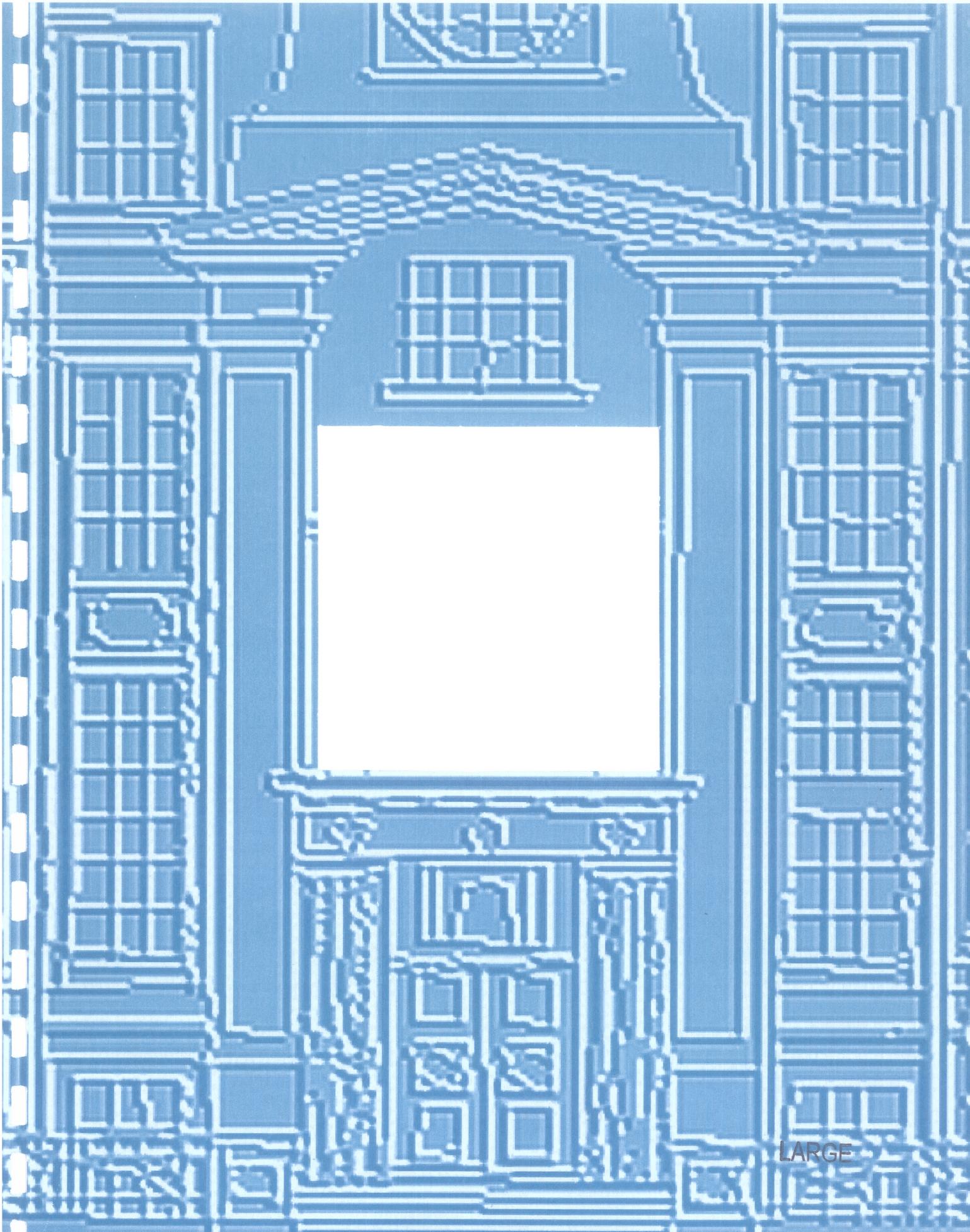


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INTERNAL MIGRATION AND  
REGIONAL POPULATION  
DYNAMICS: What Data Are  
Available in the Council  
of Europe Member States?

*Philip Rees and  
Marek Kupiszewski*

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## **WORKING PAPER 96/1**

**Philip Rees and Marek Kupiszewski**



**School of Geography  
University of Leeds  
LEEDS LS2 9JT, UK**

### **INTERNAL MIGRATION AND REGIONAL POPULATION DYNAMICS: WHAT DATA ARE AVAILABLE IN THE COUNCIL OF EUROPE MEMBER STATES?**

**Paper presented to the European Population Committee of the  
Council of Europe, Strasbourg, 18.10.1995**

**Leeds 1995**



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## **ABSTRACT**

This paper reports on the results of a survey of the National Statistical Offices of the member states of the Council of Europe, in which data on the kinds of internal migration data available were gathered. A key finding of the survey is that there is a great deal of detailed data on migration within countries that could be used to produce a comparative set of measures of migration. Of the 28 countries surveyed, half produced migration data mainly from Registers, while 4 countries relied principally on the Census as a source for internal migration information. Six countries reported that internal migration could be derived from both Registers and Censuses. Two countries depended on a comprehensive survey of migration, while another two used a mixture of Census information and sample survey. The special features of internal migration data provided in non-European Union countries, not previously described, are outlined in section three.

