## The Nature of Migration Between Northern Ireland and Great Britain: A Preliminary Analysis Based on the Labour Force Surveys, 1986-88\*

FRANK P. FORSYTHE and VANI K. BOROOAH University of Ulster at Jordanstown

Abstract: This paper takes a preliminary look at a disaggregate data source not previously used in the analysis of Northern Ireland migration patterns. Official Northern Ireland migration data are published in the form of aggregate net out-migration statistics which provide no information on the personal characteristics of migrants moving between Northern Ireland and Great Britain. The Labour Force Survey data utilised in this paper suggest that the migrant population moving between NI and GB is strongly bi-modal, with the less skilled and less qualified exhibiting a high degree of mobility relative to migration within GB itself.

#### I INTRODUCTION

W ithin the context of Northern Ireland which, of all UK regions, has the highest natural rate of population increase, net outward migration is traditionally regarded as playing a crucial rôle in keeping unemployment within containable limits (see, for example, Black and Slattery, 1975; Gudgin and Roper, 1990); even so, Northern Ireland has one of the highest unemployment rates among UK regions. A measure of the importance of net

\*The authors are grateful to the Policy Planning Research Unit (PPRU), Department of Finance and Personnel, Stormont, Northern Ireland, for funding this project, and to the Department of Employment, London, for providing Labour Force Survey data. Improvements upon an earlier draft were made possible by the comments of Brian Nolan and two anonymous referees. The authors are responsible for the views expressed in the paper.

out-migration from the Province in helping to moderate the impact on unemployment of a high rate of growth in the population of working age relative to a slow rate of growth in employment, is provided by Table 1.

Between 1984-89 there were approximately 94,000 emigrants from Northern Ireland and 66,000 immigrants, giving a net outflow of 28,000. During the 1980s the net outflow from the Province averaged around 6,000 per year, or 3.8 per thousand of the population. Although this was the highest net outflow rate within the United Kingdom, during the same period the Republic of Ireland exhibited a much higher rate of net out-migration, rising consistently throughout the decade from 1.2 per thousand in 1980 to over 13 per thousand in 1988. The net outflow from Northern Ireland during the 1980s was similar to that experienced during the 1960s, but rather less than the 10,000 approximately per year during the 1970s, which was clearly influenced by political events.

Despite having a combination of low participation and high net out-migration rates (a combination unmatched by other regions of the UK), in terms of creating jobs and reducing unemployment, Northern Ireland has been less successful than the other traditionally high unemployment regions of the UK. Table 1 shows that this holds true even during periods of relative prosperity in the national economy.<sup>2</sup> Although job creation within the Province continues to be a primary objective of Government policy, it seems unlikely that it can keep pace with the growth in the supply of labour. Consequently, job shortage and unemployment remain the dominant issues of the Northern Ireland labour market. It is within this context that one can appreciate the crucial importance of net out-migration upon the Northern Ireland employment-unemployment relationship, and why some have urged for positive action by Government to implement a migration inducement policy alongside existing training and job creation initiatives, as the best means of alleviating unemployment.<sup>3</sup>

Proper assessment of the potential success of migration inducement schemes in reducing unemployment in Northern Ireland is extremely difficult, given the limited information currently available on the personal characteristics of migrants to and from the Province (Section II). Although

<sup>1.</sup> Eurostat, Population Statistics, Luxembourg. Migration statistics for Northern Ireland as in Table 1. Net migration statistics for GB regions are published in Regional Trends (HMSO).

<sup>2.</sup> For an assessment of the relative performance of the Northern Ireland economy within the UK, particularly during the 1980s, see Gudgin and Roper (1990), and Harris et al. (1990).

<sup>3.</sup> See for example Gudgin and Roper (1990), p. 5 and p. 75, who suggest a series of migration inducement measures including improved provision of "outside" job information, enhanced housing and mobility allowances, better education and skill training for the lowest achievers, etc.

	Chang	zes (%)	in Key Lo	ibour	Participation Rates			
Region	Mai	rket Flo	ws 1986-	89	1986		1989	
	$\Delta U$	$\Delta U$ $\Delta E$	NM ∆W	ΔW	Male	Female	Male	Female
	(% point)	(%)	(%)	(%)				
Wales	-6.2	12.3	+0.9	1.2	69.0	45.1	69.0	44.6
N. West	-5.3	7.6	-1.2	1.8	74.0	49.3	73.9	49.3
North	-5.4	5.3	-1.0	1.0	72.0	47.5	72.3	49.3
Scotland	-4.0	5.3	-1.3	1.2	73.1	47.7	73.2	49.4
N. Irl	-2.3	3.6	-1.9	3.8	73.5	44.9	72.6	44.7
CR	-50	93		19	73 9	49.5	749	50.9

Table 1: Changes in Labour Market Indicators, 1986-89

Notes:

- ΔU: Percentage point change in the annual average, seasonally adjusted, unemployment rate between 1986 and 1989. Employment Gazette; Policy Planning Research Unit (1991).
- AE: Percentage change in civilian employment between June 1986 and June 1989. Employment Gazette; Regional Trends; Policy Planning Research Unit (1991).
- NM: Net migration of working age between 1986-89 expressed as a percent of the mid-year estimate of 1986 population of working age. Sources as for  $\Delta W$  below.
- ΔW: Change in population of working age between 1986 and 1989 expressed as a percent of the mid-year estimate of the 1986 population of working age. Office of Population Census and Survey (OPCS) (London); Registrar-General office (Edinburgh); Registrar General Office (Belfast); Policy Planning Research Unit (1991).

Participation rates: Regional Trends (HMSO).

some effort has been made in this direction (Section III), the aim of this paper is to enhance that effort by utilising a disaggregate data source not previously used in the analysis of Northern Ireland migration, namely, the Labour Force Survey (Section IV). In addition to providing information on the personal characteristics of migrants moving between Northern Ireland and Great Britain, the Labour Force Survey (LFS) allows one to make comparisons with recent GB migration studies that have also utilised disaggregate data (Section IV). It is hoped that the results are also relevant in an assessment of migration inducement schemes (Section V).

As the title suggests, the primary concern of the present paper is to highlight some of the main features contained in the United Kingdom LFS relating to "internal" migration between Northern Ireland and the rest of the United Kingdom. The authors are, however, currently analysing a more comprehensive LFS database covering the years 1981-90, which also provides information on migrants moving between the United Kingdom and the Republic of Ireland; labour force movements between the Republic of Ireland and both Great Britain and Northern Ireland will be considered in a subsequent paper.

