5	1994	15.1	1994	2.5	1994	1.3	1994	6.0	1994	2.5	1994	1.1
	2000	63.0	2000	15.6	2000	3.4	2000	2.3	2000	10.1	2000	4.9	2000	0.8

The column scores thus reflect the relative importance of superior educational qualifications in competition for access to one rather than another destination class.

Model B in Table 8 is a homogenous column effects model, which results in a G^2 of 398.29 for 66 degrees of freedom. Allowing the column effects to vary between 1973 and all other years produces a significant improvement with a model G^2 of 350.1 with 60 degrees of freedom leading to a reduction in the independence model deviance of 91.9% and misclassifies 6.5% of cases. In order to achieve a satisfactory fit it is necessary to include a set of affinity terms. Having done so we achieve a deviance of 62.29 with 44 degrees of freedom and misclassify only 2.1 per cent of cases. Heterogeneity of column effects does not involve any straightforward increase in the importance of education. Indeed the ability of education to discriminate between the non-skilled manual class and agricultural workers and all others actually declines, although the effect is not statistically significant in the latter case. In addition, the ability to discriminate on the basis of education between routine non-manual class and all other classes, apart from the service class, declines. The one way in which the role of education increased in importance was in a widening gap between the service class and the routine non-manual class.

The first pair of terms- DAF1 and DAF2- capture the constant affinity over time between the Inter Cert qualification and manual work and corrects for the underestimation of the flow from this level to both skilled and unskilled manual work. The remaining set of terms capture the reduced ability of education

qualifications to guarantee relative advantage in access to the service class. The interaction between DAF3 and time captures the increased flow from Inter Cert to routine non-manual work, while the interaction of DAF4 and time takes into account a reduction in the degree of fluidity between the Inter Cert and the service class. Similarly, the interaction of DAF5 with time allows for the reduced flow from the Leaving Certificate to the service class.

Table 8: Results of Fitting a Column Effects Model to the Education-Class Destination Tables for 1973 and 1994

I: Model Fits

	G^2	d.f.	Δ	RG^2	P
A. Independence	4,297.8	72	24.33		.000
B. Homogenous Column Effects	398.29	66	7.05		.000
C. Heterogonous Column Effects (1973 v 1987/94)	350.10	60	6.49		.000
D. Heterogonous Column Effects + DAF1 to DAF4	62.29	44	2.12		.036

II: Parameter Estimates

	1973		1987/1994/2000	
	Estimate	s.e	Estimate	se
Column Scores				
I+II	0.000			
III	-0.365	0.173	-0.376	0.185
IVa+b	-1.196	0.160	-0.080	0.172
IVc	-1.968	0.163	-0.029	0.175
V/VI	-1.282	0.142	-0.038	0.151
VIIa	-1.915	0.158	0.162	0.166
VIIb	-2.262	0.228	0.734	0.243
DAF1	0.748	0.064		
DAF2	0.3490	0.071		
DAF3	0.3009	0.189		
DAF3*1987/1994/2000	0.468	0.203		
DAF4	0.789	0.228		
DAF4*1987	-0.778	0.294		
DAF4*1994	-1.057	0.300		
DAF4*2000	-1.038	0.313		
DAF5	1.394	0.269		
DAF5*1987	-1.038	0.297		
DAF5*1994	-2.211	0.302		
DAF5*2000	-1.721	0.302		
DAF6	-2.308	0.691		
DAF6*1987	1.328	0.738		
DAF6*1994	2.032	0.712		
DAF*2000	2.131	0.713		

Finally, the interaction of DAF6 with time captures the increased flow from third level education to routine non-manual work. Thus, in a manner that is not

adequately captured by the column effects model, the ability of educational qualifications to predict access to the service class has been weakened over time. The results of our analysis point to a reduced rather than an increased impact of education. Taken together with the persisting strength of the relationship between class origins and education qualifications, this finding suggests one possible route by which social fluidity may have increased.

VII. The Impact of Class Origins After Controlling for Education

We now turn to the extent to which the relationship between class origins and class destination is mediated via the effects of educational level. We begin by examining the manner in which class origin and educational level combine to influence class destination. Model A in Table 5 allows for all three way interactions except O*E*D. Thus it hypothesises that the link between educational credentials and destination class is the same across all origin classes. This model produces a G^2 of 625.6 with 43 degrees of freedom. Adding the O*E*D term in Model B brings an improvement in the deviance value of 397.30 for 324 degrees of freedom and comes close to fitting the data. The modest improvement is bought at the cost of decreasing parsimony and there is little support for the hypothesis that the impact of origin on destination varies by educational level. As a consequence we have no reason to expect that educational expansion *per se* will have contributed to increased social fluidity. In light of these results, when we attempt to assess whether the

models of educational and class origin effects that we have developed proves adequate, we take model A as the reference point.