Based on the survey and a review of the literature on crossnational studies using internal migration data in section four of the paper, the paper concludes with an assessment of what research questions can be answered using the data available and tries to estimate the level of resources that might be required.

The Summary tables at the end of the paper contain a wealth of information about the nature of the internal migration produced by Council of Europe member states, using a migration cube framework developed by Willekens and Rees.

# INTERNAL MIGRATION AND REGIONAL POPULATION DYNAMICS: WHAT DATA ARE AVAILABLE IN THE COUNCIL OF EUROPE MEMBER STATES?<sup>1</sup>

Philip Rees and Marek Kupiszewski

## 1. BACKGROUND TO THE RESEARCH

This paper is a revised version of the report prepared for the Council of Europe on the possibilities for carrying out a comparative study of internal migration in the Council of Europe member states. Such details as pricing of the data and specification on what media they are available have been removed. Otherwise the working paper presents our findings in the way they were presented to the European Population Committee of the Council of Europe.

A comparative study of internal migration which is, likely to cover more than 30 countries, should not be undertaken lightly given the complexity of the phenomenon and the variation in types of data available. Several successful comparative studies of internal migration have been carried out or are ongoing, but none of them cover as many countries as are represented in the Council of Europe.

### 1.1 The definition of internal migration

Let us begin by defining what we mean by *internal* migration. Internal migration is the movement of people between permanent residences within the territory of the country. There are several aspects involved: the role of space, the role of time, the actors involved and their characteristics.

*The role of space.* Some students of migration have placed restrictions on the definition, for example, by defining migration to be non-local and migration to be between localities. There is, however, great difficulty in defining what a locality should mean in different countries. Tying the definition of migration to a certain spatial scale prevents the researcher from using the only strictly comparable measure of internal migration, namely, change of residence. It is, however, important to recognise that the meaning of migration shifts as the spatial extent increases. The probability that the change of residence for the migrant household will also mean a change of job and workplace increases as the distance of the migration increases. It is also well known that the distance between places influences the volume of migration between them. One interesting development in the 1990s is the increasing freedom of movement between European Union member states. These international migration streams are becoming more like internal migration and are now being treated differently from other international migration in European Union national and regional projections (Cruijsen, personal communication).

*The role of time.* In migration studies the role of time in measuring the phenomenon is crucial. When does a temporary migration become a permanent one? This was a particular problem in some Central and European states in which migrants had to acquire residence permits in order to move. Temporary permits were much easier to obtain than permanent and so much temporary migration was disguised permanent migration. The time period of measurement also affects the level of migration when a

<sup>1</sup> This study was prepared at the request of the Council of Europe. The Authors wish to thank the European Population Committee (CDPO) Bureau and its Secretariat for their co-operation and support without which the completion of the study could not have been possible. We are grateful in particular to Mr. Franco Millich for his support. Christine Hudson and Maureen Rosindale in the School of Geography helped with producing the final version of the report and Alistair French and Allison Manson prepped the figure.

retrospective question is asked in a census or survey. There is a non-linear relationship between the level of migration measured and the time interval of the question because of return and repeat migration.

*The actors involved.* Migration can be undertaken by individuals or by small groups, such as households. Most statistics provide information about migrants as individuals, though most migrants move as part of larger households.

*The characteristics of migrants.* To understand the nature of migration it is necessary to know what kinds of people are taking part. The most crucial attributes are those of sex and age: Migration is associated with major transitions in the life course that persons or households go through, which are associated or linked to their age. Other socio-economic attributes are also important though there is much less information on a crossnational basis.

These four dimensions need to be borne in mind when carrying out comparative cross-national research.

## 1.2 How the political and economic situation influences migration

Knowledge of internal migration is crucial in the construction of population change accounts for subnational areas within countries and in the forecasting of that change. However, migration has a wider significance because it is a reflection of economic and social processes at work.

Among researchers who specialise in migration there is little doubt that regional differentiation in the economic situation and the level of the quality of life have profound impact on migration decisions. The evidence is scattered in vast literature and will not be discussed here. Some examples of the impact of the economic situation on mobility will be given below and areas of possible research will be identified.

Per capita GDP varies substantially across Europe's regions (see European Commission 1994a, Maps 8 and 25). For example, for Germany GDP per capita oscillates between more than 127% of the EU average in Bayern to less than 73% of the EU average in all former East German Länder. Similar differences exist between the North and South of Italy and in Central Europe where urban centres are witnessing very fast economic growth whereas some rural peripheries suffer from stagnation or further decline.

Another important factor which may trigger migration is unemployment (see European Commission 1994a, Maps 11, 26 and 27). In the EU countries the largest differences can be observed in Italy and to a lesser extent in Germany. Similarly large differences may be observed in Central and East European countries, where in many cases the unemployment growth is in reverse proportion to the size and centrality of location and, at least in Northern part of the region, increases from West to East.

The reaction of population, in terms of migration, has varied substantially from country to country. In wealthy European countries migration flows clearly lead from poor to rich areas (Rees, Stillwell, Convey and Kupiszewski, 1996). This phenomenon has been clearly documented in the case of Germany (Gatzweiler and Bucher 1996), France (Baccaïni and Pumain 1996) and Italy (Bonaguidi and Terra Abrami 1996).

