

In-Migration to Irish Cities and Towns, 1970-71

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Précis: Cities and towns played an important role in internal migration and immigration in Ireland in 1970-71. Gross migration rates were strongly related to estimates of the employment increases in the centres over the year. Canonical correlation analysis shows that the migration process comprised a "general" trend and three specialised aspects. These were related to different characteristics of the cities and towns and to employment increase by industrial sector.

I INTRODUCTION

This paper is concerned with the rates and correlates of internal migration and immigration to Irish cities and towns in the year 1970-71, using the 1971 *Census of Population* data (Central Statistics Office, 1978). The inter-county and inter-regional patterns of migration and their determinants have been analysed by Hughes and Walsh (1980). They examined the role of Dublin and aggregate trends of rural-urban migration but they did not study the function of other towns and cities in the migration process. Overall, urban centres played an important role in internal migration. Centres of 1,500 population or over contained 52.2 per cent of the total population in 1971 but they accounted for 73.7 per cent of the 148,348 people who moved residence or immigrated in the previous year. Changes of residence within the same town amounted to 35.97 per cent of all moves. Of the remaining 94,984 migrants, 58.9 per cent moved to towns or cities and 41.1 per cent to rural areas or centres of less than 1,500 population. Of those changing residence within a county (generally over shorter distances), 49.5 per cent moved to towns. Some 67.3 per cent of those migrating across county boundaries (generally longer-distance migrants) and 61.2 per cent of immi-

grants moved into urban centres. In fact, these figures probably underestimate the role of urban centres in Irish migration flows. Census statistics include officially-defined towns together with their suburbs or environs, but exclude commuters living outside the built-up areas. As a result, many cities and towns are seriously underbounded, and many migrants to "rural" areas are certainly commuting to and working in urban centres.

II DATA

The town migration data have several shortcomings for a comprehensive analysis. They distinguish four separate types of movement: the numbers of migrants to each city and town from within the same county, from another county, and from abroad, and the numbers who changed residence within the centre. The inter-county migrants are not disaggregated by county of origin, so while these have generally moved longer distances than intra-county migrants, they can vary considerably and are only a fairly crude surrogate for longer-distance migration flows. There are no available data on out-migrants from each centre so it is not possible to examine net migration. All migration rates in this paper are gross of any outflows to other urban centres or to rural areas.

The data are available for each of the 114 cities and towns which had a population of 1,500 or more in 1971. This detailed breakdown has both advantages and shortcomings. It reveals the migration patterns to even small towns which might be expected to function only as local service centres. In the case of the cities, however, satellite and dormitory towns are treated as if they were independent entities and it is very difficult to distinguish between internal movement in the city regions and migration from other parts of the country.

The most serious data shortcomings in this paper are not in the migration figures themselves but in respect of the features which might be expected to attract migrants to the towns. The lack of information on the exact origins of the migrants means that a push-pull model cannot be used since the push factors in the place of origin are unknown. The pull factors are the characteristics of the towns in 1970 and the changes which occurred during the following year. (These are described below.) These data must be estimated from the five-year changes shown in the censuses of 1966 and 1971, as no satisfactory data are available otherwise for 1970. Constant rates of change were assumed over the five-year period and the data were adjusted accordingly. It is likely that growth rates were higher in 1970-71 than a few years earlier so this probably underestimates the actual change which occurred during the year in question.