Table 9 : Model Fits for Origin-Education-Destinations Tables for 1973 and 1994

Model Fits	G^2	d.f.	Δ	P
A. All three way effects except O*E*D	625.59	432	6.78	0.000
B. All three way effects	397.30	324	5.17	0.033
C. Substitute column effects model for + E*D*T	709.89	483	7.42	0.000
D. Substitute AHP + affinity terms + interactions with time for O*D*T	875.19	559	8.37	0.000
E. Substitute homogeneous column effects model and AHP + model for E*D*T and O*D*T.	939.45	609	8.85	0.000

In Model C the education-destination model is substituted for the three way interactions E*D*T, however, on this occasion we employ a homogenous column effects model since the interaction with time proves to be insignificant. We retain the O*E*T term because, since we treat D as the dependent variable, we wish to fit these margins exactly. This results in a G^2 of 709.79 with 483 degrees of freedom. Compared with model A, this involves an increase in the deviance of 84.3 for a gain of 51 degrees of freedom. The next model substitutes the AHP model, including the affinity terms and interactions terms, but excluding the OAF3 term which is insignificant, for O*D*T and gives a G^2 of 875.2 for 559 degrees of freedom. This involves an increase in G^2 of 249.6 for a gain of 137 degrees of freedom that is significant but modest. Finally, in Model D we substitute the homogenous column effects model and the AHP model for E*D*T + O*D*T. The outcome is a G^2 of 939.5 with 609 degrees of freedom constituting an increase in the deviance level over model A of 313.9 for a gain of 177 degrees of freedom. The model misclassifies

8.9% of cases compared to 6.8% for model A. Overall then our theoretical models perform very well.

At this stage we turn to a comparison of the gross and partial effects as set out in Table 10. As we would expect, the partial education effects are rather similar to their gross counterpart. Fixing the OET values leads the DAF6 term, capturing the increased tendency for third level graduates to enter routine non-manual work to become insignificant. There is also a modest narrowing in the range of column scores among employees. However, the interaction of the DAF4 and DAF5 terms with time remains highly significant and the conclusion that the impact of education declines over time continues to receive support.[11]

The remaining coefficients relate to the direct effect of class. Viewed from the perspective of the impact of education, these effects can be thought of a 'residual' path that captures all the non-educational influences on social fluidity. These include avenues of inter-generational transmission based on inheritance of property and unmeasured variables such as access to networks, discrimination, ability or social skills and, indeed, any factor that results in an association between origin and destination Breen and Luijkx (forthcoming). The extent to which one considers such effects to capture inequalities of opportunity, rather than simply differential outcomes, depends on the degree to which one is persuaded that these effects reflect differences in factors that it is appropriate to reward, such as ability, or differences in

[11] This trend has also been found for France, Sweden, Britain and the Netherlands see Breen and Luijck (forthcoming).

preferences as opposed to difference in resources (Herrenstein and Murray, 1994 and Saunders, 1997, Breen and Golthorpe, 1999, 2002),

Comparing gross and net coefficients, and focusing first on the property variables, we find that the AGB and PB coefficients relating to barriers to entry to agriculture and the movement between the petty bourgeoisie and farming classes are largely unaffected by the introductions of controls for education. With the exception of the skilled manual parameter in 1973, the inheritance effects are also unaffected. The parameters that are subject to change are those relating to hierarchy and the SLP terms which capture the additional advantage enjoyed by those from the petty bourgeoisie in gaining access to the service class. However, it is in mediating hierarchy effects that education plays a vital role.

The partial H1 to H3 terms in equation 10 have substantially lower values that the corresponding gross coefficients in Table 4. In order to illustrate the magnitude of these differences it is useful to describe our results in terms of odds-ratio and to focus on different levels of odds for hierarchical mobility versus movements involving no mobility. For H1 and H2 these findings are constant across time and the findings are straightforward. We express the odds ratios in terms of the higher likelihood of movements involving no hierarchical change. For mobility involving one step on the hierarchy the introduction of education reduces the odds ratio from 1.12 to 1.08. For two-step movements the comparable figures are 2.16 and 1.47. These net outcomes constitute 96% and 76% respectively of their gross counterparts.

The findings relating to three level movements are complicated by change over time.