The populations of the poorer countries of Central and Eastern Europe often reacted differently. For example, in Romania we saw a reduction in mobility over the last decade (Berinde 1995). Also in Poland in the eighties we witnessed a reduction in the internal mobility of population which Potrykowska (1989) attributes one third to the changes in the age structures of Polish population and two thirds to economic decline and an inadequate, inflexible housing market. Korcelli (1988) suggests that in fact internal migration in Poland is controlled by constraints rather than driven by opportunities.

It is important from both a theoretical and a practical point of view to examine these different patterns of reaction. There is plenty of evidence in developed, wealthy countries that economic prosperity attracts migrants. A hypothesis to be examined is that in less developed and poorer countries, such as the former communist block countries this effect is suppressed by a shortage of housing and relatively high costs of a move. This is an important issue as it has a direct relevance to the problem of the adjustment of labour supply to labour demand.

A rapid increase in international mobility at the end of the eighties and in early nineties is a well known phenomenon. However, little attempt has been made to link internal and international mobility. One may propose the hypothesis that reduced internal mobility in Central and Eastern Europe has been replaced with a hectic international migration from the region. Confirmation or rejection of this hypothesis may be significant for formulation of migration policies in the countries concerned.

Political issues have much more limited impact on internal migration than on international migration. In contemporary Europe at least two political developments are important. The first is Yugoslav war which has caused the largest forced migration since World War II. However, as the countries concerned (Croatia, Serbia and Bosnia-Hercegovina) are not members of the Council of Europe it is legitimate to leave this issue aside. The second problem is the effect of the freedom of movement within European Union on internal migration. In other words we should know if and to what extend intra-Union international migration has replaced internal migration.

### 1.3 Aims

Given this background, what are the aims of this report? They are two in number: (1) to survey and describe the data resources available for the study of internal migration in each of Council of Europe members, and (2) to put forward options for the kind of research that can be carried out with these data.

### 1.4 The questionnaire on internal migration

To fulfil the first aim a questionnaire was prepared and sent to the Central Statistical Offices of each of the Council of Europe states. The questionnaire asked for information about the data collected within each country using one of the three principal instruments, namely, Registers, Censuses and Surveys. The questionnaire consisted of a set of ten tables which contact persons at the Statistical Offices were asked to fill in, where appropriate. The questionnaire tables are in a very similar form to the tables presented in this report (Tables I to X) and so are not reproduced here. The Central Statistical Offices provided rapid and helpful returns, for which we are very grateful (see the Appendix for the names and addresses of contact persons). A first draft of the report was sent to the national statistical offices of all 28 member states, and numerous comments were received which have been incorporated in this document. This procedure was repeated again and in this version comments received as a result of circulation of the second draft have been included.

The structure of the questionnaire is based on concepts developed in previous comparative work carried out in the 1970s and 1980s at the International Institute for Applied Systems Analysis (IIASA) under the direction of Andrei Rogers (Rees and Willekens 1986). The first concept is the "migration cube" or three dimensional array of migration flow data needed for input to multiregional population projection models (Figure 1). The three dimensions of the cube are *origin*, *destination* and *age*. Very often only data corresponding to the faces of this cube are available: the matrices of migration by origin and destination, by origin and age, and by destination and age. For systems with very large numbers of regions the migration cube will be largely empty so that estimates of its contents are better made from the face information. So, we have a table that records on the detail at which origin-destination matrices are reported (Table I) and the detail at which origin-age and destination age matrices are reported (Table II and III respectively). These tables also ask whether migration data are broken down by sex: information on the two sexes is essential for any regional projection work.

The second finding from the IIASA work was that it was very important to make a distinction between migration data recorded as relocation events (information typically derived from the change of address records of Population Registers) and migration data recorded as persons making a relocation transition over a fixed time interval (information typically derived from retrospective questions in censuses or household surveys). Tables I through VI in the questionnaire and this report refer to Registers while Tables VII and VIII refer to Censuses and Surveys.

We now describe the results of the 28 country survey of the availability of data on internal migration in general terms in the next section while highlighting features of individual country data in Eastern Europe and countries not member states of European Union, which may not be well known, in section 3.