## II THE NEED FOR A DISAGGREGATIVE DATABASE

Despite the crucial influence of net migration upon the Northern Ireland employment-unemployment relationship, particularly within the context of cyclically sensitive net migration flows, the economic analysis of Northern Ireland migration has been very limited.<sup>4</sup> This may be explained largely in terms of problems relating to data availability and reliability, and attention has tended to concentrate upon reconciling the different estimates of net migration flows that have been derived from a variety of aggregative data sources (see Eversley, 1989 for a summary of the issues involved). Consequently, the literature relating to Northern Ireland migration is rather sparse, and tends to produce a confusing picture regarding the long-term impact of net outward migration upon the local economy. On the one hand there is the view, noted above, that given the combination of high population growth and limited employment opportunities, net outward migration is to be encouraged as the best means of tackling unemployment (Gudgin and Roper, 1990); there is also the view that since it may be the younger, more qualified and skilled members of the work-force who are most likely to leave, migration causes economic performance to suffer in the long term despite alleviating unemployment in the short term (Jefferson, 1990).

What is significant about the currently available information on Northern Ireland migration is that, except for the age and sex composition of migrants, very little is known about the personal characteristics of those who migrate from (or to) the Province between Census years.<sup>5</sup> Proper assessment of the effects of net out-migration upon the local economy — in terms of the potential loss of human capital resources or of the success of migration inducement in reducing unemployment — requires more comprehensive information than has been utilised to date about the personal characteristics of Northern Ireland migrants.

This requirement highlights the major weakness inherent with aggregative time-series migration data, in that it cannot distinguish between specific

- 4. The existence of cyclically sensitive migration flows within GB is demonstrated by Ogilvy (1982), Gordon (1985, 1988a), and Pissarides and McMaster (1990). Although Black and Slattery (1975) considered the cyclical interaction between employment and unemployment within the Province, it was assumed that, in normal circumstances, the short-run employment-unemployment relationship was unaffected by cyclical variations in net migration. Subsequent analysis of net migration flows within Great Britain do not support this view.
- 5. Unfortunately Northern Ireland Census data may itself be subject to serious deficiencies as far as enumerating migration flows from the Province are concerned. The 1981 Northern Ireland Census suffered from a serious enumeration problem, and this explains why the migration debate within the Province has tended to focus upon establishing an estimate of the net outflow between the 1971 and 1981 Census Reports. In addition to Eversley (1989), see Morris et al. (1985), and PPRU (1986).

groups of migrants who may have different motives for migrating.<sup>6</sup> As far as Northern Ireland migration is concerned, the distinction between employed and unemployed migrants is particularly important. Creedy (1974) suggests that unemployed migrants are primarily interested in finding a job, whilst employed migrants seek an increase in income. Differences in the job search behaviour of unemployed and low qualified migrants relative to employed migrants was also noted by Beggs and Chapman (1990); the former were found to have a higher probability of employment than the equivalent native population, implying that they adopted a lower reservation wage, whilst premigration work experience and higher qualifications tended to increase the probability of unemployment, suggesting that higher reservation wages had been adopted.

Thus it is possible that unemployed migrants are best viewed in the market-clearing sense of equilibrating flows of labour supply responding to regional differences in unemployment rates, whilst the movement of employed workers represents a human capital investment which enhances career prospects and future net income streams. For the latter group the migration decision is more likely to be a selective process, involving a longer time horizon and long-term commitment to moving from the Province relative to unemployed migrants. Evidence supporting the view that migrants from the Province with high human capital potential are not likely to return in the short term is provided by Osborne (1987) and Compton and Power (1991), using sample survey data (see below).

Migrants with generally low human capital potential, however, are more likely to return to the Province during periods of national recession, thus frustrating the aim of migration inducement schemes. Bell and Kirwan (1979) argue that the return of discouraged migrants to Scotland during national recession is substantial, and is an important factor in explaining the cyclical sensitivity of Scottish net migration flows. The option of job-search after migration, or speculative migration, which for low qualified migrants may entail return migration if initial expectations are not fulfilled, is discussed by Maier (1985) and, within the context of rural-urban migration in contemporary LDC'S, Pessino (1991). Speculative migration is induced by the expectation of enhanced employment opportunities in the destination region (Todaro, 1969, 1976), and for many low qualified migrants it may be indicative of a migration strategy that is essentially short term, with strong familial

<sup>6.</sup> Although Molho (1984), and Gordon (1982, 1988b), adopt a multi-stream gravity model approach to GB inter-regional gross migration flows to distinguish between long distance "employment" and short distance "housing" movements.

links being maintained in the origin region. Speculative migration by low qualified and unemployed migrants is more likely if such migrants have access to a social network of friends and relatives in the destination region. Such networks, which are established through time via the perpetual migration between the origin and destination regions (DaVanzo and Morrison, 1981; Stark, 1984), reduce both the psychological and monetary costs associated with migration and provide informal channels of information about job opportunities in the destination region. Such considerations are clearly of relevance within the context of labour force movements between Northern Ireland and the rest of the United Kingdom (see Section IV).

Migration inducement implies that unemployed workers exhibit a low degree of mobility; however, the evidence from a number of countries suggests that unemployed workers from peripheral regions are mobile but that movement is a two-way process, with the direction being determined by the national economic climate. In this context the lack of a disaggregate data base of Northern Ireland migrants that can provide information on the personal characteristics of those migrating from and to the Province represents a serious deficiency in terms of fully understanding the employment-unemployment relationship within the region.

# III USING A DISAGGREGATIVE APPROACH TO ANALYSE THE NORTHERN IRELAND MIGRATION DECISION

A primary reason for using disaggregate data is to shed light upon the individual migration decision, and to assess how this varies between different groups of migrants according to their personal characteristics.

To date there have been two such approaches in the analysis of Northern Ireland migration and although each is limited in scope, their true significance lies in the information they provide collectively. The aim of the present study is to enhance the collective weight of these previous studies by providing additional information using the Labour Force Survey, a data source not previously used in relation to Northern Ireland migration.

## Using Sample Surveys to Target Specific Groups

Osborne (1987), using postal survey returns, provides information on the location of a cohort of Northern Ireland students 3-4 years after graduating from higher education institutions (the cohort relates to the 1979 intake, both within and outside the Province); information is also provided on gender,

<sup>7.</sup> See, for example, Stark (1991) for an analysis of the savings behaviour of migrants and the rôle of remittances within a familial migration context. Although the analysis relates to migration within an LDC context, many of the issues raised have relevance for Northern Ireland migration.

religion and degree details. The analysis, however, focuses upon one specific group of migrants, (i.e. graduates) and suffers from not having comparable data for other UK regions to assess the uniqueness or otherwise of Northern Ireland graduate patterns.