Table 10: Partial Origin Destination Parameters for the Origin-Education-Destination Model

Parameters	Estimate	s.e
INH1	0.074	0.093
INH1*1987/1994/2000	0.132	0.080
INH2	-0.147	0.084
INH3	0.590	0.126
INH3**1987/1994/2000	-0.227	0.134
INH4	1.125	0.130
INH5	0.940	0.174
H1	-0.080	0.050
H2	-0.310	0.044
H3	-0.694	0.178
H3*1987	0.339	0.226
H3*1994	0.373	0.214
H3*2000	0.529	0.215
SLP	0.549	0.118
AGB	-1.644	0.116
PB	0.812	0.088
OAF1	-0.540	0.099
OAF2	0.420	0.139
Column Scores		
I+II	0.00	
III	-0.649	0.062
IVa+b	-1.255	0.059
Ivc	-1.938	0.066
V/VI	-1.225	0.048
VIIa	-1.635	0.534
VIIb	-1.514	0.789
DAF1	0.670	0.064
DAF2	0.253	0.071
DAF3	0.612	0.115
DAF4	0.672	0.226
DAF4*1987	-0.700	0.293
DAF4*1994	-1.424	-0.094
DAF4*2000	-0.943	0.298
DAF5	1.082	0.233
DAF5*1987	-0.804	0.265
DAF5*1994	-1.907	0.265
DAF5*200	-1.354	0.275
DAF6	-1.225	0.094
DAF5*1987	0.227	0.596
DAF5*1994	0.915	0.563
DAF5*2000	0.933	0.567

In Table 11 we set out the gross and partial coefficients for all time periods. In both cases we see a significant reduction in the barrier to such fluidity over time. In the case of the gross values we see a gradual decline in the value of the odds ratio from 7.04 in 1973 to 4.18 in 2000. For the partial coefficients the corresponding figures are 2.96 and 1.74. Thus both gross and net fluidity increase over time and at every point education serves as an important mediator of such fluidity. In the final column we express the net coefficient as a percentage value of its gross counterpart. The range of values observed is extremely narrow, running from 0.38 to 0.42%, with identical values being observed in 1973 and 2000. Thus education plays an increasingly important mediating role as one moves from short-range to long-range fluidity. However there is no evidence that the magnitude of that role increases over time. Presenting our findings slightly differently, we find that expressing the 2000 figure as a percentage of 1994 outcome effectively gives an identical value of 60% for both the gross and the partial cases. Thus over time we observe both a weakening impact of education as it continues to mediate a constant proportion of the declining impact of long-term hierarchy and a reduction in the magnitude of the direct effect of this factor.

One possibility we wish to explore further is that the weakening barrier to long-range fluidity is a consequence not of changing relationships between class origins and education qualifications or between the latter and class destinations, but of the expansion of higher education. This could be the case if the association between origin and destination class is weaker at higher levels of education. Hout (1988: 1388), for example, attributes some of the

increase in social fluidity he observes in the USA to a compositional change arising from the entry of more highly educated cohorts among whom origins and destinations are more weakly related; and Vallet (forthcoming) has reported the same result for France, as have Breen and Jonsson (2003) for Sweden. We have already seen that adding the OED term contributes little in the way of explanatory power. A more specific test of this hypothesis produced no evidence of any interaction between the strength of the H3 term and educational level. Starting with our final AHP model plus terms for allowing for the three way interactions between origins, education and time and education destination and time and adding the interaction between H3 and education and between H3, education and time produces no improvement in the fit of the model. [12]

Table 11: *Gross and Net Odds Ratios for Long-range Hierarchical Mobility By Time of Survey*

Survey	Gross	Net	Net as a % of Gross
1973	7.04	2.96	42
1987	5.52	2.11	39
1994	5.39	2.04	38
2000	4.17	1.75	42
2000 as % of 1973	59.2	59.1	

Conclusions

In this paper we have sought to examine the consequences of economic growth and, most particularly, the period of unprecedented growth in the second half of the 1990s that led to the 'Celtic Tiger' characterisation, for patterns of social mobility in the Republic of Ireland. We also wish to draw out

[12] The respective indices of dissimilarity were 8.85. 8.84 and 8.79

the implications of these findings for recent efforts to reconsider theories of social fluidity. Among economists there is little disagreement on the scale of economic transformation in Ireland. Discussion focuses on the role of specific factors and the extent to which recent achievements constitute the culmination of a long-term process of convergence to European norms or rather involve a significant break with the past. Among sociologists, on the other hand, the predominant view has been that growth has been accompanied by increased income inequality and heightened inequality of opportunity. However, just as detailed empirical analysis of income distribution has shown the polarization argument to be a gross simplification, analysis of mobility trends reveals a strikingly different picture