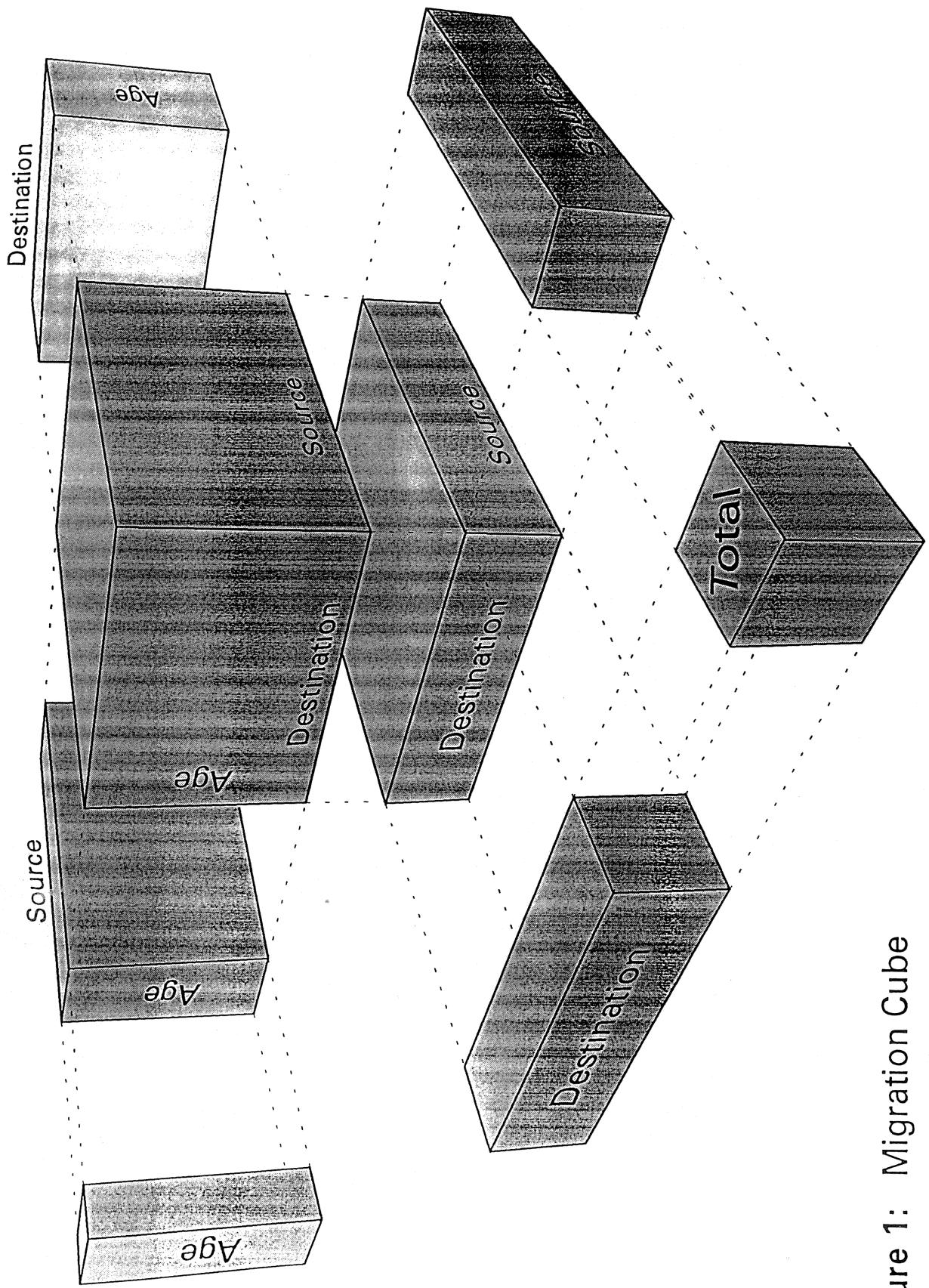


Figure 1: Migration Cube

## **2. DATA AVAILABILITY AND COMPARABILITY IN COUNCIL OF EUROPE MEMBERS**

The tables summarising the returns from the survey are positioned as a block at the end of the report for ease of reference with consolidated notes at the end of the set of tables. The tables have some general features which are described initially before a more detailed account of each table findings is given. The rows of the table refer, in blocks, to the countries surveyed. The columns refer to features of the data potentially available. In Tables I, II and III only those countries are listed which provide migration data from registers, while in Tables VII and VIII only those countries with censuses or surveys providing migration data are listed. Table X summarises the information about the spatial scale at which migration data are reported.

Table A on the next page summarises the source of migration data and provides a complete list of countries. The majority, some fourteen use registers as their only source of information, while four mainly use periodic censuses. Six countries, Hungary, Romania, Slovenia, Spain, Switzerland and the United Kingdom, have access to both registers and the census as sources. Both the Czech and Slovak Republics use a migration survey for inter-area migrations. The survey is comprehensive but not linked to a population register. Ireland and Portugal rely on the Labour Force Survey (a common survey across European Union countries) for migration information. Portugal uses also Census data. There is a question on migration in the latest Eire census (1991) but no migration tabulations have been made as yet.

There is a clear implication of this concentration on the register as a source: it is that a comparative study of the socio-economic characteristics of migrants is not possible, because only censuses, in general, provide the information on such migrant attributes. There are countries which use unique identification numbers for every individual living in the country which can be used to match information in different registers to obtain socio-economic information for internal migrants. This is possible, for example, in the Nordic countries. However, it will be some time before other registration systems provide such sophisticated data linkages. The alternative might be to use a common survey such as the Labour Force Survey (LFS) which enables migration status to be crosstabulated against other characteristics, but the LFS is only common to European Union countries. The sample nature of such surveys means that the spatial detail is coarse and the confidence band around any statistic for a subnational area rather wide. The only feasible comparative study is one that is restricted to the demographic attributes of age and sex, and which deals with the socio-economic linkages at a macro rather than micro scale.

