

*The  
Economic and Social  
Research Institute*

---

INTERNAL MIGRATION  
FLOWS IN IRELAND AND  
THEIR DETERMINANTS

J. G. HUGHES and B. M. WALSH

THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE COUNCIL  
1979 - 1980

- \*T. K. WHITAKER, M.SC. (ECON.), D.ECON.SC., LL.D., *President of the Institute.*
- \*J. F. MEENAN, M.A., B.L., *Chairman of the Council.*
- R. D. C. BLACK, PH.D., *Professor, Department of Economics, The Queen's University, Belfast.*
- F. B. CHUBB, M.A., D.PHIL., *Professor, Department of Political Science, Trinity College, Dublin.*
- SEAN CROMIEN, B.A., *Second Secretary, Department of Finance.*
- G. DEAN, M.D., F.R.C.P., *Director, Medico Social Research Board.*
- N. J. GIBSON, B.SC. (ECON.), PH.D., *Professor, Department of Economics, The New University of Ulster, Coleraine.*
- PATRICK A. HALL, B.E., M.S., DIP. STAT., *Director of Research, Institute of Public Administration.*
- \*W.A. HONOHAN, M.A., F.I.A.
- THE MOST REV. JAMES KAVANAGH, M.A., S.T.L., *Bishop of Zerta.*
- \*KIERAN A. KENNEDY, M.ECON.SC., B.PHIL., PH.D., *Director of the Institute.*
- IVOR KENNY, M.A., *Director General, Irish Management Institute.*
- MICHAEL J. KILLEEN, B.A. (MOD.), B.COMM., D.P.A., *Managing Director, Industrial Development Authority.*
- T. P. LINEHAN, B.E., B.SC., *Director, Central Statistics Office.*
- \*P. LYNCH, M.A., M.R.I.A., *Professor of Political Economy, University College, Dublin.*
- CHARLES MCCARTHY, B.L., *Chairman, Human Sciences Committee.*
- EUGENE MCCARTHY, M.SC. (ECON.) D.ECON.SC., *Director, Federated Union of Employers.*
- \*M. D. MCCARTHY, M.A., PH.D., D.SC.
- JOHN J. MCKAY, B.SC., B.COMM., M.ECON.SC., D.P.A., *Acting C.E.O. City of Dublin Vocational Education Committee.*
- \*C.H. MURRAY, LL.D., *Governor, Central Bank.*
- J. C. NAGLE, M.COMM.
- D. NEVIN, *Assistant General Secretary, Irish Congress of Trade Unions.*
- THE MOST REV. J. NEWMAN, M.A., D.PH., *Bishop of Limerick.*
- TADHG Ó CEARBHAILL, *Secretary, Department of Labour.*
- REV. E. F. O'DOHERTY, M.A., B.D., PH.D., *Professor, Department of Logic and Psychology, University College, Dublin.*
- D. P. O'MAHONY, M.A., PH.D., B.L., *Professor, Department of Economics, University College, Cork.*
- LABHRAS Ó NUALLAIN, D.ECON.SC., *Professor of Economics, University College, Galway.*
- \*W. J. L. RYAN, M.A., PH.D., *Professor of Political Economy, Trinity College, Dublin.*
- REV. L. RYAN, M.A., D.D., L.PH., *Professor, St. Patrick's College, Maynooth.*
- T. WALSH, M.AGR., SC., PH.D., M.R.I.A., *Director, AnCOT.*
- \*REV. C. K. WARD, B.A., S.T.L., PH.D., *Professor, Department of Social Science, University College, Dublin.*
- \*NOEL WHELAN, B.COMM., M.ECON.SC., PH.D., *Secretary, Department of Economic Planning and Development.*

\*Members of Executive Committee.

# INTERNAL MIGRATION FLOWS IN IRELAND AND THEIR DETERMINANTS

*Copies of this paper may be obtained from The Economic and Social Research Institute  
(Limited Company No. 18269). Registered Office: 4 Burlington Road, Dublin 4.*

**Price £3.00**

*(Special rate for students £1.50)*

J. G. Hughes is a Research Officer and B. M. Walsh is a Research Professor at the Economic and Social Research Institute. The Paper has been accepted for publication by the Institute, which is not responsible for either the content or the views expressed therein.

*Internal Migration flows in  
Ireland and their Determinants*

J. G. HUGHES and B. M. WALSH

© THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE  
DUBLIN, 1980

ISBN 0 7070 0028 9

*Acknowledgements*

We are indebted to the Central Statistics Office for providing special tabulations of the 1971 Census migration data, to R. C. Geary, D. Hannan and F. Kirwan for their comments on earlier drafts and to the Referee for comments on the final draft. We are grateful to the Ford Foundation for the financial assistance which was provided from the Ford Foundation Grant for Social Science Research in Ireland.

## CONTENTS

	<i>Page</i>
<i>General Summary</i>	9
<i>Introduction</i>	13
Section 1 The Overall Level of Internal Mobility in Ireland	15
Section 2 The Pattern of Internal Mobility	23
Section 3 Migration to and from Dublin, 1961-71	49
Section 4 Economic Influences on Internal Migration	57
Section 5 Concluding Comments	75
<i>References</i>	79
<i>Appendix</i>	81
Net Internal and Net External Migration by County by Age, 1961-71	

<i>Table</i>	<i>Page</i>
1.1 Annual rate of residential mobility in eight countries around 1971	15
1.2 Annual rate of internal migration in seven countries around 1970	16
1.3 Internal and external mobility of population aged one year and over in 1971 usually resident in the Republic of Ireland in 1970	18
1.4 Intra- and inter-regional mobility by region, 1970-71	20
2.1 Internal and external migration, natural increase and population change, by county and region, 1966-71	24
2.2 Inter-regional migration flows, 1970-71 (both sexes combined)	26
2.3 One-year internal migration by county and region, 1970-71	27
2.4 One-year internal migration rates (per 1,000 population) by county and region, 1970-71	28
2.5 Population born in Ireland (Republic) classified by region of enumeration in 1971 and by birthplace, exclusive of those enumerated in their region of birth	34
2.6 Population flows between 1961 and 1971 by birthplace (both sexes)	35
2.7 Regional distribution of internal migratory flows (percentage distribution)	36
2.8 Population aged one year and over in 1971 classified by urban/rural residence and usual residence in 1970	37
2.9 Migration to rural areas in 1970-71 classified by planning region and sex (migrants per 1,000 population)	38
2.10 Urban/rural migration, 1970-71, by sex	39
2.11 Urban/rural migration, 1970-71, by region	40
2.12 Internal migration by type of area, 1970-71, (Persons)	42
2.13 Internal migration rates per 1,000 population by age, sex, and conjugal condition	45
2.14 Migration rates by labour force status and occupation (per 1,000 population)	47
3.1 The population of Dublin (city and county) in 1961 and 1971 classified by birthplace and sex	49



<i>Table</i>	<i>Page</i>	
	7	
3.2	Estimated annual average net migration of Dublin residents by birthplace category, 1946–61 and 1961–71 (thousands)	51
3.3	Dublin-born residing outside Dublin, non-Dublin-born residing in Dublin and migration flows between Dublin and the rest of Ireland, 1946, 1961 and 1971 (thousands)	52
3.4	Population by birthplace, 1946, 1961 and 1971 and annual average growth rates	53
4.1	Linear regression results for gross male migration flows between counties, 1970–71	60
4.2	Linear regression results for gross male migration flows between regions, 1970–71	61
4.3	Regression results for gross inter-regional migration rates, 1961–71: Males	64
4.4	Estimates of $\beta_j - \beta_i$ , 1961–71: Males	65
4.5	Regression results for gross inter-regional migration rates, 1961–71: Females	66
4.6	Estimates of $\beta_j - \beta_i$ , 1961–71: Females	67
4.7	Regression results for gross inter-regional migration flows, 1961–71: Males	70
4.8	Estimates of $\beta_j - \beta_i$ , 1961–71: Males	71
4.9	Regression results for gross inter-regional migration flows, 1961–71: Females	72
4.10	Estimates of $\beta_j - \beta_i$ , 1961–71: Females	73

#### APPENDIX TABLES

A.1	Net internal migration rates per 1,000 population by county 1961–71 by age in 1971 and sex	82
A.2	Net external migration rates per 1,000 population by county 1961–71 by age in 1971 and sex	83
A.3	Regression of net internal migration rates on net external migration rates by age and sex, 1961–71	84

<i>Figure</i>		<i>Page</i>
1	Internal migration, 1970-71: Total people - miles of out-migration vectors	30
2	Internal migration, 1970-71: Total people - miles of in-migration vectors	31
3	Age specific internal mobility rates, 1970-71	43

### *General Summary*

Comparison of a number of measures of population movement within Ireland in the period 1970–71 with similar measures for other countries indicates that the Irish population exhibits a very low rate of internal mobility by international standards. Recent evidence from the 1975 and 1977 Labour Force Surveys suggests that the rate of population movement within the State has been relatively stable over the period 1971–77. It is very likely, therefore, that mobility rates within Ireland remain low by international standards. Nevertheless, internal migration in Ireland is a major component of population change and it had a marked impact on several counties' demographic fortunes in 1970–71.

One of the reasons for Ireland's low rate of internal mobility in the periods with which this paper is concerned (i.e., 1961–71, and 1970–71) was its high rate of emigration. While the emigration rate fell dramatically in the period 1961–71, only one in five of those leaving provincial Ireland in that period was likely to move to Dublin while the remaining four emigrated. Despite the continued importance of emigration from Ireland during the period 1961–71 the tendency to emigrate was less pronounced than it was in the past and internal movement of population accounted for a higher proportion of total Irish mobility than was the case in the 1950s.

The most important feature of Ireland's internal mobility is the primacy of the east region, and of Dublin city and county in particular, as the destination for and origin of those moving within the country. While the east region has consistently gained from all other regions through internal migration the evidence indicates that there is now much more two-way movement between Dublin and the rest of the country than was the case in the past.

A number of fairly predictable differentials exist between population groups with regard to mobility rates. Inter-county migration rates are highest among people aged 15–20, especially the unmarried and the economically active, and decline rather rapidly with advancing age. Local (intra-county) movement on the other hand, remains at a plateau until age 40 and is just as high among the married as the single. These local moves thus appear to be associated with changing residence (and getting married) whereas longer distance movement is more closely linked with entry to the labour force.

Analysis of population movements between and within urban and rural areas indicates that the rate of short-distance mobility within urban areas is much

higher than recorded in rural areas, where local mobility is very low. This accounts for the overall low rate of mobility recorded in rural areas, where in fact movement from addresses outside Ireland is more important than movement from other Irish counties. The net flow of people from rural to urban areas accounts for about one-quarter of the growth of the urban population. Although small compared with the major waves of rural to urban migration in most European countries over the last two centuries, this movement is none the less a significant component of urban population growth in Ireland today. Of course, the main net gainer from rural to urban movement is the east region, despite the fact that movement in the other direction (urban to rural) is quite common in this region. The rate of urban to rural migration in the east region is in fact the highest in the country and it suggests that we are already beginning to participate in the trend towards "de-urbanisation" that has attracted a great deal of attention since 1970 in the United States and in several Western European countries.

An attempt is made to discover the determinants of internal migration in Ireland over different periods of time by testing the influence of a relatively small number of economic and spatial variables. A consistent finding is that contiguity and/or distance exercises a major influence on inter-county and inter-regional movement. The dominant role of these variables, especially in our analysis of short-term inter-county flows, highlights the importance of non-economic factors in Irish internal migration. When flows over longer time periods are studied, the role of income differentials and/or changes in employment is shown to be important. Standard economic models of migration can be fitted fairly satisfactorily to the Irish data, indicating that to some extent at least internal migration may be viewed as a process whereby the population is being redistributed within the country in response to economic opportunities and in a way that tends to reduce regional disparities in living standards. It must be stressed, however, that the migration flows do not appear to work in the direction of reducing differentials in unemployment rates.

While these trends may be deemed satisfactory in a general sense, two reservations must be made. First, since the internal migration rate in Ireland is low the fact that those who move are, to some extent, moving in response to economic signals is little guarantee that the adjustment set in train by this movement will have any significant effect on existing regional differentials in living standards. Even where the migration response with respect to changes in income or employment is strong it is known from experience in other countries (notably the United States) that major differences in living standards between regions can persist even in the face of prolonged and large-scale internal migration away from low income to high income regions. Part of the reason for this may be the second reservation that needs to be attached to any tendency to regard internal migra-

tion from low to high income regions as economically desirable, namely, the possibility that such movements tend to reinforce the economic advantages of the high income areas. To the extent that economies of scale and of agglomeration are important, it is clear that the more rapid population growth of the already rich regions, far from tending to equalise regional living standards, may actually accentuate and perpetuate existing patterns of inequality.

The present study is not intended to provide a detailed examination of these issues, but it is hoped that our findings with respect to the level and pattern of internal migration will be useful as input to discussions of regional policy.

The preliminary results of the 1979 Census which were published while this paper was 'in press' have provoked widespread discussion about the accuracy of the 1971 Census results. If the response of the Central Statistics Office that there is no evidence of serious underenumeration in the 1971 Census is accepted, the 1979 Census results suggest that the general internal migration flows described and analysed in this study for the period 1961-71 have continued more or less unchanged during the intercensal period 1971-79.

## *Introduction*

The 1971 Census of Population was the first Irish census to ask households to give particulars of each person's usual residence one year previously. The census also included the traditional question about county of birth. Taken in conjunction with the returns from earlier censuses, the answers to these questions allow us to calculate a number of measures of internal mobility, including gross population flows between April 1970 and April 1971, net movement over intercensal periods up to 1971, and gross flows between county of birth and county of residence over the lifetime of the population enumerated in 1971.

The present study is concerned with the presentation and analysis of data on the pattern of internal migration in Ireland based on these sources of information. The first section presents an overview of the level of internal migration in Ireland, with some international comparisons. Section 2 contains a detailed discussion of the pattern of internal mobility. The importance of flows to and from the Dublin region merit separate treatment (Section 3). Section 4 summarises the results of a number of different analytical approaches to the observed pattern of internal mobility. In the concluding section, the main findings of the study are drawn together, areas for further research are discussed, and the implications of our findings for economic and social policy are considered.

The first systematic study of internal mobility in Ireland was Geary and Hughes (1970). This relied exclusively on the birthplace statistics in the 1946 and 1961 Censuses. The present study has been heavily influenced by this earlier work, but we have been able to explore a number of new areas due to the availability of the data on usual residence one year previously from the 1971 Census. For this reason we hope that we have not merely updated much of the material in the Geary and Hughes study, but also significantly extended our view of the process of internal mobility in Ireland.

The 1971 Census provides the latest detailed information on internal mobility in Ireland, but indications from other sources suggest that there has been no radical break with the patterns prevailing at that time. The 1975 and 1977 Labour Force Surveys show little change in the overall rate of residential mobility since 1971, and the regional distribution of population revealed by these Surveys provides no evidence of a major change in the pattern of internal migration compared with that prevailing in the previous decade. These considerations increase our confidence in the value of a detailed study of information made available by the 1971 Census.

## Section 1

### *The Overall Level of Internal Mobility in Ireland*

Definitional problems are least likely to invalidate international comparison of internal mobility if attention is confined to total residential mobility, that is, the proportion of the population enumerated at a census which was usually resident at a different address one year previously.<sup>1</sup> In Table 1.1 we have drawn together data on this measure of mobility for the limited number of countries for which such information is readily available.

Table 1.1: *Annual rate of residential mobility in eight countries around 1971*

	<i>Rate per 1,000 population</i>		<i>Rate per 1,000 population</i>
United States (1968)	186	France (1975)	104
Australia (1970)	157	Northern Ireland (1971)	86
Japan	120	Republic of Ireland (1971)	43
England and Wales		Highest region (east)	62
(1971)	107	Lowest region (north-	
Scotland (1971)	104	west)	19

*Sources:* UK: Census 1971, Great Britain, *Migration Tables*, Part I, Table 3A. Northern Ireland, *Migration Tables*, Table 3A. Republic of Ireland: Census of Population 1971, Vol. XI, Part I, Table 2A. France: Courgeau (1978, p. 529). Other Countries: Long and Boertlein (1976, Table 1).

*Note:* The mobility rate equals the numbers enumerated at the census whose usual address one year previously was elsewhere in the country divided by the total population.

<sup>1</sup> A complication arises in relation to the population which was usually resident outside the country one year previously. This amounted to 25,000 or 1 per cent of population in 1971. As far as possible we have excluded the flow of population into the country from our measure of internal mobility.

The low rate of residential mobility in Ireland revealed by these data has already been noted by Long and Boertlein (1976). It is interesting to note that the Irish rate is low, not only by comparison with the United States, England and Wales, and France, but also compared with Northern Ireland. A study of mobility rates by region shows that the rate in the most mobile region in the Republic (the east) is only three-quarters of that recorded in Northern Ireland while that in the least mobile (the north-west) is less than one-quarter of the Northern Ireland rate. The relatively low rate of mobility in the Republic as a whole, and in each region of the country, must be borne in mind throughout this study.

Comparison of movement between administrative units within a country (usually referred to as "internal migration") is very sensitive to the size and structure of the units used in defining such migration. Many European countries publish data on the annual movement between some basic unit, such as the *commune*. In Table 1.2 we present rates of internal migration based on movement between such units, on the assumption that they have a significance similar to inter-county migration rates in Ireland.

Table 1.2: *Annual rate of internal migration in seven countries around 1970*

<i>Country</i>	<i>Migration defined as a move across boundary of</i>	<i>Rate per 1,000 population</i>
United States	county	68
France	commune	64
Finland	commune	58
Great Britain	local authority area	54
Northern Ireland	local authority area	36
Belgium	<i>arrondissement</i>	52
Norway	county	47
Ireland (Republic)	county	12

*Sources:* US, GB, Northern Ireland, Ireland (Republic), France: as Table 1.1. Other countries from their Statistical Yearbooks.

It seems from this table that as well as having a low overall rate of residential mobility, Ireland also exhibits a low rate of internal migration by international standards.

A method of summarising the implications of the annual rate of residential mobility for the number of moves that a representative person can be expected to



make over his or her lifetime has been developed by analogy with the net reproduction rate (see Long and Boertlein, 1976). The summation of the age-specific mobility rates weighted by the age distribution of the life table population,  $L_x$ , measures the number of years during a person's life when a change of residence would occur if the mobility and mortality rates used were to prevail over this person's life. Long and Boertlein calculate that this total was 8.2 in Great Britain, 7.4 in Japan, and 12.9 in the United States. Using the age-specific rates of residential mobility for Ireland in 1971 (discussed in detail in Section 2, below), we calculate an expected total number of years in which a change of residence will occur of 2.8 (men) and 3.3 (women). The comparison highlights the implications for lifetime mobility of the low rates recorded in the 1971 Census. As Long and Boertlein remark, an American would probably have changed residence more frequently by age 20 than an Irishman throughout his entire lifetime.

A number of factors may be suggested as contributing to the low rate of mobility observed in Ireland. Among these are a low population density, a high proportion of the population living in rural areas including farmers who own the land they cultivate, a relatively uniform wage structure throughout the country, the absence of regional variations in entitlements to social welfare benefits, and the high proportion of the population who are owner-occupiers or who live in subsidised local authority housing from which transfer would entail loss of subsidy. However, the importance of these factors in accounting for the low level of internal mobility in Ireland has yet to be established by research, and unfortunately the later sections of the present study shed light on only a few of the issues raised here.

Any discussion of internal mobility in Ireland should be set against the extraordinarily high rate of external mobility that the Irish have exhibited in the past. It is a cliché of social commentary in Ireland that the country youth contemplating leaving his native area is far more likely to consider moving to a British or American city than to Dublin. As Geary and Hughes (1970) point out, almost 40 per cent of those aged 10–14 years living in Ireland in 1926 had left Ireland by 1966. These authors also draw attention to the very low proportion of total movement among a cohort of Irish youths accounted for by internal mobility. In a later section of this study this finding is confirmed for a more recent period (1961–71). The high rate of external mobility may be part of the reason for the low rate of internal mobility, potential movers preferring to emigrate than to seek a new residence within Ireland. In view of the easy access of young Irish people to the UK labour market, and the limited range of job opportunities available even in the Dublin region, this pattern of mobility cannot be viewed as entirely surprising.