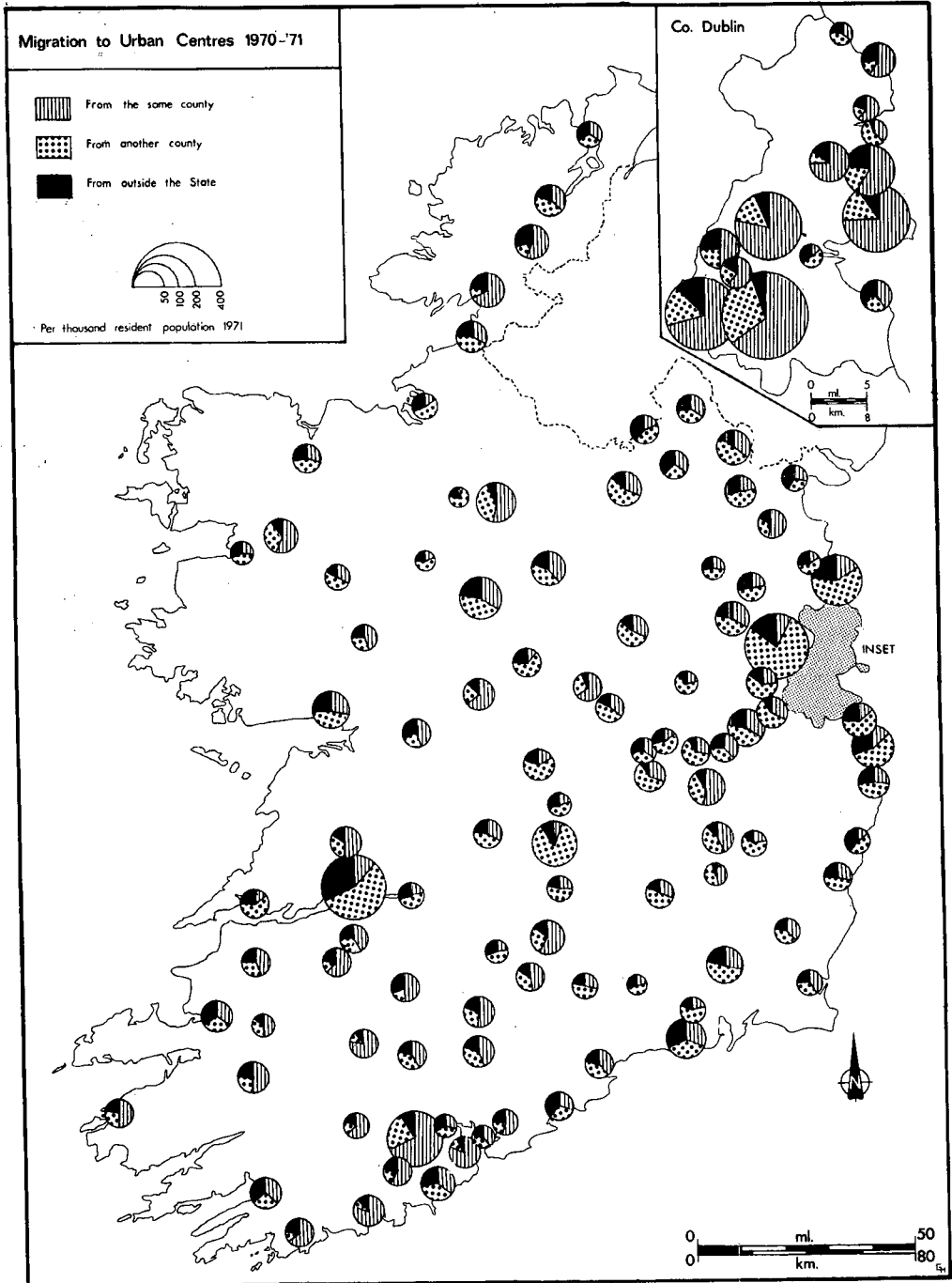
III MIGRATION RATES AND EMPLOYMENT GROWTH

The mean in-migration rate for the 113 centres (excluding Portrane in Co. Dublin which is mainly a hospital centre) was 57.6 per thousand with a standard deviation (s) of 54.1. This was composed of 25.7 per thousand from the same county (s=42.8), 20.4 from another county (s=20.1) and 11.5 from outside the state (s=9.6). In addition, an average of 19.8 per thousand of the resident populations changed address within the same towns (s=11.9). Migration rates from the three sources were not strongly correlated; same county and other county inflows correlated .09, and foreign immigration correlated .26 ($p < .01$) and .59 ($p < .001$) respectively with them.

The cities of Dublin, Cork and Limerick had low rates of in-migration (only 24.1, 28.4 and 35.7 per thousand respectively) although most of these came from other counties or from abroad. In contrast, the towns surrounding them had very high rates of migration, particularly those near Dublin where movement from the city to the nearby towns was very important. The distribution of migration rates is shown in Figure 1.

In general, towns in the midlands and on the west coast had low rates. Overall, the pattern is very similar to the classification of middle-sized towns by Curtin *et al.* (1976, p. 66), in that towns identified as growing fastest and having the highest growth potential also had the highest rates of migration. That study was based on principal component analyses of variables describing the towns' social, economic and demographic structure. One component was a combination of favourable characteristics and was identified as town "goodness". Scores on the component for 96 centres (which were published in the study) correlated .63 with migration from the same county, .50 with other county migration and .63 with immigration from abroad. However, as in the present study, much of the growth of the middle-sized towns was interpreted as not being autonomous but associated with the development and spread of the main cities.