### **2.1 Register data: the full matrix of migration flows (Table I)**

It is clear from Table I that there is a wealth of migration flow (interaction) data available across Europe, which has been hardly touched upon in academic or governmental research. In most of the countries flow matrices are available down to the district scale (see the Spatial units column). By district we mean the unit of local government which provides a wide range of services for its inhabitants. Data are available for ten or more so years in many countries, though the time series are rather

**Table A: The principal sources of migration data in Council of Europe members<sup>a</sup>**

Register Mainly	Census Mainly	Register & Census	Migration Survey <sup>b</sup>	Census & Survey
		1. Austria		
2. Belgium				
3. Bulgaria			4. Czech Republic <sup>b</sup>	
5. Denmark				
6. Estonia				
7. Finland				
	8. France			
9. Germany		10. Greece		
		11. Hungary		
12. Iceland				13. Ireland
14. Italy				
15. Latvia				
16. Lithuania				
17. Netherlands				
18. Norway				
19. Poland			20. Portugal	
		21 Romania		
25. Sweden			22. Slovak Republic <sup>b</sup>	
		23. Slovenia		
		24. Spain		
		26. Switzerland		
	27. Turkey			
		28. United Kingdom		
14 countries	4 countries	6 countries	2 countries	2 countries

**Notes to Table A:**

- a. The table indicates the main sources of information used to study internal migration in the countries listed. Many countries may have additional data sources (e.g. one-off or annual surveys which are not listed, such as the Labour Force Survey in EU members). Such additional sources are not taken into account unless they are the principal sources for internal migration informations (as in Ireland).
- b. By Migration Survey in the Czech and Slovak Republics is meant a comprehensive set of survey questionnaire returns for migrants moving between municipalities/communes or between municipalities and foreign countries. In effect, the survey is a register of inter-area migrations without linkage to a population register.

short for countries created or united after the fall of the Iron Curtain (Estonia, Germany, Latvia, Lithuania), though data for earlier years may be available. In Estonia the migration event data are preserved in the State Statistical Office from 1986, but await processing at regional level.

The existence of flow matrices at a quite fine spatial resolution means that in a comparative study use of a coarser, but more comparable network of areas is very easy in these countries. The finer scale matrix can be aggregated. It also means that migration intensities (occurrence-exposure rates) can be measured at a variety of spatial scales and related to the number of areal units and their population size: a replication of the work of Courgeau (1973) on overcoming the distorting effect of space on migration measures would be possible, for example.

In some countries migration flow matrices are available by quarter or month but in most only annual data are available. Annual data have the advantage of avoiding the seasonal fluctuations characteristic of migration. The existence of some long time runs suggests that an analysis of the stability of interaction patterns would be possible.

The picture in terms of availability of age and sex breakdowns of migrant flows is mixed. The larger the spatial scale the higher the probability that some age classification would be available, but for finer spatial scales such breakdowns probably result in too sparse arrays.

The data sets involved for flow matrices are quite large and there are rather few matrix datasets on the shelf (already created). So any comparative work involving examination of the interaction of origin, destination, age and sex in influencing migration over time would have to be confined to those countries where the data are known to be in good shape. For example, data from Italy, the Netherlands and the United Kingdom were used in a Migration Scenarios project for Eurostat and the European Commission (van Imhoff *et al* 1995, Rees 1995).

## 2.2 Register data: in- and out-migration tables (Tables II and III)

Information on total in-migration to and information on total out-migration from areas have been combined because they are identical. The table is organised in the same way as that for migration flows, but is fuller because all countries with registers can provide the total inflow and outflow data. The time series for which data are available are longer and a sex and five year classification is provided for virtually all except the smallest regions (such as Swedish parishes) or the shortest time periods (e.g. monthly in Lithuania).

Frequently, single year of age data have been generated or could be provided down to quite small spatial units (e.g. municipalities in Norway or Iceland). Even where the data are based on a health service register rather than a population register as in the United Kingdom, migration tables by single year of age can be generated. Single year of age data are clearly important in both preparing population accounts for annual periods or in carrying out population projections where it is important that age interval and time interval match. So here we have a data set that is quite comparable and widely available. However, there are likely to be substantial costs in obtaining machine readable versions of the migration statistics for analysis. Even when costs can be reduced by using the published version of the statistics, there are likely to be substantial data re-entry costs (for keying the numbers into computer readable files).

## 2.3 Other data from population registers

In the questionnaire we included tables requesting information on the total number of migrations, on net internal migration and on population change and its fertility, mortality and net international migration components. Most respondents rightly pointed out that this information, though readily available, was not needed. The migration total figures for the country could be obtained by summing the appropriate

counts of migration for subnational areas. Net internal migration could be obtained by differencing in- and out-migration totals.

#### **2.4 Census data: tables available**

In Table VII in the questionnaire we asked about the dates of the most recent census and the one previous to that. In Table VIII we asked for details of the data available on internal migration from the census in a similar form to that requested for the Register data. This information is presented in combined Tables VII/VIII.

Twelve countries out of 28 make use of censuses to provide information about internal migration. These are Austria, France, Greece, Hungary, Ireland, Portugal, The Slovak Republic, Slovenia, Spain, Switzerland, Turkey and the United Kingdom. For four of these, Austria, France, Greece and Turkey, this is the only or main source, while Hungary, Slovenia, Spain, Switzerland and the United Kingdom derive internal migration from both registers and censuses. Ireland has in the past produced migration tables from the census but currently relies on the Labour Force Survey. Portugal derives migration data from Censuses and Labour Force Surveys.

Tables VII/VIII make clear one advantage of a census for measuring migration: migration into and out of very small geographical units can be tabulated. For example, in the United Kingdom a flow matrix for wards (England and Wales) and postal sectors (Scotland) is produced. There are 10,933 of these, while migration information is available in Spain for 31,881 *sección* areas. Detailed mapping of information at this scale can be very revealing of the pattern of population movement. The sections of the map of European population change published in European Commission (1994b, Map 6, pp.32-33) at very fine geographical scales (NUTS-5 in Belgium, France, Italy, Spain for example) are far more revealing of the processes of population redistribution than those parts where only NUTS-3 information was available (e.g. in Germany, United Kingdom, Netherlands).