More recently, Compton and Powers (1991) conducted a sample survey of migrants currently domiciled outside Northern Ireland who had been interviewed at the end of a New Year visit to the Province in January 1988. Again, useful information on a variety of personal details is provided, such as origins within the Province, religion and the motives for migrating. However, despite having the potential of follow-up surveys to acquire more comprehensive information than is possible at the initial interview stage, it seems unlikely that this method could provide information on the inflow of migrants to the Province, at least not within a reasonable period of time, nor on Northern Ireland-Republic of Ireland movements.

Thus the disaggregated studies of Northern Ireland migration undertaken to date, though providing important information, do not present a full picture of the characteristics of migrants to and from the Province, particularly with regard to the crucial distinction between employed and unemployed migrants.

## The Labour Force Survey

The LFS is a random sample survey of households (0.5 per cent and 1 per cent of households in Great Britain and Northern Ireland respectively), providing information on household size and structure, basic demographic characteristics (age, sex, marital status) and, for people aged 16 and over, the LFS also provides information on economic activity at the time of the Survey and one year previously. The LFS is conducted along similar lines in each EC country. Migrants may be identified because respondents are required to give their residence, both at the LFS date and one year previously. Although the LFS has been used to analyse inter-regional migration within Great Britain (Molho, 1987, Hughes and McCormick, 1989 and Pissarides and Wadsworth, 1989), it has not been used in relation to Northern Ireland migration.

The remainder of this paper will provide a summary of the main features arising from LFS data acquired for the three-year period, 1986-88; the results reported relate to Northern Ireland-Great Britain (hereafter GB) movements only, and are restricted to adults of working age (males aged 18-64, females aged 18-59). Members of the armed forces are also excluded from the results discussed below. Three groups are distinguished:

<sup>8.</sup> As noted in the introduction, the authors have subsequently acquired more comprehensive UK Labour Force Survey data over a longer time period, in addition to relevant data from the Republic of Ireland LFS over the same time period. This enhanced dataset forms the basis of further study. Molho (1987) notes the conceptual difficulties associated with LFS data in the analysis of the migration decision.

- those individuals living in Northern Ireland both at the LFS date and one year previously. This group represents the non-migrant Northern Ireland population;
- (2) those individuals living in GB at the time of the Survey, but who were resident in Northern Ireland one year previously. This represents the emigrant group moving from the Province to GB;
- (3) those individuals living in Northern Ireland at the Survey date, but resident in GB one year previously. This group represents the movement of immigrants into the Province from GB.

Between 1986-88 the total number of migrants of adult working age moving between Northern Ireland and the rest of the United Kingdom (groups 2 and 3 above) captured by the LFS was 0.8 per cent of the equivalent non-migrant population (group 1); the actual numbers involved were 160 migrants against 20,018 non-migrants. Taking only head of household and "not-related" respondents of adult working age (see Table 11), who might be regarded as assuming a key role in the decision to migrate, migrants were 1.0 per cent of the equivalent non-migrant population (90 migrants against 8,984 non-migrants). Although the proportion (and numbers) of migrants to non-migrants is small, the present study compares favourably with recent GB studies that have also utilised disaggregate household data. The overall reliability of the dataset will also improve as it is enlarged to include Northern Ireland-Republic of Ireland movements and additional yearly data.

For each individual within the three groups identified above, information was acquired on 9 variables: age, sex; economic status at the Survey date; economic status one year previous to the LFS date; whether or not the individual had changed industry between the LFS date and one year previously; highest qualification attained; socio-economic grouping; relationship to the head of household and household structure.

9. Hughes and McCormick (1981), using the GHS 1973, obtained 101 head of household migrants against 11,000 non-migrants (0.92%). Hughes and McCormick (1985), using the GHS 1973 and 1974, obtained 67 head of household "past" migrants against 7,104 non-migrants (0.95%). Molho (1987), using the LFS 1979, obtained 478 migrant males aged 16-24, against 12,100 non-migrant males aged 16-24 (3.95%); in this study only 239 of the migrants were involved in non-contiguous regional movements, and only 127 of these were economically active prior to migration. Pissarides and Wadsworth (1989), using the LFS 1977 and 1984, quote proportions for employed migrants against employed non-migrants in 1977 and 1984 respectively as follows: North (0.76, 0.67), North West (1.05, 1.10), Wales (1.01, 0.91), Scotland (0.65, 0.97); the equivalent figure for Northern Ireland over the 1986-88 period is 0.70%. Unemployed migrants as a proportion of the unemployed stock for 1977 and 1984 is quoted by Pissarides and Wadsworth as, North (0.79, 1.80), North West (2.45, 2.02), Wales (3.45, 1.28), Scotland (1.69, 0.24); the figure for Northern Ireland, 1986-88, is 1.28%. Finally, using the most comprehensive LFS dataset to date, Hughes and McCormick (1989), LFS 1981-86, captured 1,900 head of household migrants against some 191,000 non-migrants (0.99%).

## IV SUMMARY OF LABOUR FORCE SURVEY RESULTS 1986-88

General Age-Sex Composition of LFS Migrants and Non-Migrants

Before commenting on the LFS migrant and non-migrant groups, it is worth noting that in the population estimates published by the Registrar General (Northern Ireland) for 1986-88, males accounted for 52 per cent of the adult working age population, and females 48 per cent; the corresponding figures for the LFS non-migrant group were 51 per cent and 49 per cent respectively. As far as the age distribution within each sex is concerned, there was no significant difference between the two sources. It is also worth noting that the Northern Ireland civilian work force during this period (the published estimates being derived from the Employment Census and other sources, as outlined in PPRU, 1991) comprised 59 per cent males and 41 per cent females; the LFS non-migrant group (including those aged 16-17) comprised 61 per cent males and 39 per cent females who were economically active at the LFS dates during 1986-88.