In Table 1.3 we summarise the Irish record on internal *and* external (to the UK

only) mobility for 1970/71. (Note that this table relates to the population resident in Ireland in 1970, by residence in 1971, thus reversing the normal sequence for reasons dictated by data availability.)

Table 1.3: *Internal and external mobility of population aged one year and over in 1971 usually resident in the Republic of Ireland in 1970*

<i>Usual Residence in 1971</i>						
<i>Republic of Ireland</i>			<i>Northern Ireland</i>	<i>Scotland</i>	<i>England and Wales</i>	<i>Total (Ireland and Britain)</i>
<i>Same address</i>	<i>Different Address</i>					
	<i>Same county</i>	<i>Different county</i>				
			<i>Thousands</i>			
2,744.8	89.5	34.0	1.3	0.6	17.6	2,887.2
			<i>Per cent</i>			
95.1	3.1	1.2	0.05	0.02	0.6	100.0

*Sources:* Census of Population, 1971, Vol. XI, Part I, Table 2 and Hughes and Walsh (1976), Table 5.

*Notes:* (1) These figures are exclusive of the population that moved from Ireland (Republic) to outside the UK in 1970-71.

(2) A total of 25,000 moved from outside the state into Ireland (Republic) in 1970-71.

It must be borne in mind that in the year 1970/71 the level of net emigration from Ireland was near zero, and hence it is probable that the gross flows for 1971 were also low by comparison with other years (we have no data on gross flows for other years). None the less, 19,000 people who had been living in Ireland in 1970 were recorded as usually resident in the UK in 1971, a figure which is more than half the total number recorded as moving between Irish counties in the same year. Undoubtedly, in earlier years – and especially during the 1950s when net emigration was as high as 60,000 a year, and internal movement was probably lower than in recent years – the numbers moving from Ireland to the UK must have exceeded the numbers moving between Irish counties.

Of course, the rate of internal mobility varies considerably between regions within Ireland. This is shown by the data in Table 1.4, where the distribution of the 1971 population of the nine planning regions by usual residence in 1970 is set out.

The east region had the highest rate of both short-distance (within county) and long distance (between regions) mobility. Over seven per cent of the 1971 population of this region was resident at a different address in 1970. At the other extreme, only 2.7 per cent of the 1971 population of the north-west region was resident at a different address in 1970. The contrast between these regions in terms of the proportion of their 1971 populations that had been resident at a different address in *Ireland* in 1970 was even greater—6.2 per cent in the east compared with 1.9 per cent in the north-west. On the other hand, there is less contrast between regions with respect to inter-county or inter-regional migration. Thus, the major contrast between regions with regard to internal mobility arises from the relatively high rate of short-distance mobility in the east region, where intra-regional movers amounted to over five per cent of the 1971 population, in contrast with a mere 0.9 per cent in the north-west.

The only evidence available to establish any trend over time in the level of internal mobility is based on the birthplace question which was asked at the 1946, 1961 and 1971 Censuses.<sup>2</sup> The response to this question reveals a slow upward trend both in the numbers living outside their county of birth and in this number as a proportion of the Irish-born population enumerated at each census:

	1946	1961 (000)	1971
(1) Numbers born in Ireland residing in Ireland outside their county of birth at census	401	398	442
(2) Total born in Ireland residing in Ireland at census	2,856	2,719	2,841
(3) = (1) as % of (2)	14.0	14.6	15.6

*Note:* See Geary and Hughes (1970, p. 25), regarding comparability of 1946 figures.

<sup>2</sup>This question elicits information on the county of residence at birth, specifying that the usual residence of the mother is to be given when the birth occurs in hospital. It is possible that there is misreporting by those filling out the census form, with some tendency to attribute births to the county where maternity hospitals are located.

The rise in the numbers residing outside their county of birth after 1961 suggests that the annual flow of population across county boundaries (which is the gross increment to this stock) must have risen fairly rapidly in this period. Using

Table 1.4: *Intra- and inter-regional mobility by region, 1970-71*

Region	Usual residence in April 1970						
	Usually resident population aged 1 year and over, April 1971	Different address in Ireland*					Outside Ireland*
		Same address	Different County		Different region		
		Same county	Same region	Different region			
East	000	1,030.5	956.6	48.3	4.4	10.9	10.3
	%	100	92.8	4.7	0.4	1.1	1.0
South-west	000	452.2	430.8	14.5	0.4	2.7	3.8
	%	100	95.3	3.2	0.1	0.6	0.8
South-east	000	319.9	306.8	7.2	1.2	2.6	2.2
	%	100	95.9	2.3	0.4	0.8	0.7
North-east	000	169.0	162.2	3.7	0.3	1.4	1.4
	%	100	96.0	2.2	0.2	0.8	0.8
Mid-west	000	262.7	251.0	6.1	0.9	2.5	2.2
	%	100	95.5	2.3	0.3	1.0	0.8
Donegal	000	104.6	101.0	1.8	—0.5—		1.2
	%	100	96.0	1.7	—0.5—		1.1
Midlands	000	226.3	218.2	3.7	0.7	2.3	1.3
	%	100	96.5	1.6	0.3	1.0	0.6
West	000	251.3	243.5	3.6	0.4	1.9	2.0
	%	100	96.9	1.4	0.2	0.8	0.8
North-west	000	76.8	74.7	0.6	0.1	0.8	0.6
	%	100	97.3	0.8	0.1	1.0	0.8
Total	000	2,893.2	2,744.8	89.5	8.5	25.5	24.9
	%	100	94.9	3.1	0.3	0.9	0.9

Source: Census of Population, 1971, Vol. XI, pt. 1, Tables 2 and 4.

\*That is, the 26 counties

an aggregate survivorship ratio based on Irish Life Tables, it may be calculated that in the absence of further movement across county boundaries, the population living outside their county of birth could have fallen from 401,000 in 1946 to 310,000 in 1961, compared with the actual total of 398,000. Taking account also of the estimated numbers who moved between counties, and died in the intercensal periods, it is estimated that inter-county migration amounted to 99,000 or 6.6 thousand annually between 1946 and 1961. During the period 1961-71, it is estimated by this method that inter-county migration totalled 110,000, representing an annual average flow of 11,000 – almost double that of the early period.

In view of this evidence of an increase in the rate of internal mobility after 1961, as well as the higher rate of mobility exhibited in the more urbanised regions in 1971, it is reasonable to expect that internal mobility will increase in Ireland as the country becomes more urbanised, and if the rate of economic development and the growth in the number of young adults in the population remain high. As Long and Boertlein point out, the rate of internal mobility in the United States is more likely to decline than to rise due to the sharp fall in the rate of population growth, the ageing of the population, the cresting of the wave of suburbanisation, and a general tendency towards greater stability in demographic patterns. Similar factors may lead to a levelling off of internal migration in Britain and other European countries. If these speculations prove accurate, then the Irish rate of mobility will gradually tend to converge on that observed in other western countries.

The only information available on trends in internal mobility in Ireland since 1971 is derived from the 1975 and 1977 Labour Force Surveys. According to data from these Surveys supplied to us by the Central Statistics Office, 106,000 persons changed address within the country between April 1974 and April 1975, and 134,000 between April 1976 and April 1977. Thus, the rate of residential mobility per 1,000 population aged one year and over was 43 in 1971, 35 in 1975 and 44 in 1977. These figures show no trend, but the 1975, and to a lesser extent the 1977, rate may have been depressed by the adverse economic situation in the country at that time. The relative stability of this rate over the period 1971-77 increases our belief in the value of a detailed investigation of the patterns revealed by the 1971 data.

## Section 2

### *The Pattern of Internal Mobility*

Slightly fewer than 150,000 people were returned in the 1971 Census who had been living at a different address one year previously. Of these, 25,000 were living outside Ireland in 1970, so the total moving within the state was only 124,000 or just over four per cent of the population. Movements which did not involve crossing a county boundary accounted for 90,000 of this total, leaving only 34,000 who moved between counties. Much of the subsequent analysis in this study is concerned with this relatively small number of inter-county migrants. For some purposes we narrow our attention still further by excluding the 8.5 thousand who although they moved between counties did not cross a boundary between the nine physical planning regions. Thus, only 25.5 thousand or less than one per cent of the population moved between regions in 1970–71, and some might prefer to reserve the label “internal migrants” to apply only to this small group.<sup>3</sup>

Internal migration differs greatly in importance between Irish counties, and there are a number of ways of measuring its importance. From Table 2.1, Column 1, it may be seen that the rate of net gain or loss of population due to internal migration ranges from an annual gain of eight per thousand in Wicklow to a loss of seven per thousand in Longford and Leitrim. Several counties, among them Cork, Louth, Clare and Galway, were relatively unaffected by internal migration. With the exception of Waterford, no county outside the east region gained significantly from internal migration.

Another way of assessing the importance of internal migration is to relate it to the other components of population change, namely, net external migration<sup>4</sup> and

<sup>3</sup> We recognise, of course, that movement from one end of Cork or Galway to another may entail a much greater disruption than an inter-regional move such as that from north county Dublin to south county Louth.

<sup>4</sup> We use this phrase to refer to net migration to destinations outside Ireland (Republic). It is estimated as the difference between net migration (to all destinations) and net internal migration. See the note to Table 2.1 for a caveat as to the accuracy of the estimates.

Table 2.1 *Internal and external migration, natural increase and population change, by county and region, 1966-71*

Based on data for:—	Net internal migration	Annual rates per 1,000 Population			Change in population
		Net migration (to all destinations)	Estimated net external migration	Natural increase	
1970-71	1966-71	1966-71	1966-71	1966-71	1966-71
County and planning region	(1)	(2)	(3) = (2) - (1)	(4)	(5) = (2) + (4)
Dublin	+3.9	-0.7	-4.6	14.5	13.8
Kildare	+7.4	+0.9	-6.5	15.3	16.2
Meath	+4.2	+1.3	-2.9	11.3	12.6
Wicklow	+7.7	+7.5	-0.2	11.1	18.6
East	+4.4	+0.1	-4.3	14.2	14.3
Cavan	-3.8	-9.1	-5.3	3.9	-5.2
Louth	-0.8	+0.9	+1.7	14.2	15.1
Monaghan	-3.2	-4.4	-1.2	6.7	2.3
North-east	-2.4	-3.7	-1.3	9.0	5.3
Carlow	-6.1	-8.9	-2.8	12.7	3.8
Kilkenny	-4.2	-4.2	0.0	7.5	3.3
Wexford	-3.5	-4.0	-0.5	10.9	6.9
Waterford	+3.6	+1.6	-2.0	9.6	11.2
Tipperary SR	-5.9	-8.2	-2.3	9.5	1.3
South-east	-2.7	-4.1	-1.4	9.7	5.6
Tipperary NR	-4.8	-6.5	-1.7	8.3	1.8
Clare	+0.9	-1.9	-2.8	5.7	3.8
Limerick	-3.3	-6.5	-3.2	11.1	4.6
Mid-west	-2.4	-5.2	-2.8	9.0	3.8
Laois	-3.8	-6.4	-2.6	9.4	3.0
Longford	-6.9	-11.4	-4.5	6.1	-5.3
Offaly	-5.5	-11.6	-6.1	12.0	0.4
Roscommon	-4.1	-10.9	-6.8	1.1	-9.8
Westmeath	-5.3	-9.1	-3.8	11.6	2.5
Midlands	-4.9	-9.8	-4.9	3.1	-1.7
Cork	+0.5	-1.9	-2.4	9.5	7.6
Kerry	-2.8	-4.7	-1.9	4.7	0.0
South-west	-0.3	-2.6	-2.3	8.3	5.7
Donegal	-2.3	-6.3	-4.0	5.9	-0.4
Leitrim	-6.8	-14.7	-7.9	-0.3	-15.0
Sligo	-2.9	-6.8	-3.9	2.9	-3.9
North-west	-4.3	-9.7	-5.4	1.8	-7.9
Galway	-0.9	-6.7	-5.8	7.9	1.2
Mayo	-5.7	-14.0	-8.3	3.3	-10.7
West	-3.0	-9.8	-6.8	5.9	-3.9
Total	—	-3.7	-3.7	10.1	6.4

Note: The first column is based on the figures for 1970-71 only. Columns (2) and (4) are based on the period 1966-71. Column (3) is subject to the inaccuracy introduced by mixing rates for a single year and a five-year average.

natural increase. It may be seen that in the east region the net internal and external migration rates were virtually identical – large gains from the rest of Ireland were offset by losses to the rest of the world. In another group of counties – notably, Carlow, Kilkenny, Tipperary, Monaghan and Longford – the loss of population due to the internal migration was much more important than that due to external migration.

Finally, in counties with a low rate of natural increase even small rates of internal migration can be important relative to total population change. This was the case in counties such as Leitrim, Roscommon and Mayo, as well as in some of those already listed as high ranking on other measures of the importance of internal migration.

These comparisons support the view that despite the rather small proportion of the Irish population that moved between counties in 1970–71, internal migration was none the less a major component of population change and had a marked impact on several counties' demographic fortunes.

Further detail on the pattern of internal migration is provided in Table 2.2, which is a reduction to regional level ( $9 \times 9$ ) of the  $27 \times 27$  inter-county flow matrix published as Table 4 of Volume XI Part I of the census.

The dominance of flows to and from the east region is very striking. Flows into the east account for 42 per cent of all inter-regional mobility, and 24 per cent of all inter-regional moves come from the east. If the column and row relating to the east were removed from this table, inter-regional movement would fall to a mere 8.4 thousand – less than one half of one per cent of the population at risk.

Another indication of the unique position of the east region is the fact that it was the only region to gain population through net internal movement, and that its net balance was positive from all regions. About twice as many people moved to the east from the mid-west, midlands, west and north-west as moved from the east to these regions.

Another summary of the flows between areas in 1970–71 is presented in Table 2.3, which shows in, out, and net migration at the county level for males and females separately. A slight excess of women in the total internal flow is apparent. In Table 2.4 these numbers are expressed as rates per 1,000 population and the generally higher rates of in, out, and net migration for females than males may be noted. In keeping with the dominance of the east region in the inter-regional flows, these tables reveal the dominance of flows to and from Dublin at the county level. Dublin was the destination of about one-third, and the origin of about one-fifth, of all inter-county migrants. Dublin was also exceptional in the large excess of women in the inflow of migrants to the county – women outnumbered men by three to one in the inflow to Dublin.

At the regional level, the net migration rate for females uniformly exceeded that for males. In some counties – Carlow, Offaly and Westmeath, for example –



Table 2.2: *Inter-regional migration flows, 1970-71 (both sexes combined)*

<i>Usual residence in 1971</i>	<i>Usual residence in 1970</i>									
	East	South-west	South-east	North-east	Mid-west	Donegal	Midlands	West	North-west	Total
East		1,515	2,095	1,261	1,532	406	2,103	1,405	539	10,856
South-west	1,101		545	100	564	72	155	143	34	2,714
South-east	1,233	448		82	412	20	262	126	39	2,612
North-east	844	48	100		71	52	147	105	64	1,431
Mid-west	800	538	371	70		34	276	313	51	2,453
Donegal	201	53	21	68	16		37	65	64	525
Midlands	1,051	127	243	114	202	38		365	150	2,290
West	739	109	111	92	276	72	317		156	1,872
North-west	264	34	20	57	39	85	143	116		758
<i>Total</i>	6,223	2,872	3,506	1,844	3,112	779	3,440	2,638	1,097	25,511

Source: Census of Population, 1971, Vol. XI, Part 1, Table 4.

Table 2.3 *One-year internal migration by county and region 1970-71*

County and Region	Males			Females			Total		
	In	Out	Net	In	Out	Net	In	Out	Net
Dublin	4,266	3,427	839	6,239	3,839	2,454	10,559	7,266	3,293
Kildare	909	600	309	843	622	221	1,752	1,222	530
Meath	678	483	195	697	592	105	1,375	1,075	300
Wicklow	797	548	249	848	587				510
<i>East Region</i>			1,592			3,041	(10,856)	(6,223)	4,633
Cork	1,310	1,098	212	1,146	1,197	-51	2,456	2,295	161
Kerry	331	432	-101	356	574	-218	687	1,006	-319
<i>South-west</i>			111			-269	(2,714)	(2,872)	-158
Carlow	199	290	-91	241	360	-119	440	650	-210
Kilkenny	315	384	-69	344	532	-88	650	915	-257
Tipperary SR	283	516	-233	349	524	-175	632	1,040	-408
Wexford	408	498	-90	441	651	-210	849	1,149	-300
Waterford	559	422	137	639	495	144	1,198	917	281
<i>South-east</i>			-346			-548	(2,612)	(3,506)	-894
Cavan	221	312	-91	264	375	-111	485	687	-202
Louth	422	414	8	459	530	-71	881	944	-63
Monaghan	182	248	-66	190	272	-82	372	520	-148
<i>North-east</i>			-149			-264	(1,431)	(1,844)	-413
Clare	479	465	14	547	495	52	1,026	960	66
Limerick	702	933	-231	840	1,073	-233	1,542	2,006	-464
Tipperary NR	425	471	-46	340	555	-215	765	1,026	-261
<i>Mid-west</i>			-263			-396	(2,453)	(3,112)	-659
Donegal	265	370	-105	260	409	-149	525	779	-254
Laois	274	340	-66	311	418	-107	585	758	-173
Longford	162	261	-99	164	261	-97	326	522	-193
Offaly	335	467	-132	345	498	-153	630	965	-285
Roscommon	243	316	-73	277	422	-145	520	738	-218
Westmeath	463	536	-73	451	656	-205	914	1,192	-278
<i>Midlands</i>			-443			-707	(2,290)	(3,440)	-1,150
Galway	765	796	-31	818	928	-110	1,583	1,724	-141
Mayo	300	551	-251	375	749	-374	675	1,300	-625
<i>West</i>			-282			-484	(1,872)	(2,638)	-765
Leitrim	124	194	-70	136	259	-123	260	453	-193
Sligo	255	300	-45	317	418	-101	572	718	-140
<i>North-west</i>			-115			-224	(758)	(1,097)	-339

Source: Census of Population, 1971, Vol. XI, Part I, Tables 2 and 4.

Note: It is meaningful to aggregate the net flows from the county to the regional level, but not the gross flows unless account is also taken of origins and destinations. The gross figures for each region are given in parentheses for both sexes combined, derived from Table 2.1.

Table 2.4: *One-year internal migration rates (per 1,000 population) by county and region, 1970-71*

County and Region	Males			Females			Total		
	In	Out	Net	In	Out	Net	In	Out	Net
Dublin	10.5	-8.4	2.1	14.1	-8.6	5.5	12.4	-8.5	3.9
Kildare	24.5	-16.2	8.3	24.4	-18.0	6.4	24.3	-17.0	7.4
Meath	18.4	-13.1	5.3	20.1	-17.1	3.0	19.2	-15.0	4.2
Wicklow	24.0	-16.5	7.5	25.8	-17.9	7.9	24.8	-17.1	7.7
<i>East region</i>			3.2			5.4			4.4
Cork	7.4	-6.2	1.2	6.5	-6.8	-0.3	7.0	-6.5	0.5
Kerry	5.7	-7.4	-1.7	6.5	-10.5	-4.0	6.1	-8.9	-2.8
<i>South-west</i>			-0.5			-3.5			-0.3
Carlow	11.3	-16.5	-5.2	14.4	-21.4	-7.1	12.9	-19.0	-6.1
Kilkenny	9.9	-12.1	-2.2	11.6	-17.9	-6.3	10.7	-14.9	-4.2
Tipperary SR	8.0	-14.6	-6.6	10.3	-15.5	-5.2	9.1	-15.0	-5.9
Wexford	9.3	-11.4	-2.1	10.3	-15.2	-4.9	9.8	-13.3	-3.5
Waterford	14.4	-10.9	3.5	16.6	-12.9	3.7	15.5	-11.9	3.6
<i>South-east</i>									-2.7
Cavan	7.9	-11.2	-3.3	10.6	-15.1	-4.5	9.2	13.1	-3.8
Louth	11.3	-11.0	0.2	12.2	-14.1	-1.9	11.8	-12.6	-0.8
Monaghan	7.5	-10.3	-2.7	8.6	-12.3	-3.7	8.0	-11.2	-3.2
<i>North-east</i>			-1.7			-3.1			2.4
Clare	12.3	-11.9	0.4	15.2	-13.7	1.4	13.7	-12.8	0.9
Limerick	9.9	-13.2	-3.2	12.0	-15.4	-3.3	11.0	-14.3	-3.3
Tipperary NR	15.0	-16.7	-1.6	13.0	-21.2	-8.2	14.1	-18.9	-4.8
<i>Mid-west</i>			-1.9			-3.1			-2.4
<i>Donegal</i>	4.8	-6.7	-1.9	4.9	-7.7	-2.8	4.8	-7.2	-2.3
Laois	11.5	-14.3	-2.8	14.5	-19.4	-5.0	12.9	-16.7	-3.8
Longford	10.8	-17.5	-6.6	12.2	-19.5	-7.2	11.5	-18.5	-6.9
Offaly	12.4	-17.2	-4.9	13.9	-20.0	-6.1	13.1	-18.6	-5.5
Roscommon	8.6	-11.2	-2.6	10.9	-16.7	-5.7	9.7	-13.8	-4.1
Westmeath	16.8	-19.4	-2.6	17.3	-25.1	-7.8	17.1	-22.3	-5.2
<i>Midlands</i>			-3.6			-6.4			-4.9
Galway	9.8	-10.2	-0.4	11.5	-13.0	-1.5	10.6	-11.6	-0.9
Mayo	5.3	-9.7	-4.4	7.0	-14.0	-7.0	6.2	-11.9	-5.7
<i>West</i>			-2.1			-3.9			-3.0
Leitrim	8.1	-12.7	-4.6	10.3	-19.7	-9.4	9.2	-16.0	-6.8
Sligo	9.8	-11.6	-1.7	13.0	-17.1	-4.1	11.4	-14.3	-2.9
<i>North-west</i>			-2.8			-6.0			-4.3

Sources: As for previous Table.

the outmigration rate for females was very high, but overall the main impression is one of similarity between male and female rates. This is confirmed by the very high correlation between the male and female rates— +0.97, +0.91, +0.90 for the in, out, and net rates, respectively. Thus similar forces appear to operate on men and women in their decision to move between Irish counties.