Hughes and Walsh (1980) have shown the importance of employment opportunities in inter-regional and inter-county migration flows. Migration to urban centres also was strongly affected by employment change (Table 1). The estimated percentage employment change in 1970-71 explains over 75 per cent of the variation in in-migration rates. The b-coefficient shows that each percentage point increase in employment increased the rate of migrants by over eight per thousand, although since the actual employment increase was almost certainly higher than estimated here, the coefficient probably over-estimates the migration increase. The relationship between employment change and each of the three separate migration rates is also significant. According to the coefficients, each percentage point increase in



employment attracted almost six additional migrants per thousand from the same county and almost two and one per thousand from another county and from outside the state.

Table 1: *Regressions of migration rates on percentage employment change, 1970-71*

<i>Origin of migrants</i>	<i>Intercept</i>	<i>Slope</i>	<i>b</i>
From the same county	11.7	5.6	.70
From another county	16.0	1.8	.46
From outside the state	9.2	0.9	.51
From all sources	36.9	8.3	.81

IV THE DETERMINANTS OF IN-MIGRATION

There has been an enormous number of studies of the determinants of migration. These have shown that many considerations influence the decision to move. Economic motivations are probably the most important, but there are also social, familial and purely personal considerations which encourage people to migrate and which influence their choice of destination. The present analysis will be confined to economic factors, partly because of the lack of other kinds of data (particularly as the origins of the migrants are largely unknown), but also because of the importance given to employment creation in the regional development policies of Ireland.

The employment data used are of two types. The first is the composition of the labour force in each of the cities and towns, as shown by the percentages employed in each of the major non-primary industrial groups used by the CSO. These kinds of data have been widely used in studies based on Neoclassical Equilibrium Theory to examine the influence of inter-place wage differentials (Gober-Meyers, 1978). In general, they have not been very successful. In the Irish case, however, there is evidence that the employment composition of middle-sized towns is related to their rates of growth and growth potential. Curtin *et al.* (1976) have shown that population increase between 1961 and 1971 was related to employment levels in the professions and manufacturing industry, and negatively related to the commerce, transport and labouring groups. In fact, the distinction between places with high employment in manufacturing industry and those which were more dependent on services seems to be central to the different types of towns, identified by their cluster analysis. In the present study, it is expected that centres with high employment in manufacturing and other growth industries will have higher rates of in-migration, whereas the towns where services are dominant will attract fewer migrants. Also, since the various industrial groups have

different rates of intra- and inter-county mobility, the analysis may show that employment composition varies in its importance for the different types of migrants.

The second type of employment data used as predictors are the estimated employment changes in each of the industrial sectors in 1970-71. According to Gober-Meyers (1978), data of this type are one of the post-neoclassical modifications which have become more important in migration research over the past twenty years. These view migration as being induced by differential rates of change rather than by static differences between places in variables like wage levels or employment composition. In general, these models have been more successful than the older ones. In the case of Ireland, this paper has already shown that employment increases in the towns did induce migration, and Hughes and Walsh (1980) have shown that income and employment growth are more important than unemployment rates in explaining inter-regional migration flows.

There are five other town characteristics used as predictors. Two of these are estimates of the 1970 population and labour force of each centre (converted to common logarithms to reduce the effect of outlying observations). In general, larger centres attract more migrants, and although the larger cities themselves had relatively low rates, the larger towns may have more in-migration than the smaller centres. The third characteristic is a zero-one variable indicating whether a town is a main local authority centre for its county. Clerical workers had particularly high mobility rates in 1970-71 and it would be expected that the local authority offices would be important destinations for them. The fourth variable is also a dummy, denoting whether a town is "designated" for larger grants and greater incentives for industrial development than were available in the more developed parts of the country. It might be expected that these centres would have higher in-migration rates as a result of that, although Ross (1978) has suggested that the differential advantages in the designation policy have been eroded over the years. The fifth variable is the distance of each town from a city of 50,000 population or over. This should identify the influence of the larger cities on migration to nearby centres, as this appears to be quite important (see Figure 1).

It would be ideal if the individual contributions to the migration rates of employment change in each sector could be examined together but the data are not of sufficient quality to allow this. The change estimates are very strongly intercorrelated¹ and the collinearity is excessive for multiple regression models. There is also the problem of specifying which employment

1. For the ten non-primary industrial groups used by the CSO, the root mean square of the 45 inter-correlations of the employment change estimates was .55. The correlations were also very high when the number of groups was reduced by amalgamating some of them.

changes were truly exogenous to in-migration, although it could be argued that there would be very little employment increase caused by migration in the short term of one year. Several equations were estimated from the data but the coefficients were unstable, many signs were unexpected, and errors were so large that the models were useless for prediction. The relationships between the migration rates and the town characteristics were analysed instead through canonical correlation. This technique is a form of principal components analysis which reveals the relationships within and between two sets of variables (criteria and predictors) by extracting components which maximise the correlation between linear combinations of the two variable sets. As in ordinary principal components, the canonical components are extracted in decreasing order of magnitude and are uncorrelated with each other (Tatsuoka, 1971). The coefficients cannot show the effect of employment change on migration rates, but the analysis does examine the total relationships between migration and town characteristics without the problem of multicollinearity.