Taking both migrant groups combined, males represented 42 per cent of the LFS migrant respondents and females 58 per cent. The sex composition of each of the three groups is given in Table 2. The sex composition of the LFS migrant data compares favourably with estimates of GB-Northern Ireland movements based upon the 1981 OPCS Census and the 1981 Northern Ireland Census, but incorporating adjustments to remove the distorting effect of armed forces personnel. Despite this close approximation, however, given the enumeration problems associated with the 1981 Census, it must be accepted that the LFS migrant dataset under-represents the true proportion of adult male migrants moving between the Province and GB, although it is difficult to determine the full extent of this under-representation. Although it

<sup>10.</sup> In official estimates of labour force characteristics the original LFS sample data is subsequently weighted on the basis of population estimates to correct for differences in male-female response rates. The LFS sample dataset utilised in the present study is in the original unweighted form.

<sup>11.</sup> In an unpublished PPRU report, "The Characteristics of Northern Ireland Migrants", based upon a 10% sample of emigrants to GB enumerated by the 1981 OPCS Census and a 100% count of immigrants from GB enumerated by the 1981 Census (Northern Ireland), with adjustments made to exclude armed forces personnel from both sources, the following estimates of the sex-age composition of migrants aged 16-64 (males) and 16-59 (females) were derived. Gender: total migrants (42% male, 58% female); emigrants to GB (43% male, 57% female); immigrants from GB (42% male, 58% female). Age distribution: total migrants (40% aged 16-24, 50% aged 25-44); emigrants to GB (46% aged 16-24, 46% aged 25-44); immigrants from GB (36% aged 16-24, 54% aged 25-44). Clearly these estimates, particularly those involving emigrants, are subject to sampling error. The corresponding figures for the LFS age distribution of migrants were: total migrants (47.5% aged 16-24, 43.8% aged 25-44); emigrants to GB (52.3% aged 16-24, 41% aged 25-44); immigrants from GB (42% aged 16-24, 47% aged 25-44).

	Immigrants From GB (%)	Emigrants To GB (%))	NI Non-Migrants (%)
Males (18-64)	46	39	51
Females (18-59)	54	61	49
	100	100	100

Table 2: Sex Composition (Adult Working Age)

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

may be that opportunities for female employment in GB have changed since the seventies (Eversley, 1989), and that the current LFS migrant data may not reflect the true sex composition of migrants aged 18-64 moving between Northern Ireland and GB, nevertheless the LFS data suggest that female migrants from Northern Ireland continue to play an active rôle in the GB labour market (see below). Most certainly females cannot be stereotyped as playing an insignificant rôle in the Northern Ireland migration decision.

	Immigran	Immigrants from GB		Emigrants to GB		NI Non-Migrants	
	Males (%)	Females (%)	Males (%)	Females (%)	Males (%)	Females (%)	
18-24	36	46	44	57	20	21	
25-44	48	46	44	39	46	50	
45-59	12	8	9	4	26	29	
60-64	4	_	3	_	8	_	
	100	100	100	100	100	100	

Table 3: Age Distribution (Adult Working Age)

Source: UK Labour Force Survey (1986-88), Department of Employment, London.

As far as the age distribution of migrants is concerned (Table 3), the LFS data is consistent with the well established finding that adults within the 18-44 age group tend to be the most mobile. Taking both migrant groups combined, 48 per cent were aged 18-24, and 44 per cent aged 25-44. In this respect the LFS dataset is consistent with the 1981 Census, and demonstrates the importance of the 25-44 age group as a source of potential migrants in addition to the 18-24 age group.

100

#### Economic Status

Information is available on the economic status of respondents at the LFS date and one year previously. In the discussion below, economic status is categorised as follows: full-time employment (FT); other employment (labelled PT, comprising primarily part-time employment, but also including those in employment with PT or FT not specified); unemployed (UE); and inactive (IA).<sup>12</sup>

One of the most striking differences between the migrant and non-migrant groups concerns the *change* in economic status that occurred between the LFS date and the previous year. The data also show that the nature of the change in economic status differed significantly between the two migrant groups, possibly reflecting the differences in opportunities that exist between the local and national economy. Finally, within the context of the discussion in Section II, there is evidence that unemployed workers are mobile, but that the movement of such workers is significant both from and to the Province.

	Economic Status			Immigrants Emigrants		NI Non-Migrants	
One At L		At LFS Date		From GB	To GB		
Year Ago	9				(%)	(%)	(%)
FT	_	FT			38	53	65
UE	_	UE			16	6	11
IA	_	IA			6	6	12
UE	_	$\mathbf{FT}$	ch	ange	3	21	3
$\mathbf{FT}$		UE	}	in	22	9	3
Oth	er cha	inges	s	tatus	15*	5	6

100

100

Table 4: Economic Status of Males (18-64) at LFS Date and One Year Previously

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

## Males Aged 18-64

Table 4 shows that whilst 35 per cent of emigrant males and 40 per cent of immigrant males experienced a change in economic status when moving between Northern Ireland and GB, only 12 per cent of the non-migrant male

12. The LFS adopts the ILO measures of unemployment and inactivity. Respondents are defined as unemployed if, during the LFS reference week, they were not in paid employment, were available for work during the next two weeks and had looked for work sometime during the previous four weeks (during the reference week only in the Northern Ireland LFS). LFS respondents are defined as inactive if they were without paid employment during the reference week, but were not classified as unemployed (i.e. they were either not seeking work or were not available for work during the next two weeks). See Department of Employment (1990).

<sup>\*</sup>PT/IA - FT (10%), PT/IA - UE (5%).

population changed economic status over the same period.

The most significant change which distinguishes the emigrant population from the two other groups concerns the movement UE-FT, i.e., those in FT employment at the LFS date, but who were unemployed one year previously; 21 per cent of all emigrant males to GB fell within this category, compared to around 3 per cent for both non-migrant and immigrant males. <sup>13</sup> No equivalent opportunity for the unemployed to gain full-time employment appears to exist within Northern Ireland, since those who were in full-time employment in the Province at the Survey dates also tended to have held this position one year previously (only 4 per cent of non-migrant and 6 per cent of immigrant males who were in full-time employment in Northern Ireland at the LFS date had been unemployed one year previously).

In terms of the reverse movement, FT-UE, which represents a deterioration in economic status, there were also significant differences between the emigrant, immigrant and non-migrant groups. The FT-UE movement may reflect a tendency, suggested by Beggs and Chapman (1990), that those in employment prior to migrating may contribute to their inferior post-migration status by adopting too high a reservation wage, hence prolonging the period of job search. Such selective behaviour may considerably lengthen the period of job search within a slack labour market such as Northern Ireland. Perhaps this explains the extremely high proportion of immigrant males who fell within the FT-UE category (22 per cent) relative to the other groups (see Table 4). It is also possible, of course, that the magnitude of FT-UE for immigrant males is more indicative of limited job opportunities in the Province than job-search behaviour.