Another interesting feature of the rates shown in Table 2.4 is the significant correlation between in and out rates: the correlation coefficient between the in- and out migration rate (ignoring signs) is 0.63 for males and 0.49 for females, both statistically significant at the .05 level with 27 observations. This reflects the fact that certain counties have high overall rates of mobility, in both directions, perhaps partly due to the tendency for an outflow to generate a flow back to the county at a later date, and vice versa. It is interesting to ask in this context whether the “in” or the “out”-flow is the better predictor of the “net” flow. The following correlation answers this question.


	<i>Males</i>	<i>Females</i>
Correlation of In and Net	+0.72	+0.59
Correlation of Out and Net	+0.09	+0.41

It is evident that the variation in the in-migration rate tends to account for more of the variation in net migration rates than is the case with out-migration, although this statement has much greater validity for males than for females. In the case of males, it may be seen that there was relatively little inter-county variation in out migration rates, and the correlation of these rates with the net rates was very low.

The vast majority of the 702 (viz.  $27 \times 26$ ) entries in the full matrix of inter-county flows are very small, and little would be gained from a discussion of these data. It is possible, however, to summarise graphically the information in this matrix using a technique developed by Tarver *et al.* (1967). This uses 27 vectors to indicate the magnitude, direction, and distance of in- and out-migration for all Irish counties. Each vector is the product of the number moving between counties by the distance travelled, as measured by the road distance between the largest towns in the counties concerned. The vectors which are displayed in Figures 1 and 2, are indicators of how many people-miles of in- or out-migration a county experienced relative to other counties, taking account of the direction of migration.

It will be seen from Figure 1 that, with the exception of counties on the east coast plus Waterford and Kildare, the direction in which migrants moved when

Figure 1: *Internal migration 1970-71: Total people - miles of out-migration vectors.*

150,000 people miles 

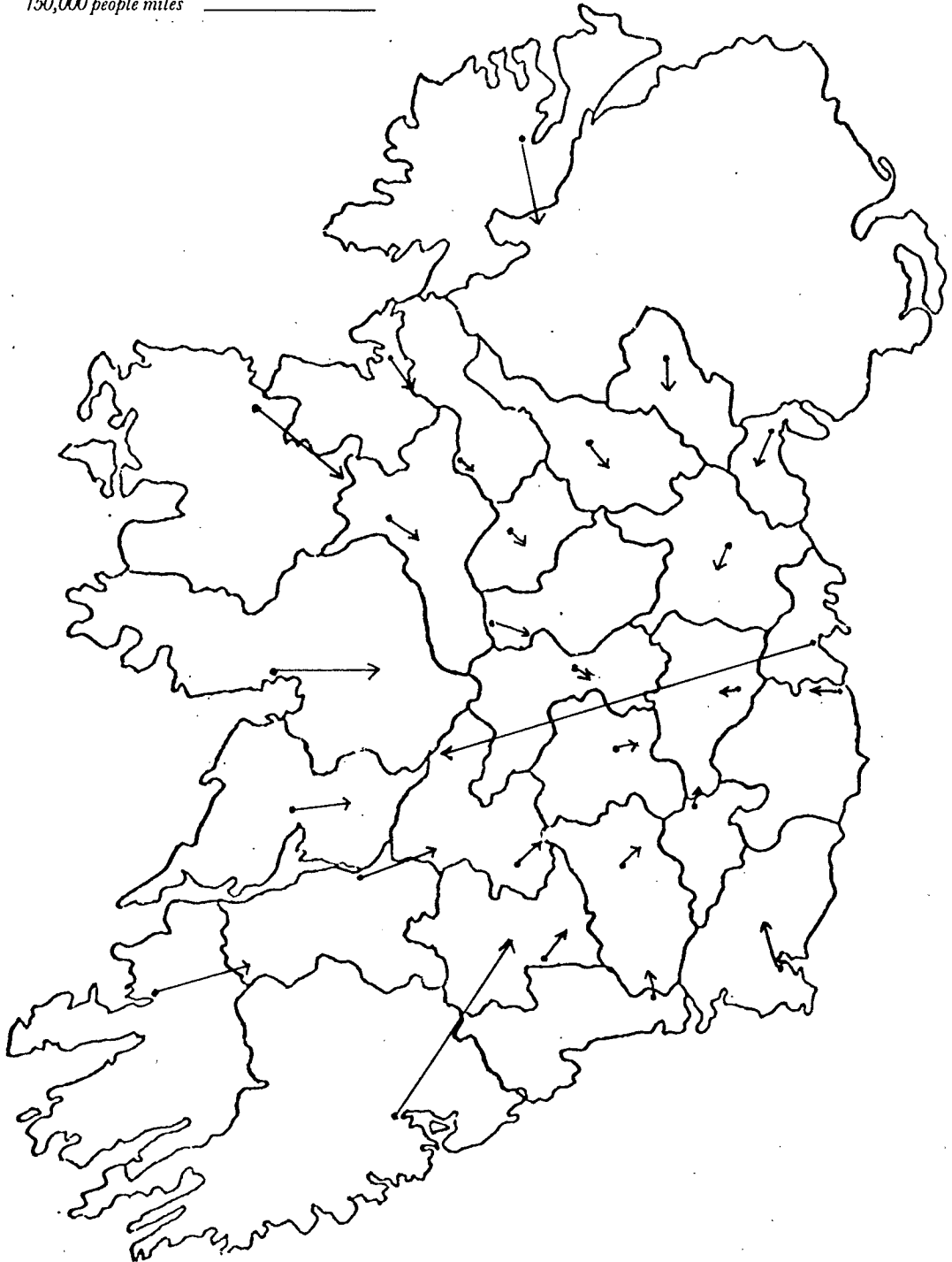
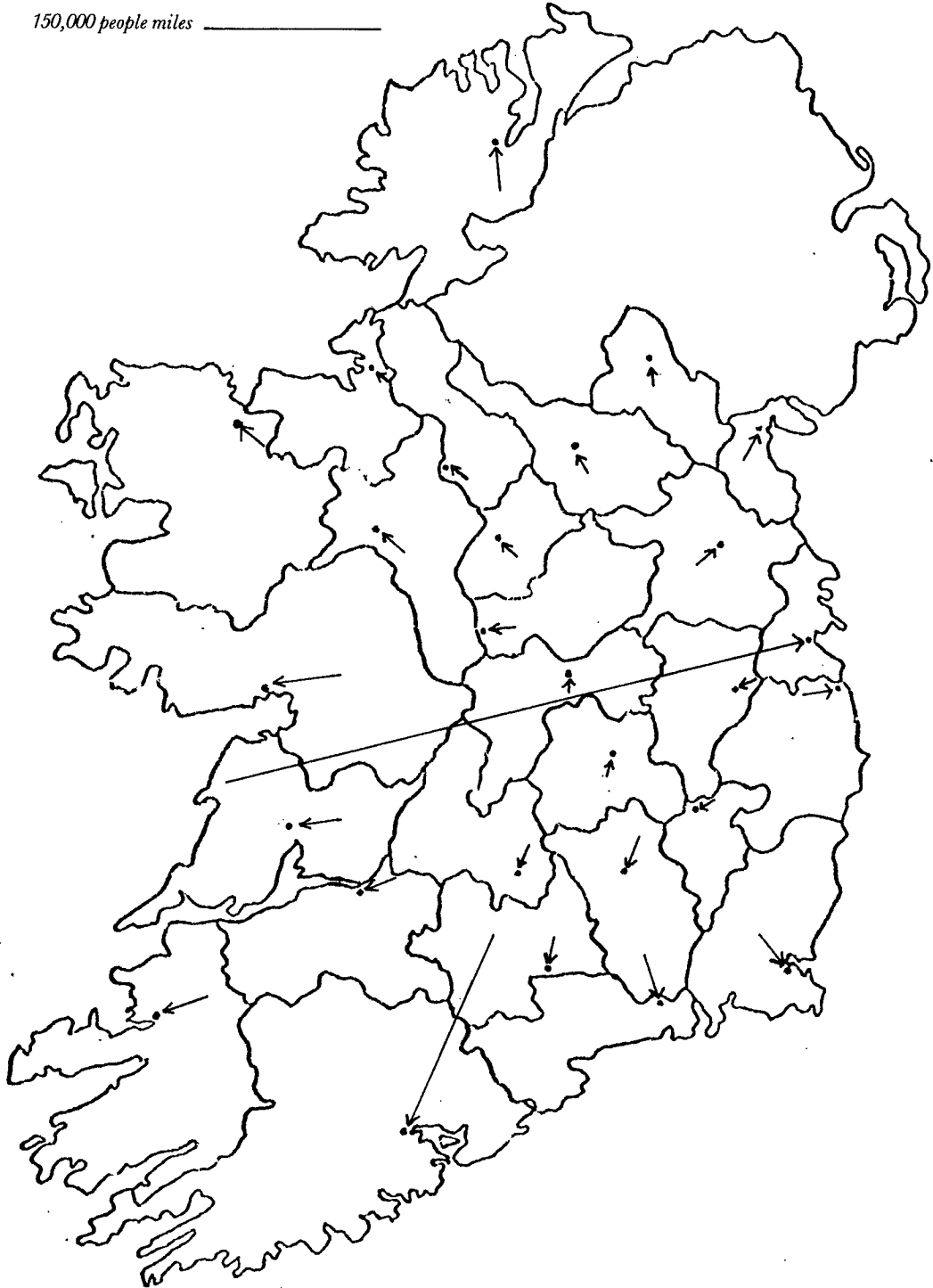


Figure 2: *Internal migration, 1970-71: Total people - miles of in-migration vectors.*

150,000 people miles —————



they left their county of residence in 1970 was towards Dublin. As one moves out from Dublin towards the periphery of the country the length of the out-migration vectors from each county increases. An examination of the data on which Figure 1 is based shows that this is due to the greater distances travelled by migrants the further they are from County Dublin and not to a greater volume of migration from counties which are furthest from Dublin. This does not mean that the deterrent effect of distance on migration is absent in Ireland, but it implies that the attractive force of the Dublin area is strong enough to counteract it. Dublin's field of influence is so great that it overrides the attractive force, even on a localised basis, of all other counties in the country.

Figure 2 shows that out-migration from Dublin exercises a dominant influence on in-migration to all of the other counties except those on the east coast. It is clear from the in-migration vectors that most of the migrants entering each county come from the Dublin direction and that the length of the vectors increases as one moves towards the periphery. This is a reflection of the greater distances from which in-migrants to the peripheral counties come rather than of a greater volume of in-migration to such counties. This point can be seen quite clearly if the average distance moved per migrant is regressed on the distance of each county from Dublin. Doing this for in- and out-migration gives the following results:

$$\text{Out-migration: } \bar{D} = 4.703 + 0.633 D_d, \quad R^2 = .732, \\ (0.290) (8.087)$$

$$\text{In-migration: } \bar{D} = 5.549 + 0.533 D_d, \quad R^2 = .608, \\ (0.296) (6.105)$$

Where  $\bar{D}$  = average distance moved,  $D_d$  = distance of each county from Dublin.

The two regression equations are significant at the one per cent level and it will be seen that nearly three-quarters of the variance in the average distance travelled by out-migrants is explained by the distance from Dublin of the county from which they migrated, while nearly two-thirds of the variance in the average distance travelled by in-migrants is explained by the distance from Dublin of the county into which they migrated.

The larger regression coefficient for the out-migration equation means that out-migrants travelled, on average, longer distances than in-migrants. An examination of the data for average miles moved per migrant shows that the differences between the average distances moved in or out are smallest in the case of

counties along the east coast and greatest in the case of counties along the west coast.

#### *Stability of Migration Patterns over Time*

Up to this, our data referred exclusively to responses to the question in the 1971 Census on usual residence in 1970. There are obvious dangers in relying exclusively on information referring to a single year as a basis for a study of patterns of internal migration. Due to the absence of a comparable question in earlier Censuses, we are constrained to rely heavily on the 1970-71 data, but it is possible to supplement these figures with data on flows between regions derived from the birthplace statistics from the 1971 and earlier Censuses.

Table 2.5 summarises the information on lifetime migration contained in the responses to the questions on usual residence and county of birth in the 1971 Census. This matrix gives a picture of the inter-regional migration flows over the lifetime of the Irish-born population enumerated in the 1971 Census (excluding moves between regions that were later offset by returning to the region of birth). Table 2.6 summarises the inter-regional population flows over the period 1961-71, using the data on the stocks of population by region of birth and residence at the two Censuses. Inter-regional migration is measured in this table as the net excess of the numbers born in county *i* living in county *j* in 1971 over the expected number of survivors from the corresponding total in 1961 (see note to the table for an illustrative calculation).

It is obvious from a comparison of the data in Tables 2.2, 2.5 and 2.6 that the broad pattern of internal migration revealed in the responses to the question on usual residence one year previously in the 1971 Census has prevailed for many years in the past. The dominance of the east as a destination for those moving within Ireland is consistent between all three tables. Similarly the flows between many of the smaller regions which are remote from one another (e.g., the south-east and north-west) are very small at all three dates.

Despite the overall impression of stability over time, closer inspection reveals that there have been significant shifts in the pattern of internal population flows. Table 2.7 presents a set of calculations to illustrate this point. The proportion of total inter-regional migrants moving to the east region seems to have been exceptionally high during the years 1961-71, but declined steeply in 1970-71.

These changes in the importance of the east as a destination reflect mainly changes in the importance of the west and south-west as a region of origin. It may be that the rapid growth of industrial and service employment in the Dublin area during the early 1960s was an exceptional spurt of regional concentration, which has now eased off.

To verify this we show the growth of the share of the east in national population since 1946, using the Labour Force Survey estimates for post-1971 data:



Table 2.5: *Population born in Ireland (Republic) classified by region of enumeration in 1971 and by birthplace, exclusive of those enumerated in their region of birth*

Region of enumeration, 1971	Region of birth									
	East	South-west	South-east	North-east	Mid-west	Donegal	Midlands	West	North-west	Total
East		25,594	33,707	21,906	20,942	5,253	30,235	22,748	8,643	169,028
South-west	6,114		6,268	855	8,427	487	1,886	2,056	589	26,682
South-east	10,031	7,093		891	31,427	346	3,863	1,794	569	56,024
North-east	7,497	1,004	1,040		756	818	2,021	1,263	1,313	15,712
Mid-west	4,803	7,854	29,976	702		379	3,169	3,340	546	50,769
Donegal	967	358	324	502	261		407	717	885	4,421
Midlands	10,635	2,014	4,835	2,026	2,790	548		7,490	2,949	33,287
West	3,596	1,916	1,523	707	2,767	791	4,671		1,902	17,873
North-west	1,494	406	376	965	381	760	2,457	2,002		8,841
<i>Total</i>	45,137	46,239	78,049	28,554	67,761	9,382	48,709	41,410	17,396	382,637

Source: Census of Population, 1971 Vol. XI, Part I, Table 4.

Note: The total Irish-born population enumerated at the census was 2,840,952 of whom 2,458,315 or 86.5 per cent were enumerated in the region of birth.

Table 2.6: *Population flows between 1961 and 1971 by birthplace (both sexes).*

<i>To:</i> <i>Residence in</i> <i>1971</i>	<i>From (Birth place)</i>									
	<i>East</i>	<i>South-west</i>	<i>South-east</i>	<i>North-east</i>	<i>Mid-west</i>	<i>Donegal</i>	<i>Midlands</i>	<i>West</i>	<i>North-west</i>	<i>Total</i>
East		6,573	6,739	5,889	5,300	1,700	7,155	6,775	2,560	42,691
South-west	1,664		1,321	209	1,270	154	445	490	139	5,692
South-east	2,044	1,650		183	830	52	486	397	131	5,773
North-east	1,782	261	214		193	183	282	367	151	3,433
Mid-west	1,612	1,285	902	252		168	741	1,040	172	6,172
Donegal	170	71	94	68	45		66	148	108	770
Midlands	2,268	260	415	177	314	82		1,838	337	5,691
West	645	445	307	135	559	220	748		160	3,219
North-west	299	43	52	59	64	176	301	311		1,305
<i>Total</i>	10,484	10,588	10,044	6,972	8,575	2,735	10,224	11,366	3,758	74,746

*Sources:* Census of Population, 1961, Vol. VII, Part II, Table 4. Census of Population 1971, Vol. XI, Part I, Table 4.

Example of calculation: In 1961 there were 421 persons enumerated in the north-west who were born in the south-west. Applying a ten-year survival probability of 0.8625 (based on the relevant Life Tables) we expect 363 persons with birthplace south-west to be enumerated in north-west in 1971. The actual total was 406, so we estimate a net inflow of 43 over the intercensal period. This takes no account of migrants who died during the intercensal period or who moved to other regions before moving to the north-west.

	1946	1951	1956	1961	1966	1971	1975	1977
East's share of national population (per cent)	28.0	30.0	31.0	32.2	34.3	35.7	36.6	36.9
Annual average growth rate of share (per cent)	1.4	0.7	0.8	1.3	0.8	0.6	0.4	

The immediate post-war boom and the years 1961-66 were periods of very significant growth in this share. The growth rate of the east's share would naturally tend to slacken as this share increases, but the slower growth since 1966 is due to the additional factors of reduced emigration from other regions and a smaller internal migration flow to the east.

One of the most impressive trends revealed in Table 2.7 is the steady increase in the proportion of migrants moving from the east region to other regions. The contrast between the 24 per cent of the 1970-71 migrants who moved from the east region to other Irish regions and the 12 per cent of those who were living outside their region of birth who came from the east may reflect a new trend in migration away from Dublin, but it may also reflect the importance of short-term or temporary movement out of the east region to other regions. It remains to be seen whether the higher level of reciprocity in inter-regional flows displayed in

Table 2.7: *Regional distribution of internal migratory flows (percentage distribution)*

Region:	By region of origin			By region of destination		
	1970-71	1961-71	Lifetime (1971)	1970-71	1961-71	Lifetime (1971)
East	24.4	14.0	11.8	42.6	57.1	44.2
South-west	11.3	14.1	12.1	10.7	7.6	7.0
South-east	13.7	13.4	20.4	10.2	7.7	14.6
North-east	7.2	9.3	7.5	5.6	4.6	4.1
Mid-west	12.2	11.5	17.7	9.6	8.3	13.3
Donegal	3.1	3.7	2.4	2.1	1.0	1.2
Midlands	13.5	13.7	12.7	9.0	7.6	8.7
West	10.3	15.2	10.8	7.3	4.3	4.7
North-west	4.3	5.0	4.5	3.0	1.7	2.3
<i>Total</i>	100	100	100	100	100	100

Sources: Derived from Tables 2.1, 2.5 and 2.6.

the 1970-71 data will result in a more permanent re-distribution of population between Irish regions or whether the net gain of the Dublin region will continue to be overwhelmingly the most important feature of internal migration in Ireland.