We did not structure our census questionnaire table in quite as detailed a way as those for migration. However, it is probable that for the finely disaggregated flow matrices a single year age disaggregation is not available though a five year one is. Extensive tables of in-migration and out-migration are available for a variety of spatial scales so that the relationship between migration and spatial scale can be studied in detail. There are also likely to be many tables providing other crosstabulations of migrants, by marital status, ethnicity, nationality, economic position, occupation, household composition and so on. Wide use of such tables has been made by researchers in both France and the United Kingdom, for example.

The one major incomparability between the data sets is the difference between their time spans of observation (the time intervals in the migration question in the census). Austria, Switzerland and Turkey ask five year questions, in the latter case linking back to the immediately previous census. Ireland and the United Kingdom ask 1 year questions and so provide migration information for a tenth of the intercensal time interval (1981-1991). Portugal asks both one and five years questions. Hungary asks a ten year question, again to link two successive censuses together. Spain asks one, five and ten year questions providing a comprehensive picture of migration over different time intervals during the inter-censal decade. France asks a question designed to link back to the previous census year but, because the census is taken at irregular intervals, eccentric time spans result, which makes use of census migration data in projection models difficult but possible (Ledent with Courgeau 1982). Slovenia asks a question on the time of the last migration.

#### **2.5 Survey data: tables available**

The questionnaire asked member state respondents for details of any surveys regularly used to provide official migration statistics. Although several were mentioned, the only country that relies on such a

survey is Ireland. Tabulations from the Labour Force Survey at planning region scale are used to provide annual statistics on migration. Although the Labour Force Survey is undertaken in all European Union member states, not much reliance is placed on it for migration information. The principal reasons are the small sample sizes at region scale and some unreliability in the sampling schemes when used with a minority but geographically concentrated population such as that of migrants. There is also the problem that it is a household survey and thus misses institutional populations which are very important contributors to migration. Armed forces personnel and students living in institutional accommodation are among the most mobile subgroups in the population.

## 2.6 On the shelf or in principle?

When carrying any research project involving official statistics it makes an enormous difference whether the tables required have already been produced or whether they have to be generated from the original records. Tables “on the shelf” in the form of publications or computer files/databases can simply be copied to be made available. Where the tables have to be generated from the original records, the degree of difficulty depends on whether the data have been entered into a database accessible by a package of some kind or whether a special purpose computer program has to be written. Hence, a phrase used frequently in the responses was that data were *in principle* available. But the exact meaning of this would need to be explored with the central statistical office concerned, once the research goals had been defined.

### **3. SPECIAL FEATURES IN COUNTRIES NOT MEMBERS OF EUROPEAN UNION**

In this section we describe some of the special characteristics of the information available from countries outside the European Union, particularly those in Eastern Europe.

#### **3.1 East European countries**

The common feature of all the statistical systems of Central, East and South-East European states is that they have grown from a tradition of totalitarian communist regimes. These regimes had well developed systems of population registers which in the past served not only statistical purposes but also were used to control, trace and supervise each member of society. Strict laws regulated registration procedures and were easily enforceable in highly bureaucratic societies. This resulted in relatively good quality registers up to the end of the 1980s.

The demise of communism and changes consequent on the bloodless revolution of 1989 have had their impact on statistical systems of countries concerned. General loosening of legal standards have made registers less reliable. The situation was made even worse as many countries decided to reform their registration and/or statistical legislation and some countries, which regained independence after the fall of communism, had to create their statistical systems virtually from the scratch.

In the following section some features of migration data of countries of the region will be discussed. Based on its political past the region will be divided into two subregions: the Baltic states which inherited the statistical system of the former Soviet Union and the remaining countries which did not have those unified roots.

##### *3.1.1 Baltic States*

*Census data.* It is appropriate to discuss the availability of the census data jointly for all Baltic states as the two most recent censuses in these countries were conducted as Censuses of Population of the USSR. During the last census (12.1.1989) a question was asked about place of migration and a question about the date of move from the previous place of permanent residence to the place of enumeration together with the question about the character (urban/rural) of previous place of residence.

The tabulations produced are by total/rural/urban population but as the questionnaire by questionnaire data are available it is in theory possible to obtain data based on urban/ rural districts for each country. Estonia will publish some tabulation of answers of the place of birth question early in 1996.

The use of the data from the 1989 census in the former USSR does not seem to be very promising. Ordering of special tabulations , even if possible in theory, may be difficult in practice due to the lack of resources in the countries concerned (a remark to that effect was made in the Estonian questionnaire).

*Registration data.* Among the Baltic States, Lithuania offers the most detailed statistical data: full annual matrices of migration flows are available from population registers for the last ten years (1985-1994). The data from the last two years are disaggregated by sex and age structure (5 years groups). Spatial divisions cover 44 administrative regions and 111 towns and urban settlements.

Estonia offers a full matrix of flows between counties (15 units) for 1993, whereas tables of departures/arrivals are available for 1992 and 1993 with age (5 years groups) and sex structures for urban/rural districts (255 units altogether).