Although migrating to GB provides an opportunity for many to improve their economic position, clearly a favourable outcome is not always guaranteed. Thus 9 per cent of migrant males to GB also experienced an FT-UE change in moving from the Province.

If one includes those who were unemployed in Northern Ireland prior to migrating, and who were still unemployed in GB at the LFS date (i.e. 6 per cent within the UE-UE category), then 15 per cent of emigrant males to GB were either no better off (in terms of finding employment) or were worse off relative to their position prior to migrating from the Province. It is interesting to note at this point that those emigrant males who were unemployed in GB at the Survey date also tended to exhibit the lowest qualification and occupational ratings (see below), suggesting a bi-modal distribution of migrants to GB in terms of human capital and security of employment potential. It is

<sup>13.</sup> Of all those emigrant males in full-time employment in GB at the LFS date, 26% had been unemployed one year previously in Northern Ireland.

possible that failed experiences in GB, resulting in return migration, may account for the otherwise difficult to explain movement of unemployed workers from GB who remained unemployed in Northern Ireland; 16 per cent of all immigrant males belonged to the UE-UE category, compared to only 6 per cent of emigrant and 11 per cent of non-migrant males. Again, those immigrant males who were unemployed in Northern Ireland at the LFS date tended to have the lowest qualification ratings.

Within the context of unemployment in Northern Ireland, although the FT-UE, UE-FT and UE-UE movements are important, the LFS data also show that the majority of male migrants moving between GB and the Province were in full-time employment prior to migrating (around 60 per cent of each of the two migrant groups, see Table 4). Differences in the FT-UE experience between both migrant groups, however, meant that only 38 per cent of immigrant males were full-time employed both before and after migration, compared to 53 per cent of emigrant males who retained full-time employed status after migrating to GB.

Table 5: Economic Status	of Females (18-59) at LF	S Date and One Year Previously
Table 0. Decimine Diame	oi i entatea (10-00) at Di	D Date and One Teal Treowasts

	Economic Status		Immigrants From GB	Emigrants To GB	NI Non- Migrants
One Year Ago	At LFS Date		(%)	(%)	(%)
FT	- FT		21	20	32
$\mathbf{PT}$	– PT		5	7	14
UE	- UE		5	6	2
IA	- IA	_	33	22	37
UE/FT/PT	- IA	change	13	7	6
IA	- PT/FT/UE	in	18	11	3
Other changes status		5	26*	6	
			100	100	100

<sup>\*</sup>FT/PT-UE (12%), UE-FT/PT (7%), FT-PT + PT-FT (7%).

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

## Females Aged 18-59

Table 5 summarises the main features. As is to be expected, the inactive category is an important element in each of the three female groups, although emigrants exhibited the highest degree of labour market activity. At the LFS dates, 46 per cent of immigrant females were either inactive both before and after migration (i.e., IA-IA), or became inactive between the LFS date and one year previously; the corresponding figure for emigrants was only 29 per cent, whilst 43 per cent of non-migrants were either inactive at both the Survey

date and one year previously, or became inactive between the two dates.

As with males, changing economic status between the Survey date and one year previously was much more prevalent for migrant females than non-migrant females (45 per cent for emigrants and 36 per cent for immigrants compared to only 14 per cent for non-migrants). The primary change for both the non-migrant and immigrant groups involved movements between active and inactive labour market status. Although this was also an important feature of the emigrant group, 26 per cent of the latter changed status within the labour market, involving movements either between employed and unemployed status (19 per cent of female emigrants), or between full-time and part-time employment (7 per cent).

## Industry Changes 14

In terms of whether one identified with the same industry at the LFS date relative to one year previously, non-migrants appeared to exhibit a high degree of industrial "fixity" or stability, relative to migrants generally, but particularly when compared to those migrating to GB. The comments in this section relate only to those LFS respondents who were economically active at the Survey dates. Despite this restriction, a large proportion of respondents, both male and female, fell within the "Not Specified" category, and this must be borne in mind when interpreting the results below (see Table 6).

Table 6: Industry Change Between LFS Date and One Year Previously (Adult Working Age)

	Economically Active Males			Economically Active Females		
	Immigrants From GB (%)	Emigrants To GB (%)	NI Non- Migrants (%)	Immigrants From GB (%)	Emigrants To GB (%)	NI Non- Migrants (%)
No change	43	31	76	43	26	85
Changed	23	31	4	14	26	5
Not Specified	34	38	20	43	48	100
	100	100	100	100	100	100

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

## Males 18-64

At the Survey date, 76 per cent of economically active non-migrant males identified with the same industry as one year previously, and only 4 per cent

<sup>14.</sup> The LFS provides information on whether respondents had changed industry between the LFS date and one year previously. Respondents who failed to indicate whether such a change had occurred, or provided inconsistent/vague information are grouped within the "Not Specified" category.

confirmed that a change had occurred; the corresponding figures for emigrant males were 31 per cent in both categories (43 per cent and 23 per cent respectively for immigrant males). Indeed, the majority of emigrant males who had been in FT employment in Northern Ireland prior to migrating, had taken up FT employment in a different industry after migrating to GB (i.e., 67 per cent of the 18-24 age group, and 56 per cent of the 25-44 age group who were employed FT in Northern Ireland, were working FT in a different industry in GB after migrating). In this context it is worth noting that Molho (1987), using the 1979 LFS to analyse the migration decision of males aged 16-24 within GB, found that 16 per cent of economically active non-migrants were involved in a job-change (defined as a change in either industry or occupation), whilst the corresponding figure for inter-regional migrants was 44 per cent.

Those respondents in the "Not Specified" category tended to have experienced a change in economic status over the previous year and, since this is a more common occurrence for migrants relative to non-migrants, this possibly explains why a larger proportion of migrants fell within this category.

## Females 18-59

Taking only those who were economically active at the LFS date, once again there were important differences between migrants (particularly emigrants) and non-migrants (Table 6). Only 5 per cent of economically active non-migrants confirmed that a change in industry had occurred between the Survey date and the previous year, compared to 26 per cent of female emigrants to GB.

Thus, in terms of industrial "fixity" or attachment, it would appear that females migrating to GB, as with males, are able to take advantage of the opportunities offered by a more dynamic GB labour market environment relative to the local labour market.

## **Qualifications**

The highest qualification obtained by LFS respondents who were economically active at the Survey dates is depicted in Table 7.