#### *Migration by Urban/Rural Residence*

The dominance of the east region as a destination for those moving within Ireland suggests that internal migration is part of the process by which the country is urbanising. The data in Table 2.8 show the mobility of the population by urban/rural residence in 1971.

Table 2.8: *Population aged one year and over in 1971 classified by urban/rural residence and usual residence in 1970.*

<i>Usual residence in 1970</i>	<i>Residence in urban areas, 1971</i>		<i>Residence in rural areas, 1971</i>	
	<i>Thousands</i>	<i>per cent</i>	<i>Thousands</i>	<i>per cent</i>
<i>Same address</i>	1,447.4	92.8	1,297.4	97.3
<i>Different address</i>				
Same town	53.8	3.5	—	—
Elsewhere in county	18.7	1.2	17.0	1.3
Other county in Ireland	23.6	1.5	10.4	0.8
Outside state	15.7	1.0	9.2	0.7
<i>Total</i>	1,559.3	100	1,334.0	100

*Source:* Special tabulation, Census of Population 1971.

*Note:* Rural areas are settlements with fewer than 1,000 residents.

The relatively low mobility of the population resident in rural areas in 1971 is clear, especially as far as movement between counties is concerned; only 30 per cent of those who moved between counties in 1970-71 were resident in rural areas in 1971. It is also evident that a major reason for the overall difference between rural and urban mobility rates is the high proportion of urban residents who moved within towns during the year prior to the Census.

Only 27,000 people residing in rural areas in 1971 had been at a different address in Ireland in 1970. Of these, almost a quarter (6.6 thousand) were in the

east region in 1971, which contained only 12 per cent of the country's rural population. This high rate of mobility among the rural residents of the east region indicates the importance of the suburban overspill into rural areas near Dublin as a component of the mobility of the rural population.

These points are supported by the migration rates for the rural population by region set out in Table 2.9.

Table 2.9: *Migration from rural areas in 1970-71 classified by planning region and sex (migrants per 1,000 population)*

<i>Usual residence one year previously: Different address</i>						
<i>Planning region</i>	<i>Male</i>			<i>Female</i>		
	<i>Same county</i>	<i>Other county</i>	<i>Outside state</i>	<i>Same county</i>	<i>Other county</i>	<i>Outside state</i>
East	22.2	16.5	8.4	24.6	18.4	8.6
North-east	11.5	6.2	6.4	13.6	8.0	7.4
South-east	12.3	7.1	6.0	14.9	9.3	6.3
Mid-west	9.2	6.5	4.9	13.0	8.6	6.1
Midlands	7.7	8.6	5.0	9.7	10.4	5.2
South-west	13.8	4.0	6.4	18.0	4.2	7.3
Donegal	12.1	2.9	11.4	14.4	3.2	12.0
North-west	4.1	7.3	7.3	6.2	9.8	7.5
West	5.3	4.0	6.3	8.0	5.5	6.5
<i>Ireland</i>	11.4	7.1	6.6	14.3	8.6	7.1

*Source:* Census of Population 1971, Special Tabulation.

*Note:* For the purposes of this table rural areas are defined as places with a population of less than a 1,000.

The extremely low rates of mobility between Irish counties of the population resident in rural areas outside the east region is very striking. In the south-west and west, for example, less than one-half of one per cent of the rural population had moved across county boundaries between 1970-71. In both these areas more people moved in from outside Ireland than from other counties in Ireland. In the east region, the high mobility into rural areas presumably reflects the extensive suburbanisation of the hinterland of the metropolitan area.

The data in Table 2.10 and 2.11 reveal the role of rural to urban migration in the growth of the urban population of Ireland.

The striking fact that most migrants do not cross the rural-urban divide is

Table 2.10: *Urban/rural migration, 1970-71, by sex*

<i>Usual residence in 1971</i>	<i>Usual residence in 1970: different address</i>					
	<i>Elsewhere in a county</i>		<i>In another county</i>		<i>Total</i>	
	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>	<i>Urban</i>	<i>Rural</i>
	<i>Males</i>					
Urban	30,262	3,538	6,847	3,834	37,109	7,372
Rural	2,749	5,302	2,933	2,058	5,682	7,360
<i>Total</i>	33,011	8,840	9,780	5,892	42,791	14,732
	<i>Females</i>					
Urban	34,263	4,431	7,441	5,491	41,704	9,922
Rural	3,140	5,841	3,313	2,046	6,453	7,887
<i>Total</i>	37,403	10,272	10,754	7,537	48,157	17,809
	<i>Both sexes</i>					
Urban	64,525	7,969	14,288	9,325	78,813	17,294
Rural	5,889	11,143	6,246	4,104	12,135	15,247
<i>Total</i>	70,414	19,112	20,534	13,429	90,948	32,541

Source: Census of Population, 1971, Special Tabulation.

*Urban* = towns of 1,000 and over.

apparent from the data: 64 per cent of those changing address moved within the aggregate urban areas, while a further 12 per cent moved within the aggregate rural areas, leaving only 25 per cent, or 29.4 thousand, who moved from one type of area to another. Of these, 17.3 thousand moved from rural to urban areas, while 12.1 thousand moved from urban to rural. The net gain to urban areas as a result of migration was, therefore, 5.2 thousand people. Females accounted for 3.5 thousand or 62 per cent of this total.

The population of the aggregate urban areas (within the 1971 boundaries) grew by an annual average of 22.2 thousand between 1966-71, so that net internal migration accounted for about one-quarter of this growth, the rest being due to natural increase and immigration to the state. Only in the west region did net internal migration account for over half the growth of the region's urban population. This relatively minor contribution of internal migration to the

Table 2.11: *Urban/rural migration, 1970-71, by region*

Previous residence (region)	<u>Rural to urban migration</u>				<u>Urban to rural migration</u>				Net rural to urban migration		Annual average growth of Urban population of region <sup>(c)</sup> 1966-71	
	Same county		Different county		Same county		Different county		No.	Rate <sup>(b)</sup>	No.	Rate <sup>(d)</sup>
	No.	Rate <sup>(a)</sup>	No.	Rate <sup>(a)</sup>	No.	Rate <sup>(b)</sup>	No.	Rate <sup>(b)</sup>				
East	1,210	1.4	5,737	6.6	1,682	10.4	1,764	10.9	3,501	4.0	13,120	15.4
South-west	1,855	8.3	624	2.8	1,436	6.2	547	2.4	496	2.2	2,800	13.4
South-east	1,249	9.6	722	5.5	716	3.8	924	4.9	331	2.5	1,540	12.8
North-east	527	7.9	295	4.4	379	3.7	429	4.2	14	0.2	1,040	16.8
Mid-west	933	8.9	763	7.2	486	3.1	661	4.2	549	5.2	1,660	17.0
Donegal	288	14.7	87	4.4	273	3.2	160	1.9	-58	-2.4	240	17.0
Midlands	740	10.9	549	8.0	419	2.6	856	5.4	14	0.2	720	12.1
West	1,022	16.0	446	7.0	445	2.4	553	3.0	470	7.4	900	15.4
North-west	145	9.2	102	6.4	53	0.9	352	5.8	-158	-10.0	180	11.6
<i>Total</i>	7,969	5.1	9,325	6.0	5,889	4.4	6,246	4.7	5,159	3.3	22,200	14.9

Source: Census of Population 1971, Special Tabulation.

(a) per 1,000 urban population aged 1 year and over 1971.

(b) per 1,000 rural population aged 1 year and over 1971.

(c) within 1971 boundaries. Towns of 1,500 and over.

(d) per 1,000 1966 population.

Note: "urban" refers to all towns with at least 1,000 population except in the last two columns.

country's urban population growth may be contrasted with the French experience, for example, where throughout the post-war period net internal migration accounted for at least half the population growth of the urban areas, with the exception of the largest cities since 1968 (Courgeau, 1978, Table 8). In general, rural to urban migration has played a much more important role in the growth of the urban population of western Europe than has been the case in Ireland even during the period of increased urban growth following 1961 (see United Nations, 1973, pp. 177ff).

The high rate of urban to rural migration in the east region is notable and may be taken as evidence that a process of "counter-urbanisation" is beginning to get under way. This reversal of the long established flow of population from the country to the city is already very important in the United States (Berry, 1976) and has major implications for land use planning. It is surprising, however, to see that in several regions (North-east, Donegal, Midlands, and North-west) there was either a net outflow of population from urban areas to the country or only a very slight net inflow to the cities and towns. This indicates that a dispersed pattern of settlement is becoming established even in regions with a relatively low level of urbanisation, and not just in the more highly developed regions. Further insight into the direction of the flows within Ireland can be gained from studying Table 2.12, which shows the matrix of flows by town size.

The elements on the main diagonal represent people who moved *within* a town or between towns of the same size, and it may be calculated that these accounted for 73,750 out of a total of 123,489 internal movers. It should, however, be noted that this includes 15,000 people who moved within "rural areas" – some of these could have involved very long distance moves, but evidence already presented in Table 2.10 showed that only 4,000 of them cross a county boundary.

Two rows and two columns dominate Table 2.12, namely, those that show the flows to and from the Dublin region and rural areas. Only from the rural areas did Dublin experience a net gain of any consequence. Rather surprisingly, there was a net loss from Dublin to towns in the 10,000-1,500 size class, perhaps due to the growth of "new towns" in the Dublin region. The net loss of 5,000 population from rural areas was distributed between towns of all sizes, although the Dublin region accounted for 40 per cent of the total.

Flows between other groups of towns tended to be fairly small and almost equal in both directions; excluding the main diagonal and the rows and columns for Dublin and the rural areas, no entry in Table 2.12 exceeds 500, and it may be calculated that only 7,545 people moved *between* the six groups of towns labelled (2)-(7) in the table.

#### *Age and Marital Status of Migrants*

It is well known that migration is much more common among young adults

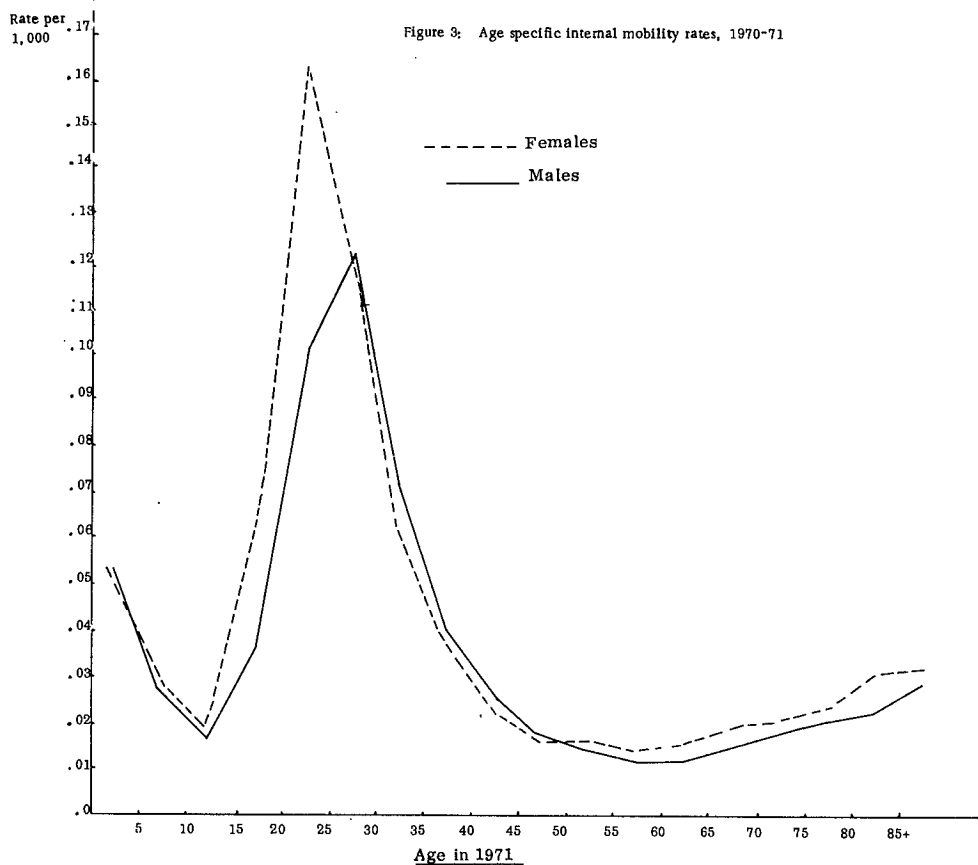


Table 2.12: *Internal migration by type of area, 1970-71, (Persons)*

<i>Usual residence in 1971</i>	<i>Usual residence in 1970</i>								<i>Total pop. Changing address</i>
	<i>(1) Dublin Region</i>	<i>(2) Other Co. Boro's</i>	<i>(3) Other Towns 10,000+</i>	<i>(4) Towns 5,000- 10,000</i>	<i>(5) Towns 3,000- 5,000</i>	<i>(6) Towns 1,500- 3,000</i>	<i>(7) Towns 1,000- 1,500</i>	<i>(8) Rural Areas</i>	
1. Dublin region	35,837	878	1,197	1,099	834	664	372	5,450	46,331
2. Other county boroughs	710	9,535	371	390	299	293	181	2,207	13,986
3. Other Towns with 10,000 pop. and over	1,124	272	5,145	425	325	249	211	2,784	10,535
4. Towns with 5,000-10,000 pop.	2,765	235	428	3,649	317	266	205	2,458	10,323
5. Towns with 3,000-5,000 pop.	1,724	295	304	299	2,285	234	132	1,685	6,958
6. Towns with 1,500-3,000 pop.	1,251	389	233	288	225	1,592	181	1,827	5,986
7. Towns with 1,000-1,500 pop.	147	117	112	102	76	91	460	883	1,988
8. Rural Areas	3,515	1,386	1,767	2,046	1,468	1,163	790	15,247	27,382
<i>Total population changing address</i>	47,073	13,107	9,557	8,298	5,829	4,552	2,532	32,541	123,489

Source: Census of Population 1971, Special Tabulation.

than among any other demographic group. The reasons for this pattern of migration by age are obvious enough; people are most likely to move on leaving school or getting married, and increasingly less likely as they age and the remaining years of working life decrease. A slight rise in migration rates might be expected around the age of retirement. The rates per 1,000 for each five-year age group graphed in Figure 3 confirm that this general pattern of migration prevails in Ireland. There is a very sharp peak in the rate, at age 20-24 (females) and 25-29 (males), which then declines steeply until age 45, levels off between age 45 and 60, and rises slightly after age 60. Very similar age patterns of migration rates have been observed in other countries (see Long and Boertlein, 1976, Table 3).



Source: Census of Population, 1971, Vol. XI, Part 1. Table 6A.

Note: The mobility rate is the proportion of population aged one year and over enumerated in 1971 Census who were residing at a different address in 1970, excluding those who moved into Ireland from outside the state.

There are, however, some differences in the age pattern of local and longer distance mobility, as may be confirmed from Table 2.13. Inter-county mobility reaches a peak at a slightly younger age than is the case for local mobility, whose rate remains at a fairly high level until age 40. Moreover, the rise in migration rates at retirement age is attributable entirely to increased mobility within counties. The importance of marital status as an influence on mobility may also be seen from Table 2.13.

The longer-distance movers are much more likely to be unmarried than is the case with local migrants. The data may be summarised as follows:

	<i>Local (intra-county)</i> <i>Moves</i>		<i>Longer distance</i> <i>(inter-county) Moves</i>	
	<i>(000)</i>	<i>per cent</i>	<i>(000)</i>	<i>per cent</i>
Single	43.5	47.5	22.4	66.1
Married	43.9	49.1	10.7	31.6
Widowed	3.0	3.4	0.8	2.3
<i>Total</i>	89.5	100.0	34.5	100.0

Fewer than half of those moving within counties were single, compared with two-thirds of those moving between counties. A detailed comparison of mobility rates by age and marital status reveals that local mobility is very much higher among the married population up to age 45 (men) or 35 (women). This undoubtedly reflects the tendency of couples to change address at, or shortly after, marriage. Longer distance mobility rates, on the other hand, are more nearly equal between married and single, even in the age interval of maximum mobility among single people, namely, from 15 to 29 years.

The higher rate of internal migration among married women aged 15-29 compared with married men in this age group may be attributed to the tendency for brides to move to their husbands' area of residence after marriage. This factor was studied in detail in Geary and Hughes (1970).

It seems reasonable to infer from the data in Table 2.13 that local mobility is closely associated with marriage, whereas longer distance moves are likely to be precipitated both by marriage and by entry into the labour market. It may be surmised that the low overall rate of internal mobility in Ireland is due in large measure to the low rates of both local and longer distance mobility recorded among the young, unmarried population, especially among males. It is surely surprising to note that only 5.7 per cent of single males aged 20-24 changed residence within Ireland during the year 1970-71. Even the 10.2 per cent of the single female population in this age group who moved is surely low compared

Table 2.13: *Internal migration rates per 1,000 population by age, sex, and conjugal condition*

Age	Males				Females			
	Total	Single	Married	Widowed	Total	Single	Married	Widowed
<i>Previous residence: Elsewhere in county</i>								
1-14	24.6	24.6	—	—	25.5	25.5	—	—
15-19	17.4	15.8	360.4	—	32.8	26.8	307.3	—
20-24	68.6	27.8	284.5	—	116.4	60.7	230.5	—
25-29	93.7	25.9	155.0	—	91.8	49.3	107.8	55.8
30-34	55.7	16.6	72.8	—	46.8	34.6	48.7	55.8
35-39	31.4	14.7	37.7	—	27.8	28.9	27.3	22.1
40-44	19.7	11.8	22.6	32.3	17.7	22.1	16.5	16.7
45-49	13.4	10.9	14.2	17.1	13.3	20.0	11.5	16.1
50-54	11.1	11.8	10.7	14.3	11.1	18.1	8.5	14.7
55-59	9.3	12.1	8.0	12.4	10.6	18.8	7.3	12.2
60-64	9.4	13.4	7.5	12.6	11.7	16.0	8.4	14.2
65-69	11.5	16.4	8.6	15.7	14.1	20.2	8.5	16.3
70-74	13.9	20.7	8.6	20.0	15.5	22.0	9.3	15.7
75+	18.3	28.7	8.8	24.0	14.0	29.1	14.1	22.2
Total Aged 1+	29.1	21.6	42.3	19.5	33.4	29.1	43.0	17.5
<i>Previous residence: Other county</i>								
1-4	10.1	10.1	—	—	9.9	9.9	—	—
5-9	6.6	6.6	—	—	6.3	6.3	—	—
10-14	4.5	4.5	—	—	4.7	4.7	—	—
15-19	19.4	19.3	37.4	—	30.4	29.8	55.5	—
20-24	30.8	29.3	38.8	—	44.2	41.6	49.9	31.2
25-29	27.5	22.8	32.0	13.2	29.4	30.0	29.2	24.9
30-34	15.6	13.1	16.8	9.0	15.6	19.9	14.6	8.7
35-39	9.5	7.6	10.3	4.6	9.8	14.1	8.8	11.0
40-44	7.1	6.6	7.4	6.0	6.3	11.3	5.2	5.7
45-49	5.0	5.9	4.7	2.0	4.0	7.5	3.1	4.8
50-54	3.5	4.9	3.1	0.5	4.0	7.3	3.1	4.3
55-59	2.9	4.5	2.4	2.3	3.6	5.7	2.6	5.1
60-64	3.2	5.1	2.4	2.7	3.7	5.5	2.7	4.0
65-69	3.9	4.9	3.5	4.0	4.0	6.4	2.6	3.8
70-74	3.9	5.6	2.8	4.9	4.4	5.5	2.2	5.3
75+	4.0	5.8	2.0	5.5	4.3	4.9	3.1	4.3
Total	10.7	11.7	9.4	4.3	12.6	14.8	11.3	4.6

Source: Census of Population 1971, Vol XI, Part I, Table 6A.

with the image of high mobility projected by this group. Our earlier caution about the need to view these figures on internal mobility in the light of the very high rate of external mobility is, however, very relevant at this point: net emigration from Ireland is at its highest among the population aged 20-29, and the vast majority of the emigrants are single. A total of 5.6 thousand persons aged 20-24 were enumerated in England and Wales in 1971 whose usual residence in 1970 was in Ireland (Republic), compared with the 8,000 who moved between Irish counties in the same period. It is likely that if we had data on the Irish in this age group who went to all destinations outside the Republic, it would emerge that this number equalled or exceeded the level of inter-county movement within the country.