Latvia has assembled tables of departures/arrivals for 1991-1994 with sex structures and age structure (3 coarse age groups for 1991-1993 and 1 year age groups for 1994). The data are available for 102 units. Matching data, in terms of disaggregation, are available on fertility, mortality and international migration.

None of the countries concerned mentioned availability of any data from the Soviet period. Without such data a study of change of migration pattern over the last decade in these countries will be difficult. Should a need arise for data covering longer period of time an enquiry should be made in Russian Statistical Office in Moscow which has inherited the statistical information base of the former Soviet Union.

Another specific feature of data from the Baltic state is that they are available for extremely fine spatial divisions: Lithuania operates a system of 155 regions, Estonia uses a two tier system with 15 units on the higher and 255 units on the lower level of hierarchy and Latvia uses a system with 102 units. Given the size of populations in these countries populations of "regions" will be very small indeed. In the case of Lithuania (3.7 million inhabitants in 1994) the average population of a spatial unit will be 24 thousand. As a result matrices of flows (where available) will be very sparse and the whole spatial system may require to be redefined with small spatial units being aggregated to larger units, more manageable and robust from a statistical point of view.

### *3.1.2 The Czech and Slovak Republics*

As in the case of the Baltic States, the Czech and Slovak Republics were covered by the Censuses of Population and Housing of the then Czechoslovak Socialist Republic (as it was called in 1980). The only "migration" question asked during the last census of 3.3.1991 was about permanent residence of the enumerated person's mother at the time of the birth of enumerated person. In the Slovak Republic a published tabulation informs about the place of birth (by district of former Czechoslovakia) of inhabitants of Slovak Republic. That means that the information on the destination of migrants is very limited (whole state with no spatial disaggregation). The data are available by sex and coarse age groups. The Czech Republic has not reported what is the availability of the tabulations of the data from the Census, but presumably it is similar to that in Slovak Republic. The Czech Republic offers to prepare special tabulations based on Census data if required.

The Czech Republic runs a population register from which full flow matrices of migration by sex between districts (75 units) are available. It is possible to aggregate these data to regional level (8 units).

The Slovak Republic does not maintain a full population register. Data on migration are available from annual monitoring of migration carried out by the Statistical Office of the Slovak Republic. Tabulations of tables of departures and arrivals go back as far as to 1950 on two levels: by counties (1950-1991) and districts (1968-1994). Sex and age structure (5 years group) are available.

### *3.1.3 Hungary*

Hungary operates a population register from which tables of arrivals and departures can be obtained dating back as far as 1980. For Budapest and 19 Counties age (1 year groups) and sex structure is available. The age structure is not available for towns/villages (3113 units). The census in Hungary was carried out on 1.1.1990 and all migration questions were asked of 20% of the population. However, these data were not processed. No off the shelf tables are available, but it is possible to order tabulations. The analysis of migration should be conducted for counties and capital city of Budapest.

#### *3.1.4 Poland*

Poland operates a register of population from which a full matrix of flows between 49 regions divided by type of community (rural/urban), by sex and by age (very coarse age groups) may be obtained. The data are available for the period from 1985 until 1994. For a finer spatial resolution (towns and communities - 3028 units) tables of departures and arrivals are available. The 1988 census of population included a question on the previous place of residence and the duration of residence in the place of enumeration and the tabulations are available on regional level. The division of the country by regions provide sufficient detail for the study of migration.

#### *3.1.5 Romania*

Romania operates a register of population on county level (40 units). A full flow matrix is available with sex and age (5 years age groups) structures. Data from the census held on 7.1.1992 are very detailed. Questions asked referred to the place of birth, previous address and the date of move to the address of enumeration and are tabulated both by county and by towns/communes (2948 units) by sex and age (5 year groups). The county division is a sensible spatial level for study of internal migration in Romania.

#### *3.1.6 Slovenia*

Slovenia runs a population register from which a full matrix of migration may be obtained for regions (12 units), communities (62 units) or settlements (5945 units). Data are available from 1982 and are disaggregated by sex and 1 year groups of age. The last census in Slovenia was held on 31.3.1991. Questions asked referred to the place of birth, previous address and the date of move to the address of enumeration and are tabulated for regions, communities and settlements by sex and single year age groups. Slovenia offers probably the most detailed migration statistics among the post-communist countries. The extent and the detail of data available makes it very tempting to select Slovenia as one of the countries for further studies. Regional level will be sufficient, given the size of the country.

### **3.2 Other countries**

The common feature of these countries is that they share neither common history, as post-communist countries do, nor that they belong to a powerful economic organisation as EU members do.

#### *3.2.1 Iceland*

Iceland runs a population register from which full flow matrices on region (9 units) and municipality (169 units in 1995) levels are available. They are disaggregated by age (single year groups) and sex. The data are available over the period 1986-1994. The data over the period 1961-1985 are also available but in 1986 the registration system was changed radically. There is no migration data from population censuses in this country.

#### *3.2.2 Norway*

Norway has individual migration records since 1967. They provide information on flows between municipalities and include information on age and sex of migrant. This is the best possible source of data on migration as it allows for longitudinal analysis of migration histories (see for example Baccainini and Courgeau 1995).