#### Males 18-64

One important difference between migrants and non-migrants relates to the highest qualification category (Degree/BTec Higher), with almost one-fifth (19 per cent) of emigrant and 17 per cent of immigrant males attaining this level compared to 10 per cent of non-migrant males. City & Guilds and trade apprenticeship qualifications featured prominently in each of the three groups. However, 37 per cent of male migrants to GB either had no qualifications or were poorly qualified (i.e., GCSE<1), which would seem to rein-

force the bi-modal nature of the migrant male population to GB, in terms of human capital investors and low qualified job seekers. Thus one cannot assume that a human capital representation of migration flows between Northern Ireland and GB is entirely appropriate, <sup>15</sup> and the LFS data suggest that in times of national economic recovery many low qualified people are prepared to migrate to GB. Table 7 shows that one-third of immigrant males also had no qualifications. It is worth noting that with the current dataset all emigrant males to GB who were unemployed at the Survey dates had no qualifications; similarly, 58 per cent of immigrant males who were unemployed in Northern Ireland at the LFS dates had no qualifications.

Table 7: Highest Qualification Attained (Adult Working Age)

	Econom	rically Active I	Males	Economically Active Females		
	Immigrants From GB (%)	Emigrants To GB (%)	NI Non- Migrants (%)	Immigrants From GB(%)	Emigrants To GB (%)	NI Non- Migrants (%)
Degree/BTEC Higher	17	19	10	29	8	6
Teaching/ Nursing	-	_	1	6	5	10
A-Level/OND	4	6	6	19	13	6
City & Guilds	23	22	27	_	13	5
O-Level	23	16	11	29	37	25
GCSE < 1	-	6	2	10	8	5
No Qualification	33	31	43	10	16	43
	100	100	100	100	100	100

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

## Females 18-59

The most striking feature of migrant females who were economically active at the Survey dates is the relatively low proportion falling within the two lowest qualification categories (24 per cent emigrants and 20 per cent immigrants) compared to non-migrants (48 per cent). In addition, a higher proportion of migrant females fell within each of the qualification categories, except for nursing and teaching, relative to non-migrant females. Of those female migrants to GB who were inactive at the LFS date, approximately one-third were either poorly or non-qualified compared to over two-thirds of the inactive non-migrant population (and 77 per cent of inactive immigrant females). Thus, in terms of qualifications attained, female migrants to GB

<sup>15.</sup> See Shields and Shields (1989) for a classification of migration literature into a number of theoretical approaches, including the human capital approach.

appeared to have generally favourable employment prospects although not all took the labour market option.

## Other Characteristics of Northern Ireland Migrants

The LFS occupational data relating to male migrants moving between GB and Northern Ireland again highlights the bi-modal nature of the Northern Ireland migrant population. Table 8 shows that 42 per cent of all male migrants belonged to the "Semi-Skilled/Unskilled Manual" or "Not Specified" occupational categories. The "Not Specified" occupational category for both emigrant and immigrant males was dominated by those who were unemployed at the Survey dates, and who also exhibited the lowest qualification rating. Over one-third (35 per cent) of emigrant males fell within the semi/unskilled manual or "not specified" occupational categories (of whom 71 per cent were unemployed in GB); the corresponding figure for immigrant males was 55 per cent (of whom 78 per cent were unemployed in Northern Ireland after moving from GB). Clearly, having neither formal qualifications nor any particular skill or trade does not appear to deter many from migrating to GB and, given the immigrant data, it is very likely that they also form a stock of potential return migrants.

Economically Active Females Economically Active Males NI Non-Migrants Migrants NI Non-Migrants Migrants (%) (%) (%) (%) 7 Prof & Managerial 11 16 10 Int/Jun Non-Manual 18 15 36 47 Personal Services 2 5 14 13 Skilled Manual 16 22 2 4 Semi/Unskilled Manual 12 3 8 13 Own Account 8 5 5 2 Not Specified 34 28 31 14 100 100 100 100

Table 8: Occupational Grouping (Adult Working Age)

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

The LFS data thus suggests that speculative migration, particularly for the unemployed and low qualified, may be an important feature of Northern Ireland-GB labour force movements. The LFS data for low qualified and manual migrants moving between GB and Northern Ireland may be contrasted with equivalent data for labour force movements within GB (Tables 9 and 10).

In their analysis of GB migration, Hughes and McCormick (1981, 1985, 1987, 1989) found the distinction between non-manual and manual occupations to be crucial, with the latter exhibiting an extremely low propensity to cross regional boundaries (Table 9). Manual heads of households moving between Northern Ireland and GB, however, exhibit a much higher migration rate, as do the low qualified, relative to migrants with equivalent characteristics within GB. Table 10 also shows that manual heads of households

Table 9: Number of Migrants per 10,000 Households with Specified Characteristics

	W	ithin GB*	Between GB and NI**		
	Migrants	Total Households in Sample	Migrants	Total Households in Sample	
Education		· · · · · · · · · · · · · · · · · · ·			
Higher	313	989	185	867	
O Levels +	195	1,474	118	3,909	
GCSE < 1	54	1,137	177	113	
None	50	7,802	62	4,185	
Occupation					
Prof & Managerial	221	1,617	- 59	1,347	
Other Non-Manual	110	1,719	129	1,525	
Skilled Manual	44) 47	3,078	55 ] 100	1,438	
Other Manual	53 47	1,566	147 } 109	2,085	
Labour Force					
Participation					
Active	112	8,050	100	7,320	
Inactive	42	3,352	97	1,754	
Economic Status					
Employed FT	. n/a	n/a	72	5,974	
Unemployed	n/a	n/a	203	1,084	
Age					
< 35 yrs	240	2,232	230	2,952	
35-64	80	4,054	45	4,419	
55-64	51	2,197	7	1,507	

<sup>\*</sup>Hughes and McCormick (1981, Table I), based upon Heads of Households using 1973 GHS.

<sup>\*\*</sup>UK Labour Force Survey, 1986-88, Head of Household and "not-related" respondents of adult working age only; in addition, the occupation and economic status data is based upon respondents who were economically active one year prior to the LFS dates, and the labour force participation data relates to the economic status of respondents one year prior to the LFS dates. Females aged 55-64 are excluded from the age data (if included, the migration rate for 55-64 rises to 20, with 2,029 sample size).

moving between Northern Ireland and GB have a higher rate of migration than non-manual migrants; within GB the opposite is the case. According to Tables 9 and 10 it would appear that a bi-modal distribution of migrants is more characteristic of labour force movements between Northern Ireland and GB than within GB.<sup>16</sup>

ortion of Correspor	nding Total Sample)
Within GB*	Between GB and

	Within GB* (%)	Between GB and NI** (%)
Manual	0.65	1.09
Non-Manual	1.50	0.97

Table 10: Manual and Non-Manual Migration Rates

Source: UK Labour Force Survey, 1983 and 1986-88, Department of Employment, London.