#### *Mobility by Labour Force and Occupational Status*

Because entry into the labour market and change of employment are two important reasons for geographic mobility, it is not surprising that the economically active population exhibits higher rates of mobility than the non-active population (Table 2.14). This differential is greater for women than for men, and with respect to inter-county rather than local mobility, which confirms the role of marriage and housing change as factors in local mobility. The importance of labour force status in relation to mobility is illustrated by noting that 3.1 per cent of economically active women moved between counties, compared with 0.9 per cent of non-active women.

In addition to the overall contrast between the active and non-active populations, there are substantial differentials between occupational groups. The differentials are once again larger for women than for men and for inter-county than for local moves. The agricultural labour force exhibits very low mobility, which is consistent with the low mobility displayed by the rural population. The rate of intra-county mobility does not vary very markedly between occupational groups, especially among the male population, but there are very wide fluctuations in inter-county mobility rates for women. The general pattern is for less skilled occupational groups to exhibit low migration rates, and for the rate to increase with increasing skill levels. Women in clerical, service, professional and technical and transport and communications occupations have the highest mobility rates, both within and between counties. Of the 18.3 thousand women who moved between counties in 1970-71, 7.9 thousand or 43 per cent were occupied in these four occupational groups in 1971. Furthermore, movement to Dublin (city and county) of women in these four occupational categories accounted for 4.1 thousand or 22 per cent of all inter-county mobility among the female population. Looking at the figures by industrial group, by far the largest single sector of employment of women who moved to Dublin was "public administration and defence", which accounted for 1.8 thousand inter-

Table 2.14: *Migration rates by labour force status and occupation (per 1,000 population)*

	<i>Inter-county Migration</i>		<i>Intra-county Migration</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
<i>Population aged 14 and over</i>				
Gainfully occupied	12.2	31.1	33.1	51.2
Not gainfully occupied	8.6	8.8	19.0	29.8
<i>Occupational group</i>				
Agriculture	3.5	4.0	6.6	5.6
Mining, quarrying, turf	8.4	—	17.9	—
Electrical workers	19.6	18.7	60.6	46.4
Engineering	11.5	8.3	50.3	27.3
Woodworkers	11.3	—	36.1	30.3
Leather workers	3.0	2.9	26.5	31.2
Textiles and clothing workers	7.0	4.0	43.4	28.5
Food, beverages, tobacco	4.3	6.7	31.5	28.2
Paper and printing workers	4.6	2.7	51.4	32.3
Other industries	6.6	4.7	44.9	31.0
Building and construction workers	10.3	—	37.9	—
Painters and decorators	4.7	—	45.6	—
Operators of cranes etc.	9.0	—	42.3	—
Labourers and unskilled workers (nes)	4.9	3.8	29.1	19.1
Foremen and supervisors	11.6	11.0	35.4	42.4
Transport and communication workers	7.3	72.7	39.9	84.1
Warehousemen, storekeepers, etc.	6.5	5.0	44.4	29.6
Clerical workers	34.2	42.1	51.8	68.6
Commerce, insurance and finance workers	17.1	13.6	43.5	34.1
Service workers	36.4	35.5	65.2	60.7
Administrative, executive, managerial workers	29.5	23.2	56.6	72.0
Professional and technical workers	46.1	63.5	66.7	74.1

*Source:* Census of Population, 1971, Special Tabulation.

county migrants. These results confirm the well-known importance of the capital city's employment structure as a magnet for women from the rest of Ireland (see O'Broin and Farren, 1978). The effect of the concentration of these types of employment opportunities in Dublin have been discussed in detail in Bannon (1978).

Mobility by educational attainment varies along lines that reflect the occupational differentials just described. The rate of inter-county mobility ranges from 2.9 per cent among those with third-level education to 0.5 per cent among those who did not progress beyond primary level. Similar, but less pronounced, differentials exist with regard to intra-county mobility. The

attraction of the east region for highly educated migrants is demonstrated by the fact that 38 per cent of inter-county migrants with third-level education were residing in the east region in 1971 but this percentage is not as high as the 43 per cent of all migrants moving to the east.

These differentials in long- and short-term mobility rates by urban/rural residence, age, sex and marital status, and occupation are not surprising and indeed provide few contrasts with the patterns that have been observed in other countries. However, the 1971 Census provided the first opportunity to document them in detail for Ireland. The picture that emerges from a study of the results of the Census shows that there are very sizeable groups in the Irish population among whom a change of address is extremely rare – groups such as the rural/farming population, manual workers in urban areas, and the elderly. On the other hand, young people with technical/professional qualifications are relatively mobile and display a readiness to move, for example, to the Dublin region from rural areas which has had a significant effect on the decline of the rural population and the growth of the metropolitan area.

### Section 3

#### *Migration to and from Dublin, 1961-71*

The previous section demonstrated clearly the importance of flows to and from the east region, and Dublin in particular, as a component of the internal population movements in Ireland. In the present section we analyse the flows to and from Dublin over the decade 1961-71 using the birthplace statistics in the two censuses. In part, this is an updating of the first section in Geary and Hughes (1970), which dealt with the situation in 1961 and the flows between 1946-61. Some of the conclusions reached in the earlier study attracted considerable attention and merit re-examination in the light of evidence for a more recent period. In addition to this updating, we extend the analysis of flows to and from Dublin using some new approaches to the data.

Table 3.1 shows the percentage distribution by birthplace of the population enumerated in Dublin in 1961 and 1971. This distribution remained fairly stable over the decade, with 20 per cent of women and 16 per cent of men residing in Dublin having another Irish county as their birthplace.

Table 3.1: *The population of Dublin (city and county) in 1961 and 1971 classified by birthplace and sex*

<i>Birthplace</i>	<i>Percentage distribution</i>					
	<i>Males</i>		<i>Females</i>		<i>Total</i>	
	<i>1961</i>	<i>1971</i>	<i>1961</i>	<i>1971</i>	<i>1961</i>	<i>1971</i>
Dublin	77.1	77.4	72.7	73.3	74.8	75.3
Elsewhere in Ireland	16.9	16.2	21.6	20.5	19.4	18.4
Outside the state	6.0	6.3	5.7	6.2	5.8	6.3
<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0

Source: Census of Population, 1961, Vol. VII, Part II, Table 8; Census of Population, 1971, Vol. XI, Part II, Table 8.



The stability of the percentage distribution should not obscure the fact that the numbers involved have changed considerably. For example, the number born "Elsewhere" in Ireland residing in Dublin rose by 18,000, and the numbers born "Outside" Ireland grew by almost 12,000, over the period.

A detailed comparison of the proportion of Dublin residents falling in each birthplace category in 1971 by five-year age interval reveals little change from that displayed for 1961 in Geary and Hughes (1970). It is, however, notable that a slightly higher proportion of Dublin born was recorded at each age 30 and over in 1971 than in 1961. The biggest increase in the proportion born "Outside" the state occurred among children aged 5-14, presumably returning with parents who were born in Ireland. Perhaps surprisingly, there was a decline in the proportion born "Outside" Ireland in all but one age interval after 15 years for men, while this proportion increased marginally for women up to age 35. The rapid expansion of Dublin over the decade did not result in any appreciable increase in the ratio of foreign-born to total adult residents.

*Net Migration in Each Birthplace Category by Age*

The changes which occurred in the birthplace composition of the population of Dublin in each age class between 1961 and 1971 reflect the effects of mortality and net migration in the case of all cohorts aged 10 and over and the effects of births, deaths and net migration in the case of cohorts aged 0-4 and 5-9 in 1971. The number of births which can be assigned to Dublin during the period 1961-71 is known from the vital statistics reports, while the number of deaths which would have been expected to occur can be estimated from the Irish Urban Life Table for 1960-62. The net migration identity,

$$(I - E) = P_{71} - P_{61} - (B - D)$$

where P, B, D, I, E are population, births, deaths, immigration and emigration respectively, can be applied to each age group, birthplace category and sex to show the effect of net migration on each cohort between 1961 and 1971.<sup>5</sup> A summary of the results for the period 1961-71 for each group are shown in Table 3.2 together with the results for the period 1946-61 from Geary and Hughes (1970).

It will be seen from Table 3.2 that Dublin's population increased at the rate of about 1,700 persons per year as a consequence of net immigration between 1961 and 1971. This net inward movement was the result of a complex set of migration streams into and out of the county. Nearly 4,000 persons on balance who had been born in Dublin left the county each year. This outflow (which includes

<sup>5</sup>The same procedure has been used to derive estimates of net internal and net external migration by age and sex for the remaining 25 counties. These estimates are presented in the Appendix.

Table 3.2: *Estimated annual average net migration of Dublin residents by birthplace category, 1946-61 and 1961-71 (thousands)*

<i>Population resident in Dublin born in:</i>	<i>Males</i>		<i>Females</i>		<i>Total</i>	
	<i>1946-61</i>	<i>1961-71</i>	<i>1946-61</i>	<i>1961-71</i>	<i>1946-61</i>	<i>1961-71</i>
Dublin	-3.5	-1.9	-3.4	-2.1	-7.0	-4.0
Elsewhere in Ireland	1.2	1.9	1.3	2.0	2.5	3.9
Outside the state	0.5	0.9	0.4	0.9	0.9	1.8
<b>Total all birthplaces</b>	<b>-1.9</b>	<b>0.9</b>	<b>-1.7</b>	<b>0.8</b>	<b>-3.5</b>	<b>1.7</b>

*Sources:* 1946-61: Geary and Hughes (1970), Table 3; 1961-71: Census of Population, 1971, Vol. XI, Part II, Table 8.

migrants from Dublin to places outside Ireland as well as to other counties in Ireland) was almost exactly offset by a net inflow of 4,000 persons per year who had been born "Elsewhere" in Ireland (not all of these would have been living "Elsewhere" in Ireland in 1961). There was an additional inflow of nearly 2,000 persons per year who had been born "Outside" Ireland. More detailed data reveal a net loss of Dublin-born between 1961 and 1971 in all age groups except 35-44 and 55+ with over half of this concentrated in the age groups 20-24 and 25-29. There was a net gain in the migrant population born "Elsewhere" in Ireland in all age groups with over half of it concentrated in the age groups 15-19 and 20-24. Migrants from "Elsewhere" in Ireland, therefore, entered Dublin at an earlier age than the Dublin-born left the area. Persons born "Outside" Ireland were the youngest of all the migrants – over two-thirds of them were children, presumably returning to Dublin with their parents.

It is evident from Table 3.2 that there was a dramatic change in the impact of net migration on the population of Dublin between 1946-61 and 1961-71. In the earlier period net migration drained off about 53,000 persons or nearly 40 per cent of the natural increase in the county, while in the later period it added over 17,000 persons to the county's population or 15 per cent of the natural increase. The annual average net outward flow of Dublin-born declined by over 40 per cent between the two periods, while the annual average net inward flow from other counties in Ireland increased by over 50 per cent and the annual average net inward flow of persons born "Outside" Ireland doubled. These changes confirm the point raised in Section 2 that the period 1961-71 was one where

Dublin exercised a major attraction to population flows from the rest of Ireland, with the result that the concentration of national population in Dublin rose rapidly. On the other hand, there was an increase in the outflow of Dublin-born population to the rest of Ireland, from only 0.7 thousand a year between 1946-61 to 1.8 thousand a year between 1961-71. Thus the net emigration (outside the state) of Dublin-born population declined from 6.3 thousand annually to 2.2 thousand.

*Migration between Dublin and "Elsewhere" in Ireland*

Using the data on residence by birthplace in three post-war censuses, it is possible to construct a picture of the population flows between Dublin and the rest of Ireland. Table 3.3 sets out a summary of this information. The striking increase in internal migration after 1961 affected the flows to and from Dublin. The outflow from Dublin to "Elsewhere" in Ireland grew proportionately more rapidly than the inflow to Dublin from the rest of Ireland, but the net balance remained in Dublin's favour and grew from 1.8 thousand annually between 1946-61 to 2.1 thousand in the later period.

Table 3.3: *Dublin-born residing outside Dublin, non-Dublin-born residing in Dublin and migration flows between Dublin and the rest of Ireland, 1946, 1961 and 1971 (thousands)*

<i>Population</i>	<i>1946</i>	<i>1961</i>	<i>1971</i>
Born in Dublin, residing "Elsewhere" in Ireland	42.0	42.9	54.8
Born "Elsewhere" in Ireland, residing in Dublin	134.9	139.4	157.3
Estimated annual average migration flows:	1946-61	1961-71	
Dublin-born to "Elsewhere" in Ireland	0.7	1.8	
Born "Elsewhere" in Ireland to Dublin	2.5	3.9	

*Sources:* Census of Population, 1946, Vol. III, Part II, Table 7; Census of Population, 1961, Vol. VII, Part II, Table 4; Census of Population, 1971, Vol. XI, Part II, Table 8.

A predictable feature of the growth in the numbers of Dublin-born living in other Irish counties has been their increasing concentration in the contiguous counties of Kildare, Meath and Wicklow. In 1946, 39 per cent of the Dublin-born living outside Dublin in Ireland were in these three counties; in 1961 this proportion had risen slightly, to 40 per cent, but by 1971 it had reached 44 per

cent. The rapid growth of the Dublin-born population residing in contiguous counties draws attention to the limitations of census data based exclusively on residence and taking no account of commuting patterns.

*The Growth of the Dublin-born Population living in Ireland*

It is of interest to examine the growth of the Irish population by birthplace, comparing the numbers born in Dublin with those born "Elsewhere" in Ireland. In Table 3.4 we set out the Irish born population enumerated at the censuses of 1946, 1961 and 1971, classified by birthplace. The growth of the Dublin-born population since 1946 is striking. The growth was at an annual average rate of one per cent between 1946-61, when the population born "Elsewhere" declined by almost 0.7 per cent annually. Since 1961 the Dublin-born population has increased by over 1.7 per cent annually, while the population born "Elsewhere" only remained stable. The result has been a sharp increase between 1946 and 1971 in the Dublin-born as a proportion of the Irish-born population resident in Ireland – from 16 to 24 per cent for men, and from 18 to 25 per cent for women.

Table 3.4: *Population by birthplace, 1946, 1961 and 1971 and annual average growth rates*

<i>Population</i>	<i>Males</i>			<i>Females</i>		
	<i>1946</i>	<i>1961</i>	<i>1971</i>	<i>1946</i>	<i>1961</i>	<i>1971</i>
	<i>Thousands</i>					
Dublin-born	241.5	280.4	342.1	263.4	299.5	354.1
Born "Elsewhere" in Ireland	1,206.0	1,088.5	1,087.0	1,145.3	1,050.9	1,057.7
<i>Total Irish-born</i>	1,447.5	1,368.9	1,429.1	1,408.7	1,350.4	1,411.9
	<i>Annual average growth rates (per cent)</i>					
	<i>1946-61</i>	<i>1961-71</i>	<i>1946-61</i>	<i>1961-71</i>		
Dublin-born	1.0	2.0	0.9	1.7		
Born "Elsewhere" in Ireland	-0.7	0.0	-0.6	0.0		
<i>Total Irish-born</i>	-0.4	0.4	-0.3	0.4		

Sources: Census of Population, 1946, Vol. III, Part II, Table 7; Census of Population, 1961, Vol. VII, Part II, Table 4; Census of Population, 1971, Vol. XI, Part II, Table 4.

*Net Emigration by Birthplace*

The main reason for the different fortunes of the two populations has been the higher net emigration rate among the population born "Elsewhere". The net emigration rate can only be estimated indirectly by assuming that the rate of natural increase of the two birthplace populations equals that of the population actually *resident* in Dublin and "Elsewhere" in Ireland.

Using this method we estimate that the annual average net emigration at rates per 1,000 were (both sexes):

	1946-61	1961-71
Dublin-born	-4.0	+3.3
Born "Elsewhere" in Ireland	-14.1	-8.1

In both periods, the migration experience of the Dublin-born was much more favourable than that of the population of the rest of Ireland. In the more recent period there was a net inflow of Dublin-born to Ireland, while net emigration continued among those born "Elsewhere" in Ireland.<sup>6</sup>

*Importance of Dublin as a Destination for Migrants from the Rest of Ireland*

We have repeatedly stressed the importance of the net inflow to Dublin from the rest of Ireland. This flow should, however, be viewed in relation to the total outflow from the rest of Ireland. Geary and Hughes (1970, Table 5) showed that between 1946 and 1961 only 8 out of every 100 people leaving the rest of Ireland moved to Dublin – the other 92 went outside the state. A similar calculation for the decade 1961-71 reveals a markedly changed picture: 21 out of every 100 leaving the rest of Ireland moved to Dublin in the more recent period. Thus, in the more recent period not only was there a much lower net emigration rate from the rest of Ireland, but also Dublin absorbed a higher proportion of this reduced flow.

This development illustrates the growing importance of internal relative to external migration, which historically tended to dominate Irish population movements. We have seen how during 1970-71 Dublin acted as a magnet for

<sup>6</sup>It should be noted that this conclusion is at variance with the statement in Geary and Hughes (1970) that "migrationally Dubliners behave like their fellow countrymen" (p. 60). The gross survivorship ratios on p. 15 of the Geary and Hughes paper are seriously misleading as far as the Dublin-born population is concerned. The 0.72 for males, for example, actually measures the probability that a male born in Dublin County Borough and residing there in 1946 would still be residing in the Borough in 1961. It is obviously misleading to compare this with the probability that a person residing in Ireland in 1946 would still be in Ireland in 1961. A somewhat more accurate comparison reveals a probability of 0.80 for males born in Dublin (city plus county) resident in Dublin in 1946 still being resident there in 1961, to which should be added the proportion who were resident "Elsewhere" in Ireland in 1961.

young, well educated migrants from the rest of Ireland. However, it is known that the recession of 1974-76 had a particularly severe impact on the Dublin region, and this may be expected to have reduced the inflow of population to the region. The growth of Dublin averaged 1.6 per cent a year between 1971 and 1977 (using the 1977 Labour Force Survey estimate of 936,000 for the population of Dublin). It is thus only slightly in excess of the area's rate of natural increase of 1.5 per cent, and while the metropolitan area continued to gain population through internal migration, this was at a greatly reduced rate.

### *Conclusion*

This section examined in detail the role of Dublin in the network of internal migration flows since 1961. We documented the reduced importance to Dublin of inflows from the rest of Ireland in this period compared with earlier years. None the less, Dublin has continued to gain population from the rest of Ireland, and there is now a much higher probability than was the case in the past that a person leaving another county will move to Dublin. Because of the much higher rate of natural increase among the Dublin-born, and their much lower emigration rate, the Dublin-born's proportion of the total Irish population has risen steadily during the post-war period – from 22 per cent in 1946 to 32 per cent in 1971. In fact, the population born outside Dublin enumerated at the 1971 Census was 306 lower than that enumerated in 1946 whereas the Dublin-born population had risen by 191,000. Recent developments regarding emigration and the birth rate should have changed this, and by the 1980s we can expect to see a resurgence of the numbers born outside Dublin residing in Ireland.

## Section 4

### *Economic Influences on Internal Migration*

During the last two decades there has been a proliferation of studies of internal migration based on various relatively simple economic models. Gross and net migration flows have been related to measures of the economic gain to be reaped through migration, following the basic approach outlined by Sjaastad (1962), in which migration is seen as an investment with a rate of return depending on differentials in income and unemployment rates at the origin and destination. Surveys of this type of research show that it provides some insight into the process of population redistribution in a wide variety of situations, but that much remains unexplained (Greenwood, 1975a; Long, 1977). Purely geographical factors (such as proximity) appear to play a very important role, often dominating the identifiable economic factors or perhaps serving as indirect measures of some of the costs of moving.

It has been cogently argued that most of the traditional studies of migration have uncritically adopted a single-equation approach, treating the employment and income variables as strictly exogenous (Greenwood, 1975b). This of course begs the important question about the dynamic repercussions of migration on the local economy. To explore this topic a simultaneous equations approach must be used. The present study does not attempt this, being limited to the less ambitious task of establishing the main economic and geographical correlates of the internal population flows.

A number of different measures of migration are studied, and the choice of explanatory variables is dictated in part by the particular measure being studied. The unifying thread of this section is the attempt to relate migration flows to indices of regional living standards and/or labour market conditions.