The structure matrix in Table 2 shows the linear correlations between the original variables and the canonical variates. These can be interpreted as analogous to loadings in principal components analysis and are the best means of interpreting canonical correlations (canonical weights, whether standardised or not, are very difficult to interpret). The four correlations are strong and highly significant.

The first is particularly related to intra-county migration among the criteria, but it also picks up the common trends which inter-county movement and immigration share with it; it can be viewed as a "general" migration variate. The structure correlations among the predictors show that this general migration is only slightly affected by the characteristics of the destination towns. It does not correlate with the size of their populations or labour force, with either of the dummy variables, or with proximity to the larger cities. The employment composition variables show that towns with high levels in building and construction, and insurance, finance and business, did attract more migrants. On the other hand, high employment in commerce and professional services were related to lower rates of in-migration. The commerce variable identifies those service towns which have been relatively static or declining since the 'twenties and which would be expected to attract fewer migrants, but the professional services variable is more difficult to explain. The professions had high mobility rates in 1970-71, and it may be that they moved to towns which were poorly served at that stage in search of greater opportunities. Overall, though, the correlation is too weak to draw any strong inferences and it may be only a spurious relationship. The remaining structure correlations are not ambiguous, however. They show the strong and consistent influence of employment growth on this general

migration variate. The strongest relationships are with change in commerce, transport, the professions, and manufacturing industry, all of which had

Table 2: *Canonical correlation structure matrix of migration rates and town characteristics*

Variable sets	Canonical correlations			
	1	2	3	4
<i>Criteria</i>				
Migration from the same county	.84			.48
Migration from another county	.56			-.82
Immigration from outside the state	.66	.65		
Internal movement		.59	.78	
<i>Predictors</i>				
1970 Population (log)			.56	
1970 Employment (log)			.55	
Local authority centre (dummy)			.45	
Designated (dummy)			-.42	
Distance from a city of 50,000+ population			-.25	
Per cent employment (1970) in:				
Manufacturing		.30	.22	
Building and construction	.30	-.23		
Commerce	-.33	-.27	-.27	.32
Insurance, finance and business	.38	.28		.25
Public administration and defence		-.22		-.23
Professional services	-.23			
Personal services		.26		
Employment change (1970-71) in:				
Manufacturing	.73			
Building and construction	.64			-.24
Electricity, gas and water supply	.63			-.38
Commerce	.88	-.25		
Insurance, finance and business	.70			
Transport, communication and storage	.80			
Public administration and defence	.67		.23	
Professional services	.77			
Personal services	.61			.35
Recreational services	.44			
Canonical correlation	.909	.814	.737	.667
Wilk's lambda	.014	.085	.254	.555
Chi-square	408.4	238.6	133.0	57.0
Degrees of freedom	100	72	46	22

Only correlations which are significant at the .01 level are shown.

relatively high intra-county migration rates. The weakest correlation is with change in recreational services, but, together with personal services, this was a declining category and did not provide many employment opportunities. Overall, therefore, the first canonical correlation shows that migrants in general were attracted by job opportunities in every industrial sector and only to a slight degree by characteristics of the towns themselves. This supports the findings of Hughes and Walsh (1980) and also the general trends in migration research (Gober-Meyers, 1978).

The second canonical correlation is related to those aspects of immigration which differ from the general migration variate, and, to a lesser extent, to residential mobility within the towns. In contrast to the first, these are largely determined by the employment composition of the centres. The correlations show that immigrants were attracted to towns with high employment in manufacturing industry. This probably was due partly to foreign personnel being transferred to subsidiaries in Ireland and partly to returning emigrants attracted to manufacturing towns. They were also attracted to centres with higher levels in insurance, finance and business, and personal services. Conversely, immigrants were repelled by towns with high levels in commerce, building, and public administration and defence. This was probably a combination of the static nature of many service towns and the fact that positions in public administration were closed to most immigrants. Thus, immigration seems to have been more selective in nature than the general migration variate, which was more of a blanket response to employment growth.

The third canonical variate is exclusively related to internal movement within the cities and towns among the criteria. The correlations show that this was highest in the larger centres, with larger labour forces, and in local authority centres. It was also likely to be lower in the designated towns of the western part of the country and in those at greater distances from the cities. Clearly, the designated towns are smaller, more remote, and less developed, and one would expect their residents to be less mobile, but this is the only effect which the dummy variable has. Its lack of influence on any of the three migration variables tends to confirm, at least as far as attracting migrants is concerned, Ross's (1978) suggestions about the erosion of the advantages of designation. The correlations for internal movement again show the disparity between the manufacturing towns and the service centres.