Table 11 shows that male migrants tend to be either "Head of Household" or "Not Related" to head of household (82 per cent of all male migrants to and from the Province fell within these two categories). As far as the household status of female migrants is concerned, 38 per cent of migrant females fell within the head of household/not related categories, compared to around 14 per cent of non-migrants. In addition, 41 per cent of migrant females in the current dataset were categorised as "Wives" to head of households compared to 66 per cent of non-migrant females. Within the context of family migration, the occupational and economic status of the wife, as well as household size, exert an important influence upon the family migration decision<sup>17</sup> (76 per cent of migrant wives belonged to a two-adult or small family household, with only 24 per cent belonging to a large family or 3+ Adult households). Migrant wives who were economically active at the LFS date (61 per cent of emigrant wives, compared to 41 per cent of immigrant and 53 per cent of non-migrant wives were economically active at the LFS date), tended to be in full-time employment both before and after migration had taken place.

<sup>\*</sup>Hughes and McCormick (1987, Table 4), based upon Heads of Households using 1983 LFS.

<sup>\*\*</sup>UK Labour Force Survey, 1986-88, Head of Household and "not-related" respondents of adult working age who were economically active one year prior to the LFS dates.

<sup>16.</sup> The high migration rate for inactive heads of households and "not related" respondents moving between Northern Ireland and GB largely reflects the movement of those with a "student" profile, i.e., A level or equivalent qualifications aged between 18-24.

<sup>17.</sup> See, for example, Lichter (1980) and Maxwell (1989) who consider the gender aspects of migration using US data. Grundy (1989) uses GB longitudinal inter-Census micro data to examine the relationship between migration and family structure.

	_				
	M	[ales	Females		
	Migrants	NI Non- Migrants	Migrants	NI Non- Migrants	
	(%)	(%)	(%)	(%)	
Head of Household	63	74	22	13	
Wife	_	_	41	. 66	
Child	9	24	<b>` 15</b>	18	
Sibling	6		5 <b>)</b>		
Other Relation	3 }	2	1 }	3	
Not Related	<sub>19</sub> J		16 J		
	100	100	100	100	

Table 11: Relationship to Head of Household (Adult Working Age)

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

Table 12 summarises the household structure of migrants relative to non-migrants. Only head of household and "not-related" respondents aged 18-64 (males) and 18-59 (females) are included in Table 12. The importance of the "3+ Adult" household unit for migrants is not indicative of family migration, since it is dominated by respondents who were not related to the head of household (71 per cent of migrants in this category were not related to the head of household). The LFS data shows that migrants tended to be associated with small household units, with large families tending not to migrate.

Table 12: Household Type (Head of Household and "Not-Related" Respondents of Adult
Working Age)

	All Migrants (%)	NI Non-Migrants (%)
Single Adult	15	9
Two Adult	28	15
Small Family	19	28
Large Family	10	22
3+ Adult	28	26
	100	100

Source: UK Labour Force Survey 1986-88, Department of Employment, London.

#### V CONCLUSION

The primary aim of this paper was to provide information on the personal characteristics of migrants moving between Northern Ireland and GB using a disaggregative data source not previously utilised in the analysis of Northern Ireland migration. The Labour Force Survey has the advantage of providing

data over a broad range of personal characteristics, and allows comparisons not only between the migrant and non-migrant population, but between emigrant and immigrant groups. The latter comparison is particularly important within the context of the Northern Ireland labour market where net outmigration is seen as playing a crucial rôle in checking unemployment growth.

The significance of the LFS data used in this paper is twofold. First, it suggests that during periods of relative prosperity in the national economy the Northern Ireland migrant population is strongly bi-modal, involving the movement not only of those exhibiting relatively high human capital potential (in terms of age, qualifications and occupational grouping), but also those who possess little in the way of formal training and qualifications, and with limited or no prospects of employment in the local labour market. In this respect labour force movements between Northern Ireland and GB would appear to be significantly different from inter-regional migration within GB. Secondly, the LFS data suggest that the trade-off between net out-migration and local unemployment may be more complex than that implied by the traditional view of Northern Ireland migration (i.e., as a means of checking unemployment growth). Not only does there appear to be a significant "reverse" movement of unemployed persons from GB who remain unemployed in the Province, but there appears to be an additional, and perhaps less recognised, source of unemployment pressure within the Province caused by the movement of persons who were in full-time employment in GB, but who are unemployed in Northern Ireland. Clearly, the extent to which immigration contributes to unemployment pressure within Northern Ireland is an issue requiring further consideration, particularly within the context of potentially expensive migration inducement schemes. The LFS data suggest that such schemes may have a limited long-term impact upon local unemployment, since the real problem may not be that the unemployed and those with low human capital potential lack mobility, but that movement of such persons is a two-way process. Although a carefully targeted migration inducement policy may stimulate the outflow of unemployed persons, the long-term effectiveness of such policies, as far as combating unemployment is concerned, will depend upon how successfully they prevent "reverse" movements; unfortunately, this is precisely the area over which such policies have least control.

## REFERENCES

BEGGS, J., and B. CHAPMAN, 1990. "Search Efficiency, Skill Transferability and Immigrant Relative Unemployment Rates in Australia", Applied Economics, Vol. 22, pp. 49-26.

BELL, D., and F. KIRWAN, 1979. "Return Migration in a Scottish Context", Regional Studies, Vol. 13, pp. 101-111.