The first measure of migration used is the population moving from county  $i$  to county  $j$  between 1970 and 1971,  $M_{ij}$ . This is converted to a rate by dividing by  $P_i P_j$ , the product of the populations at the origin and destination. Young (1975) has shown that this procedure results in a migration rate that is independent of the population size of the regions. As far as possible, we follow this procedure in calculating migration rates throughout this section.

The measurement of distance between areas of origin and destination could be

done in a number of ways. The measure which will be used in this paper is the straight line distance between the largest centres of population in each county or region; this is the easiest measure to calculate and the differences between it and the road distance are negligible in most cases. We designate this variable  $D_{ij}$ .

A certain amount of migration takes place for reasons entirely unconnected with differences in economic opportunities between counties or regions, e.g., local movement across county boundaries as a consequence of changing residence but not jobs. Such movement has an essentially random character and it would present no problem if all of the areas involved in migration were the same regular shape. This, however, is not the case since the shapes of counties in Ireland are very irregular. The volume of local migration across county boundaries will, therefore, be directly related to the length of the county boundary adjoining other counties. Part of the effect of this kind of movement should be controlled for by including a dummy variable  $C_{ij}$  that is equal to 1 when  $i$  and  $j$  are contiguous counties and zero if they are non-contiguous.

A wide variety of income measures have been used in empirical studies of migration. Some of these have been chosen on theoretical grounds but in many cases the choice has been dictated by the data which are available. The measure which we shall use is affected by both considerations. Theoretically, one should use the average income of migrants before they migrate and the expected income after migration. Since this information is not available an approximation has to be used, and the one we are forced to use is the sum of wages and salaries plus the total income of the self-employed in each county divided by the total population in each county. We designate this variable  $Y_i$ .

Similar problems arise in finding a suitable measure of employment opportunities. Generally, this is represented by the level of unemployment in each county since, in the absence of data on vacancies, this is taken to be the most appropriate indicator of labour market conditions in different regions. There are a number of reasons why this may not be true, however. Thus, (i) there is no necessary relationship between changes in employment and changes in unemployment as Geary and Hughes (1970) have shown; (ii) since Labour is a quasi-fixed factor as Oi (1962) has shown, the unemployment rate may not be a good indicator of labour market conditions when employers are hoarding labour; (iii) the unemployment rate may reflect many other factors, such as the county's demographic and industrial structure. If so, the interpretation of a relationship between migration and unemployment will not be straightforward.

Despite these objections, we shall use the unemployment rate ( $U_i$ ) in our migration function as an indicator of job opportunities, since there are no data available on the number of jobs created or lost in each county in 1970-71. The rate which will be used is males out of work as a percentage of male employees plus males out of work.



*Gross Migration 1970-71*

The basic migration function which was estimated is:

$$M_{ij}/P_iP_j = \beta_0 + \beta_1D_{ij} + \beta_2C_{ij} + \beta_3Y_i + \beta_4Y_j + \beta_5U_i + \beta_6U_j + e_i$$

where

$$\beta_0 > 0, \beta_1 < 0, \beta_2 > 0, \beta_3 < 0, \beta_4 > 0, \beta_5 > 0, \beta_6 < 0.$$

The gross migration flows, 1970-71, were studied in detail for males only, due to the greater relevance of the purely economic model to their behaviour and the greater importance of migration on marriage to females (Geary and Hughes, 1970). Regression results for counties are presented in Table 4.1 and for regions in Table 4.2. The most surprising result to emerge from the regression analysis is that the economic variables of themselves explain hardly any of the variance in internal migration. The most important influences on male migration between counties were distance and contiguity. The distance variable always has the expected negative sign in any of the regressions in which it appears and its *t*-values are significant at the five per cent level in all cases. On its own, distance accounts for nearly 30 per cent of the variance in male inter-county migration which took place in 1970-71. The deterrent effect of distance on migration is quite strong in Equation 1 – the elasticity of the normalised gross migration rate  $M_{ij}/P_iP_j$  is  $-1.7$  at the mean values of the variables – but its effect is considerably reduced when other variables are introduced into the regression. Thus, in Equation 11 in which contiguity and income variables are included in the regression the elasticity is approximately  $-0.9$ .

The strongest influence on male inter-county migration flows in 1970-71 was contiguity. This variable, which it will be recalled was entered into the regression to pick up the random effects of migration across county boundaries into counties contiguous to the county of origin, accounts for over 40 per cent of the variance in the gross migration rate. The coefficient of this variable is positive in all regressions in which it appears and it is always significant at the five per cent level. Moreover, its influence appeared consistently stronger than the distance variable, indicating to us that inter-county, and even inter-regional, migration in Ireland contain a very important component of purely residential mobility, which is not related to job change and hence uninfluenced by economic variables or distance.

Equations 3, 4 and 10 show that income or unemployment variables, whether separately or in combination, exert hardly any influence on the normalised gross migration rate when they are the only variables included in the migration function. However, when they are combined with distance and contiguity variables, as in Equations 11, 12 and 15, they lead to some improvement in the explanatory power of the migration function as the  $R^2$  is raised from .41 to .47.

Table 4.1: *Linear regression results for gross male migration flows between counties, 1970-71*

Equation no.	Intercept	Distance	Contiguity	Income per head		Unemployment rate		$\bar{R}^2$	F	SEE
				Origin	Destination	Origin	Destination			
1	0.02314 (24.56377)	-0.00017 (16.69638)						.2997	278.77	0.0102
2	0.00530 (13.17250)		0.02071 (21.47243)					.4148	461.06	0.0093
3	0.00670 (1.69038)			-0.00001 (0.79361)	0.00002 (1.59754)			.0019	1.64*	0.0122
4	0.00190 (8.17166)					-0.00013 (1.31551)	-0.00039 (3.88083)	.0217	8.30	0.0121
5	0.01358 (12.97127)	-0.00009 (8.49568)	0.01582 (14.61638)					.4727	291.94	0.0088
6	0.02065 (6.03220)	-0.00017 (16.66418)		-0.00001 (0.57501)	0.00001 (1.64999)			.3009	94.13	0.0102
7	0.00166 (13.50232)	-0.00017 (16.13078)				0.00014 (1.61879)	-0.00008 (0.89828)	.3015	94.39	0.0102
8	0.00273 (0.089904)		0.02073 (21.56712)	-0.00001 (1.04862)	0.00002 (2.28248)			.4189	156.93	0.0093
9	0.00915 (6.15043)		0.02049 (21.33044)			-0.00002 (0.19924)	-0.00029 (3.68711)	.4151	160.97	0.0092
10	0.02990 (4.41391)			-0.00003 (2.10800)	-0.00001 (1.07807)	-0.00031 (2.35318)	-0.00048 (3.69943)	.0269	5.48	0.0120
11	0.01088 (3.58257)	-0.00009 (8.43546)	0.01588 (14.71351)	-0.00001 (0.87923)	0.00002 (2.20127)			.4758	148.27	0.0088
12	0.01407 (9.09058)	-0.00008 (7.98708)	0.01590 (14.70193)			0.00010 (1.28278)	-0.00015 (1.99069)	.4760	148.41	0.0088
13	0.01456 (2.50210)	-0.00017 (15.97073)		0.00001 (0.65870)	0.00001 (1.41232)	0.00019 (1.69152)	0.00003 (0.24091)	.3019	57.13	0.0102
14	0.01466 (2.78918)		0.02040 (21.17409)	-0.00001 (1.52509)	-0.00001 (0.05423)	-0.00011 (1.11873)	-0.00029 (2.89458)	.4254	97.09	0.0092
15	0.01028 (2.03582)	-0.00009 (7.91347)	0.01587 (14.63951)	-0.00001 (0.03672)	0.00001 (1.19125)	0.00010 (0.97968)	-0.00008 (0.75765)	.4756	99.09	0.0088

t-values in parentheses; \*not significant at .10 level: SEE = standard error of estimate.

Number of observations = 702.

Note: The data on income per head are given in Ross, Jones and O'Malley (1977), while those on unemployment are given in *Census of Population of Ireland, 1971, Vol III.*

Table 4.2: *Linear regression results for gross male migration flows between regions, 1970-71*

Equation no.	Intercept	Distance	Contiguity	Income per head		Unemployment rate		$\bar{R}^2$	F	SEE
				Origin	Destination	Origin	Destination			
1	0.01145 (15.05442)	-0.00005 (8.02038)						.4714	64.33	0.0024
2	0.00370 (10.86423)		0.00503 (9.52247)					.5582	90.71	0.0022
3	0.00623 (1.99007)			-0.00001 (0.99941)	0.00001 (0.78878)			.0022	0.92*	0.0033
4	0.00758 (5.21157)					-0.00001 (0.16400)	-0.00012 (1.75038)	.0148	1.53*	0.0033
5	0.00676 (5.59573)	-0.00002 (2.62897)	0.00354 (4.67145)					.5926	52.64	0.0021
6	0.01321 (5.51312)	-0.00005 (8.17788)		-0.00001 (1.82840)	0.00001 (0.66822)			.4873	23.49	0.0024
7	0.01054 (9.46310)	-0.00006 (8.01527)				0.00010 (1.91018)	-0.00001 (0.20715)	.4859	23.37	0.0024
8	0.00425 (2.06939)		0.00503 (9.68482)	-0.00001 (1.57322)	0.00001 (1.6503)			.5726	32.71	0.0022
9	0.00339 (3.18830)		0.00506 (9.42726)			0.00007 (1.41219)	-0.00004 (0.94265)	.5667	31.95	0.0022
10	0.01748 (2.80015)			-0.00002 (1.69396)	-0.00001 (0.75022)	-0.00014 (1.36517)	-0.00018 (1.74207)	.0311	1.57*	0.0033
11	0.00790 (3.32404)	-0.00002 (2.72701)	0.00351 (4.72147)	-0.00001 (1.84432)	0.00001 (1.01265)			.6096	28.71	0.0021
12	0.00602 (4.41281)	-0.00003 (2.87089)	0.00351 (4.71750)			0.00009 (2.04165)	-0.00002 (0.38297)	.6084	28.57	0.0021
13	0.01003 (2.14006)	-0.00006 (7.63836)		-0.00001 (0.53980)	0.00001 (0.71318)	0.90007 (0.86297)	0.00003 (0.38037)	.4779	14.00	0.0024
14	0.00362 (0.80997)		0.00506 (9.04841)	-0.00001 (0.72892)	0.00001 (0.64688)	0.00003 (0.39268)	-0.00001 (0.14807)	.5610	19.15	0.0022
15	0.00435 (1.02234)	-0.00003 (2.88820)	0.00353 (4.71381)	-0.00001 (0.40023)	0.00001 (1.03860)	0.00008 (1.06851)	0.00004 (0.51380)	.6049	19.12	0.0021

t-values in parentheses; \*not significant at .10 level.  
Number of observations = 72.

While very few of the regression coefficients on the income or unemployment variables turn out to be significantly different from zero, the coefficients have the theoretically "correct" signs in most of the regression equations. These results indicate that while income and unemployment levels may have influenced male inter-county migration in 1970-71 in the way in which they were expected to, their influence was minor compared to the very powerful effect of geographical factors. The poor performance of the income and unemployment variables may, of course, reflect the inadequacy of the measures used to try to capture the effects of income and labour market conditions on migration.

The main difference between the county and regional results is that the proportion of the variance in the normalised migration rate which is explained by the explanatory variables is higher at the regional level in all cases with the exception of the equations containing only income or unemployment variables (i.e., Equations 3 and 4). Thus, comparing the "best" equations at county and regional level (i.e., Equations 11 and 12) it will be seen that about 48 per cent of the variance in the dependent variable is explained at county level while over 60 per cent of it is accounted for by the explanatory variables at regional level. This suggests that a significant amount of the inter-county movement in a single year is unrelated to systematic factors, while this is less true of inter-regional flows. A number of reasons may be suggested for this: in the first place, the pattern of mobility revealed by the responses to a previous-residence-one-year-ago question may contain a good deal of "noise" – short-run and temporary movements, for example. Secondly, the pattern prevailing in 1970-71 may have been influenced by special circumstances peculiar to a period when net emigration had fallen to near zero for the first time in a generation. Thirdly, the pattern of gross inter-county flows may be influenced to a significant extent by non-economic forces, such as migration on or after marriage – which is very important for women, but must also play a role in male mobility.

Longer term flows might be expected to be more systematically related to economic variables. We turn, therefore, to these measures of migration to see whether this is in fact the case.

#### *Inter-regional Migration, 1961-71*

One approach to the measurement of medium-term migration is to utilise the birthplace/residence data in the 1961 and 1971 Census reports to develop gross inter-county flows. This technique was used in preparing Table 2.6 and is illustrated in a note to that Table. It may be seen that inter-regional migration between 1961 and 1971 amounted to 75,000 people, compared with the 332,000 persons enumerated in 1971 outside their region of birth. Thus, the flows we propose to study amount to about 23 per cent of lifetime inter-regional migra-

tion. (These calculations ignore persons who migrated and died before the end of the period.)

The model to be applied to these data is the same as that which was used to study the 1970-71 gross migration flows, with the addition of a variable measuring the percentage change in employment by region, 1961-71,  $\Delta E_i/E_i$ . The dependent variable was expressed as a rate by dividing by the product of the population in regions  $i$  and  $j$ .

The net effect of any variable which appears for both the origin and destination regions will be given by subtracting the regression coefficient for the region of origin from the regression coefficient for the region of destination. Thus the net effect of the income, unemployment or employment variables will be given by  $(\beta_j - \beta_i)$ . The  $t$ -statistic to indicate the significance of each variable's effect on net migration can be computed from the formula

$$t_{(\beta_j - \beta_i)} = (\beta_j - \beta_i) / \sqrt{\sigma_{\beta_j}^2 + \sigma_{\beta_i}^2 + 2 \text{cov}(\beta_j, \beta_i)}$$

In Tables 4.3 and 4.4 for males and 4.5 and 4.6 for females we present some results from a larger number of regression trials, bearing in mind that this selectivity in the presentation of regression results conveys a spuriously high level of significance in the results actually presented.

In estimating migration functions containing a distance variable and a constant term we discovered that while the distance variable always had the expected negative sign and a  $t$ -value significantly different from zero at the .05 level, the constant term was negative or not significantly different from zero in some of the equations. Since the constant term should be non-negative because  $M_{ij}/P_i P_j > 0$  for all values of the origin and destination variables, we re-estimated the migration functions by imposing the constraint that the regression line should pass through the origin. This resulted in a considerable increase in the explained variance but it also led to the distance variable becoming positive or not significantly different from zero in some equations. We therefore dropped the distance variable from our migration functions and estimated proportional functions containing only labour market and/or income variables together with a dummy variable to capture the effect of contiguity. The resulting gross migration functions for males are shown in Table 4.3 while the results for females appear in Table 4.5. The estimated effect of each explanatory variable on net migration for each region is shown in Tables 4.4 and 4.6.

The explanatory variables have the expected 'push' - 'pull' signs when entered separately into the regression equation with the dummy variable for contiguity. High unemployment rates in a region seem to deter migrants from entering that region, while a strong demand for labour in a region or a high level of regional income encourage migration to the regions. Labour income per head when

Table 4.3: *Regression results for gross inter-regional migration rates, 1961-71: males*

Equation no.	Contiguity	Unemployment rates		Rate of change in employment		Labour income per head		$\bar{R}^2$	SEE
		Origin	Destination	Origin	Destination	Origin	Destination		
1	1.902 (4.63)	0.099 (2.94)	-0.034 (1.00)					.506	1.83
2	2.721 (7.79)			-0.069 (3.45)	0.079 (3.96)			.566	1.72
3	1.455 (4.05)					-0.023 (4.52)	0.032 (6.18)	.667	1.50
4	1.914 (6.27)	0.004 (0.13)	0.124 (3.74)	-0.026 (1.21)	0.160 (7.57)			.719	1.36
5	1.554 (4.51)	-0.050 (0.98)	0.039 (0.77)	-0.097 (1.58)	0.167 (2.72)	0.024 (0.92)	-0.012 (0.48)	.728	1.32

Notes: t-values in parentheses.

The unemployment rates and labour income variables refer to 1961, the employment change variable is for the period 1961-71.

Table 4.4: *Estimates of  $\beta_j - \beta_i$ , |1961-71: males*

<i>Equation no.</i>	<i>Unemployment rates</i>	<i>Change in employment</i>	<i>Labour income per head</i>
1	-0.133 (6.49)		
2		0.148 (5.35)	
3			0.055 (33.95)
4	0.120 (5.84)	0.186 (6.28)	
5	0.089 (1.26)	0.264 (6.18)	-0.036 (6.48)

*Note:* t-values in parentheses.

combined with the contiguity variable explains a larger proportion of the variation in gross male and female inter-regional migration in 1961-71 than either of the other two variables with contiguity alone. The income variable also has the strongest effect on net migration in the first three equations for either sex. The elasticity implied by the coefficients of the income variable are high – over 2 – in all these equations. When the two labour market variables are included in the regression equation with the contiguity variable they explain a larger proportion of the variance in the dependent variable for males than the income and contiguity variables. However, the sign of the unemployment rate in the destination region is wrong and the change in employment variable in the origin region is not significantly different from zero. When the income and labour market variables are entered into the same regression equation (i.e., Number 5) there is a slight improvement in the coefficient of determination from its highest previous level but multicollinearity among the explanatory variables (e.g.,  $r_{E_i Y_i} = .98$  for males and  $.82$  for females) results in most of the regression coefficients not being significantly different from zero and in the wrong net effect of the unemployment and income variables in the regression for males.

The contiguity variable is positive as expected in all regressions and its coefficient always has a significant t-value. The coefficients in the male and female equations are very similar. Short distance migration across regional boundaries was, therefore, an important part of the total amount of inter-regional migration which took place between 1961 and 1971.

Table 4.5: *Regression results for gross inter-regional migration rates, 1961-71: females*

Equation no.	Contiguity	Unemployment rates		Rate of change in employment		Labour income per head		$\bar{R}^2$	SEE
		Origin	Destination	Origin	Destination	Origin	Destination		
1	1.834 (5.05)	0.420 (4.07)	-0.169 (1.64)					.658	1.56
2	2.553 (7.09)			-0.129 (4.59)	0.046 (1.61)			.617	1.65
3	1.541 (5.43)					-0.023 (5.59)	0.033 (8.09)	.801	1.19
4	1.888 (5.95)	0.398 (4.40)	-0.119 (1.32)	-0.066 (2.57)	0.101 (3.96)			.741	1.34
5	1.491 (5.42)	-0.089 (0.67)	-0.285 (2.12)	-0.040 (1.05)	0.019 (0.51)	-0.008 (0.69)	0.029 (2.70)	.814	1.11

See notes to Table 4.3.



Table 4.6: *Estimates of  $\beta_j - \beta_i$ , 1961-71: females*

Equation no.	Unemployment rates	Change in employment	Labour income per head
1	-0.589 (11.93)		
2		0.175 (4.52)	
3			0.056 (43.75)
4	-0.517 (9.93)	0.167 (4.33)	
5	-0.196 (1.51)	0.059 (1.74)	0.037 (9.09)

Note: t-values in parentheses.

As has already been mentioned, the migration functions presented in Tables 4.3 and 4.5 were also estimated with a distance variable included in each. In all cases, except that of Equation Number 3 in both tables, the inclusion of the distance variable resulted either in a lower  $\bar{R}^2$  or in a regression coefficient on the distance variable which was positive or insignificantly different from zero. In the case of Equation 3 the equations which resulted were

$$M_{ij}/P_iP_j = -0.015D_{ij} + 0.504C_{ij} - 0.016Y_i + 0.038Y_j, \bar{R}^2 = .700, \text{SEE} = 1.42,$$

(2.99)      (1.09)      (3.01)      (7.20)

for males and

$$M_{ij}/P_iP_j = -0.011D_{ij} + 0.811C_{ij} - 0.017Y_i + 0.037Y_j, \bar{R}^2 = .819, \text{SEE} = 1.12,$$

(2.94)      (2.22)      (3.99)      (9.04)

for females

Inclusion of the distance variable in Equation 3 results in only a very modest improvement in the proportion of the variance explained by the regression. Its strong correlation with the contiguity dummy variable,  $r_{D_{ij}C_{ij}} = -.74$ , leads to a significant reduction in the strength of the contiguity coefficient in the case of females and to an insignificant coefficient in the case of males. Our results suggest that once people have decided to move outside their local labour market

the deterrent effect of distance is quite weak. This outcome is similar to that obtained for the 1970-71 gross migration flows. Our conclusion about the effect of distance on migration is, therefore, closer to Weeden's (1973) finding for the United Kingdom that once a certain threshold has been passed, migrants are indifferent between travelling 100 or 400 miles, than it is to the findings of other studies, which are summarised in Krugman and Bhagwati (1976), that distance is a strong deterrent to migration. The studies surveyed by Krugman and Bhagwati all relate to countries which are much larger in size than Ireland or Britain (e.g., Brazil, India, Ghana, Canada) so the different results which have been found for the strength of the distance variable may be due to differences in the geographic units used in our study and Weeden's and those surveyed by Krugman and Bhagwati.