The fourth canonical variate is especially related to inter-county migration among the criteria. This is positively related to higher employment in public administration and defence, reflecting the fact that workers in that sector had the highest mobility rate between counties (over three times the national average) of all industrial groups in 1970-71. Inter-county movement was

inversely related to employment in commerce, finance and business, showing once again that the role of the service towns in the migration process was fairly limited, aside from the additional job opportunities created in them.

Overall, the four canonical variates decompose the migration process into its different parts. The first shows the general migration trend, dominated especially by local, intra-county movement, and the influence of employment increase on it. The other three variates identify the unique elements in immigration, inter-county, and internal movement and their responses to particular aspects of the town characteristics, their employment compositions, and employment change.

V CONCLUSION

The 1979 *Census of Population* (Central Statistics Office, 1980) contained data only for towns with legally defined boundaries. Many of the "census towns" with populations exceeding 1,500 in this paper were not included, but, on the basis of the centres which were, the migration trends of 1970-71 seem to have continued since then. The population of Dublin County Borough declined in the eight years by 4.1 per cent but the population of the surrounding area increased considerably, reflecting the migration trends to the nearby towns. The cities of Cork, Limerick and Waterford continued to grow, but at rates well below the national rate. Their adjacent areas grew more rapidly, however, as their dormitory towns continued to receive migrants from the cities. Almost all of the other towns grew in the period 1971-79, most of them at rates higher than the growth rates in their counties. Even those centres which seemed to lose population experienced population growth in their surrounding areas as their built-up and commuting zones spread outside their legal boundaries (e.g., Athlone Urban District declined by 0.5 per cent but the three contiguous District Electoral Divisions together grew by 92.3 per cent). Even if the rates of natural increase were considerably higher in the towns than in the countryside during the 'seventies, a significant part of their population growth must have come from migration.

It would seem that there are three policy implications of migration to urban centres. The first, which has not been considered here, concerns the primacy of Dublin. This has received considerable attention during the 'seventies (Dublin Planning Department, 1975; Bannon, Eustace and Power, 1977; O'Farrell, 1979), and will not be repeated except to note that no comprehensive programme to tackle the problem has yet been suggested, let alone adopted. The second implication concerns the growth of the other cities if they are ever to reach a level at which they can counter-balance the dominance of Dublin, as suggested by O'Farrell (1979). For this it will be necessary for them to attract migrants from well outside their immediate

areas. In 1970-71 their gross in-migration rates were relatively low (although the issue is somewhat confused by their satellite towns). A reliance on manufacturing industry alone will not be adequate to increase their migration rates sufficiently, as workers in manufacturing had relatively low rates of inter-county migration ten years ago. It was administrative, clerical, professional and technical workers who were most mobile across county boundaries and it is these which must be attracted to the smaller cities if they are to counter-balance Dublin. Finally, there are the medium-sized and smaller towns. Excluding those with urban influences, their in-migration rates were relatively low but they did attract migrants, and their local roles are probably far more important than migration or growth rates would suggest. Manufacturing workers had intra-county migration rates slightly above the national average in 1970-71 and the Industrial Development Authority policy of dispersing manufacturing industry to the smaller towns means that local job opportunities can attract migrants from the nearby areas. Service and ancillary jobs should also induce migration as all of these industrial groups had local migration rates above the national average. The *desirability* of attracting migrants to live in towns as opposed to encouraging commuting from rural areas to work in towns is a matter which would require careful consideration. It is generally argued that commuting helps to diffuse the economic benefits of developments in towns into their rural areas although the evidence to support such "spread" effects is weak (Friedmann and Weaver, 1979). Against this must be set the economic and social costs of commuting. Distances travelled to work in smaller towns are considerably higher than in the cities (in 1971 the mean distance for all modes of travel, excluding walking, was 8.7 miles for towns of 3-5,000 population, 8.5 miles for towns of 1,500-3,000, against an average of 4.8 miles in Dublin and 4.4 in the other county boroughs).² This seems undesirable in a time of energy scarcity and ecological pressures on the countryside and would be alleviated through a policy of encouraging short-distance migration to the smaller towns and service centres.

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2. These data were calculated from the grouped journey-to-work data prepared by the CSO from the 1971 Census (Table 7A in the unpublished volume). A mid-point of 35 miles was used for these travelling "30 miles and over".

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