Social mobility in the period 1973-2000 took place in the context of a significant upgrading of the class structure. While the transformation of the class structure was a gradual process, the shift from large-scale unemployment throughout the 1980s to labour shortages in the 1990s was a dramatic one. In terms of absolute mobility, one of the striking consequences of such changes was increased access to the service class across the spectrum of class origins. Alongside such upward mobility we also observed significant flows from the propertied classes to the white-collar classes. The vast bulk of the change in social mobility patterns over time was accounted for by changes in absolute mobility, as Ireland converged towards a European norm from a traditionally low level of mobility. In terms of social fluidity, we observe a reduction in barriers to long-range mobility and increased flows from the propertied classes to the white-collar classes. Thus, the general

picture is quite the opposite of one characterised by blocked mobility and marginalization. These changes combined with a dramatic reduction in the unemployment rate, unprecedented increases in employment and a shift from large-scale emigration to significant inward migration constituted a profound transformation of the society.

Such changes cannot be explained by reductions in income inequality nor by any policies purposively directed at reduction of class inequalities. Instead policy has been directed towards opening up of labour, goods and capital markets, reduced taxation and educational expansion. Welfare policy, while improving the real incomes of the less advantaged, has favoured those with higher incomes. There is no evidence of a trend towards greater meritocracy. The advantages enjoyed by propertied groups in terms of social mobility are substantial and have remained undiminished over time. The association between class-origins and education shows no sign of reduction. That between education and destination has declined and there is no evidence of a weaker association between origins-and destinations at higher levels of education of a kind that would lead expansion of participation *per se* to promote increased social fluidity. The most significant mediating role of education arises in relation barriers to movement across the class hierarchy. Education plays an increasingly important role as one proceeds from short-range to long-range mobility, however, its importance as a mediator remains constant over time. The evidence we have observed for the impact of education is consistent with findings from a number of recent studies. [13] It is

[13] For a review of this evidence see Jackson *et al* (forthcoming).

also consistent with the argument developed by Jackson *et al* (forthcoming) that, while with the expansion of education the absence of qualifications sends a clear negative signal, overall qualifications may provide less information to employers whether as means of certifying or signalling.

Throughout the course of the economic boom Ireland has remained a highly unequal society in terms of the distribution of income and there is no evidence of a movement towards a more meritocratic society in terms of changes in the causal processes represented by the O-E-D triangle. However, contrary to the assumptions and predictions of many Irish sociologists, economic growth and, in particular, the economic boom of recent years has been associated with substantial social mobility and with increased equality of opportunity. Ireland therefore fits into the pattern observed by Breen and Luijkx (forthcoming) of a widespread tendency towards increased social fluidity. However, as they have noted, this trend is not systematically related to trends in economic inequality or growth. A reduction in inequality of opportunity has been achieved in Ireland without a reduction in key inequalities. As with explaining the economic boom in Ireland, it is easier to rule out certain interpretations than to provide precise accounts of the mechanisms underlying increased social fluidity. Breen and Luijkx (forthcoming) suggest that the most plausible model connecting trends in economic growth and social fluidity is one in which a time trend drives both elements but in which there is no direct link between the two. However, while there is no necessary relationship between the two variables, the pattern of change over time in Ireland suggest that both long-term factors, associated with the upgrading of the class structure, and short-term factors

reflected in the tightness of the labour market have played a role. It appears that that faced with a situation where an increasing number of candidates are found above the minimum threshold and, in recent years with an unprecedented tightness in the labour market employers have shown a tendency to resort to criteria other than education. Of course such criteria have always played a significant role in determining social fluidity, however over time it appears that employers have applied them in manner that discriminates less against those from less favoured class origins and promotes increased long-range social fluidity. Thus while the changes observed in Ireland have not taken the form of increased meritocracy in the sense associated with the liberal theory of industrialism of an 'education based meritocracy, an increased emphasis on other criteria or signals that are deemed to be performance relevant may have contributed to a reduction in specific barriers to social fluidity.

The Irish case provides further support for the argument of Breen and Luijkx (forthcoming) for reconsidering the balance that mobility research has struck between social fluidity and absolute mobility and encouraging increased attention to the detailed evolution of businesses and firms and the jobs that constitute classes. It also provides striking support for their argument that in circumstances where policies in advanced industrial societies have shown an increasing tendency to diverge increased social fluidity may arise as a consequence of highly variable economic and social policies.

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