Comparison of these results with those for the 1970-71 male gross flows reveals that there is a more systematic pattern in the longer term data. The  $R^2$  is higher and the level of significance of the economic variables much greater in Table 4.3 than in Table 4.2. This is as was expected, and presumably reflects the high proportion of short-distance "random" movements in the annual data, even when attention is confined to male inter-regional movement. This finding could be seen as placing a question mark over the value of the "usual residence one year previously" question in the census, at least as far as capturing movement of an economic significance is concerned.

#### *Migrant Stock and Inter-Regional Migration 1961-71*

It has long been recognised that an important determinant of international migration flows is the information which migrants send back to friends and relatives in their native country and the support which they are prepared to give if their friends and relatives decide to join them in their new homeland. The Commission on Emigration, for example, observed in its Report (1954, p. 137) that "for very many emigrants there was a traditional path 'from the known to the known', that is to say, from areas where they lived to places where their friends and relations awaited them". Much less attention has been given to the role of the migrant stock in the literature on internal migration than the literature on international migration but in recent years a number of studies have appeared in which migrant stock variables have been incorporated in inter-regional migration functions.

There are several ways in which the migrant stock can be measured. Greenwood (1969 and 1970) uses the number of lifetime migrants from  $i$  to  $j$  at time  $t$ , while Fabricant (1970) uses the number of lifetime migrants from  $i$  to  $j$  at time  $t$  as a percentage of all lifetime internal migrants from  $i$  who were alive at time  $t$ . We shall use the number of lifetime migrants from region  $i$  to region  $j$  in 1961 divided by the population of region  $i$  in 1961,  $MS_{ij}/P_i$ . We feel that this

should be a good measure of the diffusion of information about conditions in region  $j$  among the population of region  $i$ .

The regression results obtained when the migrant stock variable is included in our migration functions are shown in Tables 4.7 and 4.9 for males and females respectively and the effects of the labour market and income variables on net migration are shown in Tables 4.8 and 4.10.

The migrant stock and contiguity variables on their own explain nearly 90 per cent of the variance in male and 85 per cent of the variance in female inter-regional migration between 1961-71. Most of the variance explained by the regression is attributable to the influence of the migrant stock variable. The simple regression of the gross migration rate on the migrant stock variable gives an  $R^2$  of .864 for males and .754 for females. The migrant stock coefficient is positive, as expected, in each of the regression equations reported in Tables 4.7 and 4.9. The addition of the labour market or income variables to the regression equation leads to a slight improvement in the coefficient of determination. Of the three variables which refer to both origin and destination regions only the income variable appears in all regressions with the expected signs for both regions and this is the only variable which continues to exert a discernible influence on net migration when the migrant stock variable is included in the regression.

Our results strongly suggest that regional income differences were an important determinant of inter-regional migration flows for both males and females in the decade 1961-71 and that the presence of friends and relatives in regions other than the migrants' region of birth provided a powerful incentive for migrants to move from the known (their region of birth) to the known (the region in which their friends and relatives were living).<sup>7</sup> However, the role of the migrant stock variable cannot readily be disentangled from the tendency for the income and employment change variables to be correlated over time. In as much as the "successful" counties or regions have been successful for a long period of time, it is clear that migrants will tend to move to areas where others have already settled *even if* the various interpretations of the role of the migrant stock in attracting further migration were invalid.

This possibility should be borne in mind before accepting the apparently major role of the MS variable as necessarily implying a demotion of the other variables whose performance when MS is omitted is quite impressive.

<sup>7</sup>The conclusions drawn from our analysis of gross inter-regional migration 1961-71 are supported by the results of a similar analysis for lifetime inter-regional migration up to 1971, viz. (i) differences in regional incomes are a more important factor in influencing migration between regions than differences in job opportunities between regions and (ii) migration flows do not tend to iron out regional unemployment differentials in Ireland.

Table 4.7: *Regression results for gross inter-regional migration flows; 1961-71: males*

Equation no.	Contiguity	Unemployment rates		Rate of change in employment		Labour income per head		Migrant stock	$\bar{R}^2$	SEE
		Origin	Destination	Origin	Destination	Origin	Destination			
1	0.914 (5.09)							0.007 (18.53)	.898	0.84
2	0.530 (2.96)	0.019 (1.34)	0.019 (1.40)					0.007 (19.39)	.919	0.74
3	0.632 (3.15)			-0.024 (2.55)	-0.018 (1.76)			0.007 (16.77)	.910	0.78
4	0.584 (3.14)					-0.003 (1.06)	0.007 (2.24)	0.006 (14.99)	.918	0.74
5	0.612 (3.62)	0.002 (0.09)	0.039 (2.15)	-0.015 (1.34)	0.018 (1.21)			0.006 (13.63)	.920	0.72
6	0.599 (2.99)	-0.009 (0.31)	0.050 (1.79)	0.013 (0.38)	-0.011 (0.29)	-0.013 (0.90)	0.013 (0.91)	0.006 (13.15)	.918	0.72

Note: See note to Table 4.3.

Table 4.8: *Estimates of  $\beta_j - \beta_i$  1961-71: males*

<i>Equation no.</i>	<i>Unemployment rates</i>	<i>Change in employment</i>	<i>Labour income per head</i>
2	0.0		
3		0.006 (0.47)	
4			0.010 (11.66)
5	0.037 (1.61)	0.033 (1.79)	
6	0.059 (1.53)	-0.024 (1.01)	0.026 (8.29)

*Note:* t-values in parentheses.

### *Conclusion*

In this section we presented several attempts to model the process of internal migration in Ireland. Two different measures of migration were used; namely,

gross inter-county (or inter-regional) flows, 1970-71  
gross inter-regional flows, 1961-71

The first measure of migration was least susceptible to explanation in terms of a strictly economic model of migration. Short-term flows appear to contain substantial random components, whose importance decreases when migration over a decade is studied.

In all cases distance and contiguity were shown to be important influences, suggesting the importance of movement within local markets even in flows between regions or over a decade.

The economic variables associated with mobility were income levels, unemployment rates, changes in income, and changes in employment. The results presented in this section are not clearcut enough to allow us to assert the superiority of any one model of migration over all rivals. However, the role of income and employment growth was important in all but the gross flows 1970-71. Unemployment rates were found not to exert a major influence on either long-run or short-run flows. This implies that there is no tendency for migration to remove differentials in measured unemployment. The flows of population across county boundaries, to the extent that they are a response to purely

Table 4.9: Regression results for gross inter-regional migration flows; 1961-71: females

Equation no.	Contiguity	Unemployment rates		Change in employment		Labour income per head		Migrant stock	$\bar{R}^2$	SEE
		Origin	Destination	Origin	Destination	Origin	Destination			
1	1.515 (6.80)							0.005 (12.80)	.848	1.04
2	0.894 (4.20)	0.106 (1.71)	0.060 (1.01)					0.005 (12.87)	.895	0.86
3	0.922 (4.08)			-0.065 (4.11)	-0.048 (2.92)			0.005 (13.55)	.890	0.87
4	1.018 (4.97)					-0.007 (2.11)	0.013 (3.77)	0.004 (8.87)	.903	0.82
5	0.809 (3.77)	0.077 (1.25)	0.044 (0.77)	-0.046 (2.92)	-0.013 (0.67)			0.004 (11.17)	.904	0.81
6	0.821 (3.95)	-0.085 (0.91)	0.074 (0.72)	-0.014 (0.52)	-0.048 (1.73)	-0.011 (1.47)	0.016 (2.07)	0.004 (8.64)	.907	0.78

Note: See note to Table 4.3.

Table 4.10: *Estimates of  $\beta_1 - \beta_i$  1961-71: females*

<i>Equation no.</i>	<i>Unemployment rates</i>	<i>Change in employment</i>	<i>Labour income per head</i>
2	-0.046 (1.64)		
3		0.017 (0.82)	
4			0.020 (20.41)
5	-0.033 (0.96)	0.033 (1.33)	
6	0.159 (1.59)	-0.034 (1.40)	0.027 (7.81)

*Note:* t-value in parentheses.

economic factors seem to be determined by considerations of income and/or employment growth but not by the unemployment rate at either origin or destination. This may reflect the fact that unemployment rates are not a very sensitive measure of job availability, or that the prevailing differentials in unemployment rates are consistent with equilibrium in local labour markets, and any tendency for above-average growth in employment opportunities to disturb this equilibrium is offset by variations in migration.

The association between changes in employment and long-term migration changes may contain elements of feedback from migration to the level of employment, as well as reflecting the attraction of high income areas to those moving within Ireland.

While there is room for further development of the models used here – and in particular there is a need to move from a single equation to a simultaneous equations approach to studying the interaction of migration and employment change – the main conclusions we have drawn are likely to prove robust.<sup>8</sup> Almost all studies of internal migration have found some tendency for economic forces to influence the direction of population flows, and we have confirmed that Ireland is not exceptional in this regard.

<sup>8</sup>Further research using a simultaneous equation approach, along the lines of Greenwood (1975b) or Dahlberg and Holmlund (1978) is planned (see Walsh (1978)).

While in a sense it may be reassuring that movement between regions is responsive to existing differentials in living standards and the rate of growth in employment opportunities, the possibility that internal migration could tend to perpetuate rather than eliminate these differentials has also to be borne in mind. This possibility is stressed by those who adopt a "Keynesian" framework for analysing the effects of migration, emphasising the adverse effects of population decline on regional demand and investment over time, as opposed to its beneficial effects in the short-run on the capital/labour ratio. The present study has not attempted to explore these issues, but the persistence and severity of the north-south wage differential in the United States, despite large scale inter-regional migration, is proof that such migration is at best a very slow way of bringing about equalisation in regional living standards.



## Section 5

### *Concluding Comments*

The point of departure for the present study of internal mobility in Ireland was the evidence that the Irish population exhibits a very low rate of internal mobility by international standards. This evidence related mainly to the period 1970-71 but we saw that there is no evidence to show that residential mobility has risen substantially over the period 1971-77. It is very likely that the rate of residential mobility and the internal migration rate (that is, movement across county or regional boundaries) in Ireland have remained very low by international standards.

It is not hard to search for reasons why the Irish population shows a lower mobility rate than that found in many other western countries. A high proportion of our population live on farms and is most unlikely to move to other parts of the country. In urban areas, we have a very high proportion of owner-occupiers, who are less likely to move than tenants, although the rapid inflation in house prices in recent years has altered the incentives facing those who own or are purchasing their house, and seems to have encouraged an increased turnover of property. We also have a high proportion renting from local authorities, and the existing system of subsidising this form of accommodation makes it difficult for tenants to move even within a local authority area, much less between areas.

Perhaps equally important as a reason for our low rate of internal mobility is our high rate of external mobility. It is shown in Section 3 that only about one in five of those leaving provincial Ireland was likely to move to Dublin, the remaining four emigrating. There is an obvious rationale for the tendency of many young people in rural Ireland once they have decided to leave home to move to England or further afield rather than to Dublin. We saw, however, that this tendency is less pronounced now than it was in earlier periods, and that internal movement now accounts for a higher proportion of total Irish mobility than was the case in the 1950s.

The primacy of the east region, and Dublin city and county in particular, as both a destination for, and the origin of, those moving within Ireland is the most important feature of our internal mobility. When movement to and from the east is excluded, it was seen in Section 2 that the remaining flows are very small indeed. The east region has consistently gained from all other regions through internal migration, but in the most recent period for which we have data it is notable that outflows from the east have risen more than in line with inflows to

the region, and there is now much more two-way movement between Dublin and the rest of the country than was the case in the past.

The general conclusion that the east region is the most important centre of migration in the country is supported by the preliminary results of the 1979 census which were issued while this paper was 'in press'. Over half of the net inflow of population which occurred during the intercensal period 1971-79 was concentrated in the east region. While the net inflow into each region which took place during the period 1971-79 cannot be separated into its internal and external components, since the 1979 census collected no information on internal population movement, the scale and pattern of the regional net migration estimates suggest that the general internal migration flows which have been described and analysed in this paper for the period 1961-71 have continued more or less unchanged in the years 1971-79.

Despite the low internal migration rate, it was shown in Section 2 that at a time when external mobility was very low, in many regions with low rates of natural increase, internal movement accounted for a high proportion of the recorded change in population. The importance of internal mobility as a source of differential rates of population growth is illustrated by considering, for example, that the difference in net internal migration rates between Longford and Dublin amounted to about one per cent of population in 1971.

A number of fairly predictable differentials exist between population groups with regard to mobility rates. Inter-county migration rates are highest among people aged 15-29, especially the unmarried and the economically active, and decline rather rapidly with advancing age. Local (intra-county) movement, on the other hand, remains at a plateau until age 40 and is just as high among the married as the single. These local moves thus appear to be associated with changing residence (and getting married) whereas longer distance movement is more closely linked with entry to the labour force.

An important topic dealt with in Section 2 is movement between and within urban and rural areas. The rate of short-distance mobility within urban areas is much higher than recorded in rural areas, where local mobility is very low. This accounts for the overall low rate of mobility recorded in rural areas, where in fact movement from addresses outside Ireland was more important than movement from other Irish counties. It was shown in Section 2 that the net flow of people from rural to urban areas accounts for about one-quarter of the growth of the urban population. Although small compared with the major waves of rural to urban migration in most European countries over the last two centuries, this movement is none the less a significant component of urban population growth in Ireland today. Of course, the main net gainer from rural to urban movement is the east region, despite the fact that movement in the other direction (urban to rural) is quite common in this region. The data presented in Section 2 suggest

that we are already beginning to participate in the trend towards "de-urbanisation" that has attracted a great deal of attention since 1970 in the United States and in several Western European countries.

The more favourable experience of the Dublin-born with regard to migration was documented in Section 3, and it was noted that all the growth of the Irish population between 1961 and 1971 was due to an increase in the number of Dublin-born in the country. The metropolitan area continues to gain substantially from net migration from other Irish counties, but despite this it remains the destination of only about one-fifth of all those leaving other Irish counties (the other four-fifths emigrate). In the decade 1961-71 there was a marked rise in the number of Dublin-born living in other Irish counties, but much of this was attributable to the rise in the Dublin-born population of the adjacent counties (Wicklow, Meath, Kildare).

In Section 4 of our study we attempt to account for the patterns of internal migration documented in the earlier sections. Our approach consists in testing the influence of a relatively small number of economic and spatial variables against several alternative measures of mobility. A consistent finding was that contiguity and/or distance exercises a major influence on inter-county and inter-regional movement. The dominant role of these variables, especially in our analysis of short-term inter-county flows, highlights the importance of non-economic factors in Irish internal migration. When flows over longer time periods were studied, the role of income differentials and/or changes in employment was shown to be important. Standard economic models of migration can be fitted fairly satisfactorily to the Irish data, indicating that to some extent at least internal migration may be viewed as a process whereby the population is being re-distributed within the country in response to economic opportunities and in a way that tends to reduce regional disparities in living standards (although it was stressed that the migration flows do not appear to work in the direction of reducing differentials in unemployment rates).

While these trends may be deemed satisfactory in a general sense, two important reservations are very relevant. First, we have stressed the low overall internal migration rate recorded in Ireland. The fact that those who move are to some extent moving in response to economic signals is little guarantee that the adjustment set in train by this movement will have any significant effect on existing regional differentials in living standards. Even where the elasticities with respect to income or employment change are high (as they are in many of the equations presented in Section 4), it is known from experience in other countries (notably the United States) that major differences in living standards between regions can persist even in the face of prolonged and large-scale internal migration away from low income to high income regions. Part of the reason for this may be the second reservation that needs to be attached to any tendency to regard internal

migration from low to high income regions as economically desirable, namely, the possibility that such movements tend to reinforce the economic advantages of the high income areas. To the extent that economies of scale and of agglomeration are important, it is clear that the more rapid population growth of the already rich regions, far from tending to equalise regional living standards, may actually accentuate and perpetuate existing patterns of inequality.

The present study was not intended to provide a detailed examination of these issues, but it is hoped that our findings with respect to the level and pattern of internal migration will be useful as input to discussions of regional policy.

## REFERENCES

- BANNON, J., 1978. "Service Functions, Occupational Change and Regional Policy for the 1980s", *Administration*, Vol. 26, No. 2. (Summer).
- BERRY, J. L., 1976. "The Counterurbanisation Process: Urban America since 1970" in *Urbanisation and Counterurbanisation*, Brian J. L. Berry, ed., Urban Affairs Annual Reviews, Vol. II, Beverly Hills, California.
- COURGEAU, D., 1978. "Les migrations internes en France de 1954 à 1975, I. Vue d'ensemble", *Population*, Vol. 33, No. 3, (May/June).
- COMMISSION ON EMIGRATION AND OTHER POPULATION PROBLEMS 1948-1954, 1954. *Reports*, Dublin: Stationery Office.
- DAHLBERG, A., and B. HOLMLUND, 1978. "The Interaction of Migration, Income and Employment in Sweden", *Demography*, Vol. 15, No. 3.
- FABRICANT, A., 1970. "An Expectational Model of Migration", *Journal of Regional Science*, Vol. 10, No. 1.
- GEARY, R. C. and J. G. HUGHES, 1970. *Internal Migration in Ireland*, Dublin: The Economic and Social Research Institute, Paper No. 54.
- GREENWOOD, M. J., 1969. "An Analysis of the Determinants of Geographic Labour Mobility in the United States", *Review of Economics and Statistics*, Vol. LI, No. 2.
- GREENWOOD, M. J. 1970., "Lagged Response in the Decision to Migrate", *Journal of Regional Science*, Vol. 10, No. 3.
- GREENWOOD, M. J., 1975a. "Research on Internal Migration in the United States: A Survey", *Journal of Economic Literature*, Vol. XIII, No. 2.
- GREENWOOD, M. J., 1975b. "A Simultaneous-Equation Model of Urban Growth and Migration", *Journal of the American Statistical Association*, Vol. 70, No. 352, (December).
- HUGHES, J. G. and B. M. WALSH, 1976. "Migration Flows between Ireland, the United Kingdom, and the Rest of the World, 1961-71", *European Demographic Information Bulletin*, Vol. 7, No. 4.
- KRUGMAN, P. and J. BHAGWATI, 1976. "The Decision to Migrate: A Survey" in J. N. Bhagwati (ed.), *The Brain Drain and Taxation*, Vol. 11: *Theory and Empirical Analysis*, Amsterdam: North Holland.
- LONG, L. H. and C. G. BOERTLEIN, 1976. *The Geographical Mobility of Americans: An International Comparison*, Washington, DC: US Department of Commerce, Bureau of the Census, Current Population Reports, Special Studies, Series, No. 64, p. 23.
- LONG, L. H., 1977. "Contribution to Review Symposium on Internal Migration," *Demography*, Vol. 14, No. 4 (November), pp. 557-562.
- O'BROIN, N. and G. FARREN, 1978. *The Working and Living Conditions of Civil Service Typists*, Dublin: Economic and Social Research Institute, Paper No. 93.
- OI, WALTER, Y., 1962. "Labor as a Quasi-Fixed Factor", *Journal of Political Economy*, Vol. 70, No. 2.

- ROSS, M., R. JONES and E. O'MALLEY, 1977. *Personal Incomes by County in 1973*, Dublin: National Economic and Social Council Report No. 30.
- SJAASTAD, L. A., 1962. "The Costs and Returns of Human Migration", *Journal of Political Economy*, Vol. 70, No. 1.
- TARVER, J. D., W. R. GURLEY and P. M. SKEES, 1967. "Vector Representation of Migration Streams Among Selected Statistical Economic Areas During 1955-60", *Demography*, Vol. 4, No. 1.
- UNITED NATIONS, 1973. *The Determinants and Consequences of Population Trends*, New York.
- WALSH, B. M., 1978. "Demographic-Labour Force Model", Seminar Paper, The Economic and Social Research Institute, (Mimeo).
- WEEDEN, R., 1973. *Inter-regional Migration Models and their application to Great Britain*, National Institute of Economic and Social Research, Regional Papers II, Cambridge: Cambridge University Press.
- YOUNG, G., 1975. "The Choice of Dependent Variable for Cross-Section Studies of Migration", *Canadian Journal of Economics*, Vol. III, No. 1.