- BLACK, W., and D. SLATTERY, 1975. "Regional and National Variations in Employment and Unemployment in Northern Ireland: a Case Study", Scottish Journal of Political Economy, Vol. 22, pp. 195-205.
- COMPTON, P., and J. POWER, 1991. "Migration from Northern Ireland: a Survey of New Year Travellers as a Means of Identifying Emigrants", Regional Studies, Vol. 25, pp. 1-11.
- CREEDY, J., 1974. "Inter-Regional Mobility: a Cross-Section Analysis", Scottish Journal of Political Economy, Vol. 21, pp. 41-53.
- DaVANZO, J., and P. MORRISON, 1981. "Return and Other Sequences of Migration in the United States", *Demography*, Vol. 18, pp. 85-101.
- DEPARTMENT OF EMPLOYMENT, 1990. "Measures of Unemployment", Employment Gazette, October Issue, pp. 506-513, London: HMSO.
- EVERSLEY, D., 1989. Religion and Unemployment in Northern Ireland, Sage Publications.
- GORDON, I., 1982. "The Analysis of Motivation-Specific Migration Streams", Environment and Planning, (Series A), Vol. 14, pp. 5-20.
- GORDON, I., 1985. "The Cyclical Variation Between Regional Migration, Employment and Unemployment: a Time-Series Analysis for Scotland", Scottish Journal of Political Economy, Vol. 32, pp. 135-158.
- GORDON, I., 1988a. "Evaluating the Effects of Employment Changes on Local Unemployment", Regional Studies, Vol. 22, pp. 135-147.
- GORDON, I., 1988b. "Inter-District Migration in Great Britain 1980-81: a Multi-Stream Model with a Commuting Option", *Environment and Planning* (Series A), Vol. 20, pp. 907-924.
- GOSS, E., and M. SCHOENING, 1984. "Search Time, Unemployment, and the Migration Decision", Journal of Human Resources, Vol. 19, pp. 570-579.
- GRUNDY, E., 1989. Women's Migration: Marriage, Fertility and Divorce, Longitudinal Study, Office of Population Censuses and Surveys, Series LS No. 4, London: HMSO.
- GRUNDY, E., and A. FOX, 1985. "Migration During Early Married Life", European Journal of Population, Vol. 1, pp. 237-263.
- GUDGIN, G., and S. ROPER, 1990. The Northern Ireland Economy: Review and Forecasts to 1995, Northern Ireland Economic Research Centre, Belfast.
- HARRIS, R., C. JEFFERSON, and J. SPENCER (eds.), 1990. The Northern Ireland Economy: A Comparative Study in the Economic Development of a Peripheral Region, London: Longman.
- HUGHES, G., and B. McCORMICK, 1981. "Do Council Housing Policies Reduce Migration Between Regions?", *Economic Journal*, Vol. 91, pp. 919-937.
- HUGHES, G., and B. McCORMICK, 1985. "Migration Intentions in the UK: Which Households Want to Migrate and Which Succeed?", *Economic Journal*, Vol. 95, pp. 113s-123s.
- HUGHES, G., and B. McCORMICK, 1987. "Housing Markets, Unemployment and Labour Market Flexibility in the UK", European Economic Review, Vol. 31, pp. 615-645.
- HUGHES, G., and B. McCORMICK, 1989. "Migration and Regional Unemployment Rates, 1981-86", Paper prepared for the AUTE Conference, April 1989.
- JEFFERSON, C., 1990. "The Labour Market", in Harris, R., et al. (eds), The Northern Ireland Economy, London: Longman, Ch. 6.
- LICHTER, D., 1980. "Household Migration and the Labour Market Position of Mar-

- ried Women", Social Science Research, Vol. 9, pp. 83-97.
- MAIER, G., 1985. "Cumulative Causation and Selectivity in Labour Market Orientated Migration Caused by Imperfect Information", Regional Studies, Vol. 19, No. 3, pp. 231-241.
- McCORMICK, B., 1983. "Housing and Unemployment in Great Britain", Oxford Economic Papers, Vol. 35, pp. 607-629.
- McCORMICK, B., 1990. "Migration and Regional Policy", Paper prepared for the NEDO Conference, March 1990.
- MAXWELL, N., 1989. "Economic Returns to Migration: Marital Status and Gender Differences", Social Science Quarterly, Vol. 69, pp. 108-121.
- MOLHO, I., 1984. "Distance Deterrance Relationships in Multi-Stream Migration Models", Manchester School, Vol. 52, pp. 49-69.
- MOLHO, I., 1987. "The Migration Decisions of Young Men in Great Britain", Applied Economics, Vol. 19, pp. 221-243.
- MORRIS, C., P. COMPTON, and A. LAKE, 1985. Non-Enumeration in the 1981 Northern Ireland Census of Population, Occasional Paper No. 9, Policy Planning Research Unit, Department of Finance and Personnel, Stormont, Belfast.
- OGILVY, A., 1982. "Population Migration Between the Regions of Great Britain, 1971-79", Regional Studies, Vol. 16, pp. 65-73.
- OSBORNE, R., R. CORMACK, R. MILLER, and A. WILLIAMSON, 1987. "Graduates: Geographical Mobility and Incomes", in R. Osborne, R. Cormack and R. Miller, Education and Policy in Northern Ireland, Policy Research Institute, Queen's University and University of Ulster, Belfast, Ch. 16, pp. 231-244.
- PESSINO, C., 1991. "Sequential Migration: Theory and Evidence from Peru", Journal of Development Economics, Vol. 36, pp. 55-87.
- PISSARIDES, C., and J. WADSWORTH, 1989. "Unemployment and the Inter-Regional Mobility of Labour", *Economic Journal*, Vol. 99, pp. 739-755.
- PISSARIDES, C., and I. McMASTER, 1990. "Regional Migration, Wages and Unemployment: Empirical Evidence and Implications for Policy", Oxford Economic Papers, Vol. 42, pp. 812-831.
- POLICY PLANNING RESEARCH UNIT (1986). Revision of Estimate of Non-Enumeration at the 1981 Northern Ireland Census of Population, SCG(86)2, Policy Planning Research Unit, Department of Finance and Personnel, Stormont, Belfast.
- PPRU, 1991. Northern Ireland Annual Abstract of Statistics, No. 9-1990, Policy Planning Research Unit, Department of Finance and Personnel, Belfast: HMSO.
- SHIELDS, G., and M. SHIELDS, 1989. "The Emergence of Migration Theory and a Suggested New Direction", *Journal of Economic Surveys*, Vol. 3, pp. 277-304.
- STARK, O., 1984. "Rural-to-Urban Migration in Less Developed Countries: a Relative Deprivation Approach", Economic Development and Cultural Change, Vol. 32, pp. 475-486.
- STARK, O., 1991. The Migration of Labour, Oxford: Basil Blackwell.
- TODARO, M., 1969. "A Model of Labour Migration and Urban Unemployment in Less Developed Countries, *American Economic Review*, Vol. 59, pp. 138-148.
- TODARO, M., 1976. "Urban Job Expansion, Induced Migration and Rising Unemployment", Journal of Development Economics, Vol. 3, pp. 211-225.