## Appendix

### *Net Internal and Net External Migration by County by Age, 1961-71*

The method used to derive estimates of net migration by age and sex for each birthplace category of Dublin's population between 1961 and 1971 (Table 3.2) can be applied to the birthplace data for each of the remaining twenty-five counties to give estimates of net internal and net external migration by age and sex.

The net internal and net external migration flows for each county for the period 1961-71 are expressed as rates per 1,000 population by dividing the number of migrants by the population exposed to the risk of migration in 1961 and the results for the age groups 15-29, 15-64 and all ages are presented in Tables A.1 and A.2 for males and females separately. The loss of population between 1961-71 from all counties except Dublin and those contiguous to Dublin has been discussed in the main body of the study. Table A.1 establishes that this loss was heaviest in the age group 15-29 and that for those counties which lost population through internal migration the average unweighted loss was 38.3 per 1,000 for males and 57.4 per 1,000 for females.<sup>9</sup> The loss of population in all age groups in those counties which lost population through internal and external migration was far more severe as a result of external than of internal migration and the losses through external migration were heaviest in the age group 15-29. Thus, nearly one-fifth of those aged 5-19 in 1961 had left the country by 1971. The losses in the age group 15-29 in 1971 ranged from 78 per 1,000 for males in Dublin to 379.3 per 1,000 for males in Mayo and from 50.7 per 1,000 for females in Louth to 367.5 per 1,000 for females in Leitrim, i.e., from around 5 to 40 per cent of those who would have come on to the labour market between 1961 and 1971. The female rates for both internal and external migrants are in nearly all cases greater than the corresponding male rates.

The relationship between the internal and external migration rates for each age group is examined in Table A.3. It will be seen from the table that there is a significant positive association between the internal and external rates for male and female migrants in the age group 15-64 and for female migrants in the age group 15-29 it is also positive but not significant. The association between the

<sup>9</sup>Since the change in the population at national level as a result of internal migration is zero an unweighted average has been computed for those counties which lost population to give an indication of the magnitude of the population movements involved in internal migration.

two rates in each of the age groups mentioned is stronger for females than for males. There is no association between the two rates for either sex at the "All Ages" level. This is perhaps due to the important return migration on retirement to regions that have experienced heavy emigration of young people in the past. Thus, in general, net internal and external migration reinforce one another, and

Table A.1: *Net internal migration rates per 1,000 population by county 1961-71 by age in 1971 and sex*

County	15-29		15-64		All ages	
	Male	Female	Male	Female	Male	Female
Carlow	-64.7	-50.7	-35.5	-17.8	-20.3	-7.8
Dublin	+87.6	+119.1	+47.7	+40.6	+31.8	+28.7
Kildare	-2.9	+10.3	-15.9	+14.7	+40.6	+70.7
Kilkenny	-56.1	-68.2	-28.3	-25.6	-9.9	-12.6
Laois	-56.6	-54.5	-33.9	-24.8	-17.6	-9.7
Longford	-70.3	-126.9	-39.9	-63.7	-35.1	-59.8
Louth	-33.8	-56.0	-19.9	-25.8	-33.6	-37.7
Meath	-34.9	-21.7	-2.8	+10.9	+44.7	+33.6
Offaly	-61.4	-70.7	-39.7	-34.5	-29.8	-31.0
Westmeath	-44.6	-79.5	-6.0	-32.9	+10.7	-9.3
Wexford	-22.7	-44.3	-11.9	-16.0	-5.1	-17.1
Wicklow	+12.8	+33.2	+26.1	+30.6	+83.6	+84.1
Clare	+8.7	-5.1	+11.9	+12.3	+15.5	+12.1
Cork	-2.7	-19.1	-4.2	-7.0	-8.4	-11.6
Kerry	-34.0	-43.6	-18.4	-15.8	-16.6	-15.2
Limerick	-29.9	-37.3	-14.7	-15.5	-24.3	-20.1
Tipperary	-42.4	-52.3	-26.5	-21.5	-26.5	-22.8
Waterford	-13.0	-30.5	-2.4	-15.1	-0.4	-9.4
Galway	-32.5	-52.9	-21.3	-22.8	-27.6	-33.3
Leitrim	-64.7	-108.2	-40.2	-55.2	-31.6	-47.1
Mayo	-42.1	-75.6	-27.8	-35.4	-28.4	-37.2
Roscommon	-55.0	-100.4	-28.5	-44.9	-15.2	-32.4
Sligo	-42.1	-69.3	-20.9	-31.8	-20.0	-24.8
Cavan	-38.6	-63.1	-21.5	-25.9	-12.7	-16.1
Donegal	-14.2	-40.8	-11.6	-20.9	-15.3	-22.6
Monaghan	-21.3	-50.1	-19.9	-23.0	-11.0	-14.5



counties that lose population because of one type of migratory flow tend also to lose through the other type of migration. This could be taken as a reflection of the strength of the desire to leave certain areas, the choice of a destination ("Elsewhere" in Ireland or "Outside" Ireland) being a matter of secondary importance to the potential migrant.

Table A.2: *Net external migration rates per 1,000 population by county 1961-71 by age in 1971 and sex*

County	15-29		15-64		All ages	
	Male	Female	Male	Female	Male	Female
Carlow	-207.2	-230.1	-98.7	-114.4	-92.0	-93.2
Dublin	-78.0	-58.5	-21.6	-33.6	-3.4	-8.1
Kildare	-150.4	-165.4	-72.0	-81.5	-93.7	-98.6
Kilkenny	-217.6	-233.4	-98.3	-117.6	-63.9	-59.1
Laois	-219.3	-256.0	-100.9	-124.0	-70.2	-69.6
Longford	-285.6	-294.0	-134.3	-147.0	-86.3	-95.4
Louth	-96.5	-50.7	-35.1	-38.0	+2.9	+1.0
Meath	-147.6	-177.3	-60.4	-77.1	-57.0	-72.9
Offaly	-228.6	-240.4	-112.3	-123.6	-78.9	-84.9
Westmeath	-228.2	-226.6	-118.9	-121.9	-103.0	-98.0
Wexford	-216.1	-222.6	-90.7	-107.7	-56.3	-62.4
Wicklow	-126.3	-155.4	-36.2	-67.4	-63.0	-77.5
Clare	-244.5	-258.4	-87.5	-104.1	-47.0	-49.9
Cork	-147.5	-131.1	-55.3	-61.8	-22.7	-25.3
Kerry	-259.8	-260.2	-110.0	-123.0	-55.3	-64.6
Limerick	-188.4	-182.6	-75.5	-89.2	-39.6	-47.1
Tipperary	-245.9	-247.9	-108.0	-118.7	-67.2	-74.4
Waterford	-134.7	-133.1	-44.9	-60.8	-13.6	-21.0
Galway	-254.8	-241.9	-112.0	-118.1	-41.3	-49.1
Leitrim	-344.1	-367.5	-167.8	-194.7	-100.0	-115.8
Mayo	-379.3	-356.8	-186.3	-180.5	-95.3	-100.3
Roscommon	-324.5	-329.1	-145.5	-150.3	-69.3	-76.2
Sligo	-278.5	-281.6	-128.3	-144.6	-67.9	-77.7
Cavan	-294.8	-322.7	-138.4	-161.1	-90.2	-103.9
Donegal	-325.4	-300.8	-149.3	-158.1	-65.8	-75.4
Monaghan	-228.8	-232.2	-98.2	-120.0	-60.4	-77.1
Total	-188.8	-179.9	-78.9	-87.0	-43.6	-46.9

Table A.3: *Regression of net internal migration rates on net external migration rates by age and sex, 1961-71*

<i>Age group</i>	<i>Constant</i>	<i>Net external migration</i>	<i>R<sup>2</sup></i>	<i>SEE</i>
<i>Males</i>				
15-29	24.966 (1.52)	0.243 (3.50)	.321	26.62
15-64	16.558 (2.15)	0.072 (4.52)	.439	14.92
<i>All ages</i>	-0.924 (0.07)	0.086 (0.44)	.007*	27.94
<i>Females</i>				
15-29	48.345 (2.36)	0.405 (4.79)	.446	34.31
15-64	28.869 (3.04)	0.413 (5.24)	.514	16.32
<i>All ages</i>	-4.866 (0.29)	0.065 (0.29)	.003*	33.36

*Note:* t-values in parentheses.

\*Not significant at the .05 level.

## THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE

### Books:

*Economic Growth in Ireland: The Experience Since 1947*

Kieran A. Kennedy and Brendan Dowling

*Irish Economic Policy: A Review of Major Issues*

Staff Members of ESRI (eds. B. R. Dowling and J. Durkan)

### Policy Research Series:

1. *Regional Policy and the Full-Employment Target*

M. Ross and B. Walsh

### Broadsheet Series:

1. *Dental Services in Ireland*

P. R. Kaim-Caudle

2. *We Can Stop Rising Prices*

M. P. Fogarty

3. *Pharmaceutical Services in Ireland*

P. R. Kaim-Caudle

assisted by Annette O'Toole and Kathleen O'Donoghue

4. *Ophthalmic Services in Ireland*

P. R. Kaim-Caudle

assisted by Kathleen O'Donoghue and Annette O'Toole

5. *Irish Pensions Schemes, 1969*

P. R. Kaim-Caudle and J. G. Byrne

assisted by Annette O'Toole

6. *The Social Science Percentage Nuisance*

R. C. Geary

7. *Poverty in Ireland: Research Priorities*

Brendan M. Walsh

8. *Irish Entrepreneurs Speak for Themselves*

M. P. Fogarty

9. *Marital Desertion in Dublin: an exploratory study*

Kathleen O'Higgins

10. *Equalization of Opportunity in Ireland: Statistical Aspects*

R. C. Geary and F. S. Ó Muircheartaigh

11. *Public Social Expenditure in Ireland*

Finola Kennedy

12. *Problems in Economic Planning and Policy Formation in Ireland, 1958-1974*

Desmond Norton

13. *Crisis in the Cattle Industry*

R. O'Connor and P. Keogh

14. *A Study of Schemes for the Relief of Unemployment in Ireland*

R. C. Geary and M. Dempsey

with Appendix

E. Costa

15. *Dublin Simon Community, 1971-1976: An Exploration*

Ian Hart

16. *Aspects of the Swedish Economy and their Relevance to Ireland*

R. O'Connor,

E. O'Malley and A. Foley

17. *The Irish Housing System: A Critical Overview*

T. J. Baker and L. M. O'Brien

18. *The Irish Itinerants: Some Demographic, Economic and Educational Aspects*

M. Dempsey and R. C. Geary

### General Research Series:

1. *The Ownership of Personal Property in Ireland*

Edward Nevin

2. *Short-Term Economic Forecasting and its Application in Ireland*

Alfred Kuehn

3. *The Irish Tariff and The E.E.C.: A Factual Survey*

Edward Nevin

4. *Demand Relationships for Ireland*

C. E. V. Leser

5. *Local Government Finance in Ireland: A Preliminary Survey*

David Walker

6. *Prospects of the Irish Economy in 1962*

Alfred Kuehn

7. *The Irish Woollen and Worsted Industry, 1946-59: A Study in Statistical Method*

R. C. Geary

8. *The Allocation of Public Funds for Social Development*

David Walker

9. *The Irish Price Level: A Comparative Study* Edward Nevin  
 10. *Inland Transport in Ireland: A Factual Survey* D. J. Reynolds  
 11. *Public Debt and Economic Development* Edward Nevin  
 12. *Wages in Ireland, 1946-62* Edward Nevin  
 13. *Road Transport: The Problems and Prospects in Ireland* D. J. Reynolds  
 14. *Imports and Economic Growth in Ireland, 1947-61* C. E. V. Leser  
 15. *The Irish Economy in 1962 and 1963* C. E. V. Leser  
 16. *Irish County Incomes in 1960* E. A. Attwood and R. C. Geary  
 17. *The Capital Stock of Irish Industry* Edward Nevin  
 18. *Local Government Finance and County Incomes* David Walker  
 19. *Industrial Relations in Ireland: The Background* David O'Mahony  
 20. *Social Security in Ireland and Western Europe* P. R. Kaim-Caudle  
 21. *The Irish Economy in 1963 and 1964* C. E. V. Leser  
 22. *The Cost Structure of Irish Industry, 1950-60* Edward Nevin  
 23. *A Further Analysis of Irish Household Budget Data, 1951-1952* C. E. V. Leser  
 24. *Economic Aspects of Industrial Relations* David O'Mahony  
 25. *Psychological Barriers to Economic Achievement* P. Pentony  
 26. *Seasonality in Irish Economic Statistics* C. E. V. Leser  
 27. *The Irish Economy in 1964 and 1965* C. E. V. Leser  
 28. *Housing in Ireland: Some Economic Aspects* P. R. Kaim-Caudle  
 29. *A Statistical Study of Wages, Prices and Employment in the Irish Manufacturing Sector* C. St. J. O'Herlihy  
 30. *Fuel and Power in Ireland: Part I. Energy Consumption in 1970* J. L. Booth  
 31. *Determinants of Wage Inflation in Ireland* Keith Cowling  
 32. *Regional Employment Patterns in the Republic of Ireland* T. J. Baker  
 33. *The Irish Economy in 1966*  
 The Staff of The Economic Research Institute  
 34. *Fuel and Power in Ireland: Part II. Electricity and Turf* J. L. Booth  
 35. *Fuel and Power in Ireland: Part III. International and Temporal Aspects of Energy Consumption* J. L. Booth  
 36. *Institutional Aspects of Commercial and Central Banking in Ireland* John Hein  
 37. *Fuel and Power in Ireland: Part IV. Sources and Uses of Energy* J. L. Booth  
 38. *A Study of Imports* C. E. V. Leser  
 39. *The Irish Economy in 1967*  
 The Staff of The Economic and Social Research Institute  
 40. *Some Aspects of Price Inflation in Ireland* R. C. Geary and J. L. Pratschke  
 41. *A Medium Term Planning Model for Ireland* David Simpson  
 42. *Some Irish Population Problems Reconsidered* Brendan M. Walsh  
 43. *The Irish Brain Drain* Richard Lynn  
 44. *A Method of Estimating the Stock of Capital in Northern Ireland Manufacturing Industry: Limitations and Applications* C. W. Jefferson  
 45. *An Input-Output Analysis of the Agricultural Sector of the Irish Economy in 1964* R. O'Connor with M. Breslin  
 46. *The Implications for Cattle Producers of Seasonal Price Fluctuations* R. O'Connor  
 47. *Transport in the Developing Economy of Ireland* John Blackwell  
 48. *Social Status and Inter-Generational Social Mobility in Dublin* Bertram Hutchinson  
 49. *Personal Incomes by County, 1965* Miceal Ross  
 50. *Income-Expenditure Relations in Ireland, 1965-1966* John L. Pratschke  
 51. *Costs and Prices in Transportable Goods Industries* W. Black, J. V. Simpson, D. G. Slattery

52. *Certain Aspects of Non-Agricultural Unemployment in Ireland*  
R. C. Geary and J. G. Hughes
53. *A Study of Demand Elasticities for Irish Imports*  
Dermot McAleese
54. *Internal Migration in Ireland*  
R. C. Geary and J. G. Hughes
- with Appendix*  
C. J. Gillman
55. *Religion and Demographic Behaviour in Ireland*  
B. M. Walsh
- with Appendix*  
R. C. Geary and J. G. Hughes
56. *Views on Pay Increases, Fringe Benefits and Low Pay*  
H. Behrend, A. Knowles and J. Davies
57. *Views on Income Differentials and the Economic Situation*  
H. Behrend, A. Knowles and J. Davies
58. *Computers in Ireland*  
F. G. Foster
59. *National Differences in Anxiety*  
Richard Lynn
60. *Capital Statistics for Irish Manufacturing Industry*  
C. W. Jefferson
61. *Rural Household Budget – Feasibility Study*  
Sile Sheehy and R. O'Connor
62. *Effective Tariffs and the Structure of Industrial Protection in Ireland*  
Dermot McAleese
63. *Methodology of Personal Income Estimation by County*  
Miceal Ross
64. *Further Data on County Incomes in the Sixties*  
Miceal Ross
65. *The Functional Distribution of Income in Ireland, 1938-70*  
J. G. Hughes
66. *Irish Input-Output Structures, 1964 and 1968*  
E. W. Henry
67. *Social Status in Dublin: Marriage, Mobility and First Employment*  
Bertram Hutchinson
68. *An Economic Evaluation of Irish Salmon Fishing, I: The Visiting Anglers*  
R. O'Connor and B. J. Whelan
69. *Women and Employment in Ireland: Results of a National Survey*  
Brendan M. Walsh assisted by Annette O'Toole
70. *Irish Manufactured Imports from the UK in the Sixties: The Effects of AIFTA*  
Dermot McAleese and John Martin
71. *Alphabetical Voting: A Study of the 1973 General Election in the Republic of Ireland*  
Christopher Robson and Brendan M. Walsh
72. *A Study of the Irish Cattle and Beef Industries*  
Terence J. Baker, Robert O'Connor and Rory Dunne
73. *Regional Employment Patterns in Northern Ireland*  
William Black and Clifford W. Jefferson
74. *Irish Full Employment Structures, 1968 and 1975*  
E. W. Henry
75. *An Economic Evaluation of Irish Salmon Fishing, II: The Irish Anglers*  
R. O'Connor, B. J. Whelan, and A. McCashin
76. *Factors Relating to Reconviction among Young Dublin Probationers*  
Ian Hart
77. *The Structure of Unemployment in Ireland, 1954-1972*  
Brendan M. Walsh
78. *An Economic Evaluation of Irish Salmon Fishing, III: The Commercial Fishermen*  
B. J. Whelan, R. O'Connor, and A. McCashin
79. *Wage Inflation and Wage Leadership*  
W. E. J. McCarthy, J. F. O'Brien and V. G. Dowd
80. *An Economic Study of the Irish Postal Services*  
Peter Neary
81. *Employment Relationships in Irish Counties*  
Terence J. Baker and Miceal Ross
82. *Irish Input-Output Income Multipliers 1964 and 1968*  
J. R. Copeland and E. W. Henry
83. *A Study of the Structure and Determinants of the Behavioural Component of Social Attitudes in Ireland*  
E. E. Davis

84. *Economic Aspects of Local Authority Expenditure and Finance*  
J. R. Copeland and Brendan M. Walsh
85. *Population Growth and other Statistics of Middle-sized Irish Towns*  
D. Curtin, R. C. Geary, T. A. Grimes and B. Menton
86. *The Income Sensitivity of the Personal Income Tax Base in Ireland, 1947-1972*  
Brendan R. Dowling
87. *Traditional Families? From Culturally Prescribed to Negotiated Roles in Farm Families*  
Damian F. Hannan and Louise Katsiaouni
88. *An Irish Personality Differential: A Technique for Measuring Affective and Cognitive Dimensions of Attitudes Towards Persons*  
E. E. Davis and Mary O'Neill
89. *Redundancy and Re-Employment in Ireland*  
Brendan J. Whelan and Brendan M. Walsh
90. *A National Model of Fuel Allocation - A Prototype*  
E. W. Henry and S. Scott
91. *A Linear Programming Model for Irish Agriculture*  
Robert O'Connor, Miceal Ross and Michael Behan
92. *Irish Educational Expenditures - Past Present and Future*  
A. Dale Tussing
93. *The Working and Living Conditions of Civil Service Typists*  
Nóirín O'Broin and Gillian Farren
94. *Irish Public Debt*  
Richard Bruton
95. *Output and Employment in the Irish Food Industry to 1990*  
A. D. O'Rourke  
and T. P. McStay
96. *Displacement and Development: Class, Kinship and Social Change in Irish Rural Communities*  
Damian F. Hannan
97. *Attitudes in the Republic of Ireland Relevant to the Northern Ireland Problem: Vol. I. Descriptive Analysis and Some Comparisons with Attitudes in Northern Ireland and Great Britain*  
E. E. Davis and R. Sinnott
98. *Internal Migration Flows in Ireland and their Determinants*  
J. G. Hughes and B. M. Walsh