### *3.2.3 Switzerland*

Since 1981 Switzerland has published tables of departures and arrivals from/ to communes and cantons (respectively 2911 and 26 units) disaggregated by sex. Arrivals/departures to/from cantons are disaggregated by age as well. The last census was held on 4.12.1990. Questions about place of birth, previous address and place of residence 5 years prior to the census was asked. The latter question was tabulated by communes, sex and single-year age groups. The cantonal level seems to be satisfactory for the study of migration.

### *3.2.4 Turkey*

Turkey does not run population registers. Migration data are available from censuses of which the most recent took place on 21.10.1990. The question asked was about place of permanent residence at the time of previous census (20.10.1985) and was tabulated by sex and 5 years age groups.

## **4. COMPARATIVE RESEARCH INTO INTERNAL MIGRATION IN EUROPE**

This section of the report describes some past projects which have carried out research into migration in European countries with the aim of comparing the results.

### **4.1 Individual research and collaborative networks of researchers**

(1) Fielding (1982) carried out a commissioned study of net migration patterns for a number of European countries to examine the extent to which the counterurbanisation turnaround, which had been recognised in the USA in the 1970s, was occurring in Western Europe. This might be described as a “one-off” expert study. The number of countries and the richness of the data now available probably precludes commissioning a larger and more comprehensive version by one expert.

(2) Weidlich and Haag (1988) produced an edited book applying a particular spatial interaction model developed by the editors to a set of countries that included many from Europe. This was a collaborative project adopting a common methodology. Convincing a group of academic researchers of the merits of one modelling system is a difficult task and the editors included in their book a chapter by Ledent which evaluated its usefulness. The basic outputs were returned to authors for detailed interpretation and then set within their own understanding of the migration processes in their country. This kind of collaboration requires the resources of a research institute to run the common analysis on each national dataset.

(3) Champion (1989) edited a book on counterurbanisation in which population and migration shifts between settlement types were explored by a collaborative network of authors interested in this one population redistribution process. The key ingredient was access in each country to population change and net migration statistics at fine spatial scales that are relevant to the debate about movement between urban and rural settlements and within the urban hierarchy. Ideally, in this kind of study, common definitions of settlements need to be agreed, and in many cases this involves the difficult process of urban area identification. For a project covering Eastern and Southern Europe as well as Western and Northern the framework would need to encompass urbanisation as well as counterurbanisation.

(4) Stillwell and Congdon (1991) put together a collection of papers by authors from a variety of European countries expert in modelling migration as an interaction phenomenon and using different approaches. The aim was not explicitly to compare substantive results across a set of countries but to bring together a variety of modelling studies which had been applied to migration processes from regional to intra-urban scales.

(5) Rees, Stillwell, Convey and Kupiszewski (1996) have edited a book on internal migration in 11 of the pre-1995 member states of the European Union. The book's authors constitute a collaborative network of country experts with a general brief to describe the changing structure of migration in their country, and a specific brief to comment on migration processes occurring at NUTS-2 level. Most of the authors were academic researchers but a number were members of official statistical agencies (Terra Abramí, Peixoto) with good access to national data on internal migration. The methods of analysis used differ from Chapter to Chapter. Precise comparison of similar measures across countries was not attempted.

(6) The Organisation for Economic Co-operation and Development has organised an ongoing team of national collaborators, called the SOPEMI network. Collaborators submit reports on international migration into and out of their countries, contributing a set of semi-standard tables and individual analyses. National statistical agencies are involved either directly as national collaborators or indirectly through supplying data to the researcher who is the collaborator and in giving permission for the reproduction of published tables. This differs from the previous collaborative networks which exist for one project only, being maintained over time and serviced by an international organisation. The aims of

the publications (e.g. SOPEMI 1994) are modest, but over time a very useful body of knowledge of international migration in Europe has been built up.

#### **4.2 The IIASA Migration and Settlement study**

In the 1975-83 period a large programme of research into internal migration and population dynamics was carried out at the International Institute for Applied Systems Analysis (IIASA) in Austria under the leadership of Andrei Rogers (Rogers, Willekens and Ledent 1983). The results of the research are published in an extensive series of monographs published by IIASA and summarised and synthesised in the publication edited by Rogers and Willekens (1986). This project was seminal in several ways. It established the feasibility of carrying out a study of regional population dynamics in 17 developed countries (13 in Europe) using what were known at the time as multiregional demographic models but which have since been generalised as multistate demographic methods. The project also developed methods of data estimation in the internal migration context, "filling in the migration cube" (Willekens, Por and Raquillet 1981) and a model for generalising schedules of migration intensities (rates or probabilities) by age (Rogers and Castro 1981). These methods have been widely applied in many European countries in subnational population projections and in crossnational studies in the European Union. The achievements of this programme of research were outstanding but, of course, a considerable resource base provided by national governments to IIASA was needed. This supported programme researchers and funded the extensive set of meetings at Schloss Laxenburg that convinced collaborators of the value of the approach and enabled many of them to spend time at the Institute.

#### **4.3 Regional population projections for the European Union**

Considerable investments are made by the European Commission in studies to underpin the regional development strategy of the European Union, in collaboration with the European Union's Statistical Office. This involves improvement of the holdings of data on internal migration in member states held centrally and in employing those data in regional population projection exercises at a common spatial scale across the European Union (NEI 1994).

Considerable efforts are made by the Statistical Office of the European Communities (Eurostat) to develop databases of comparable statistics at both national and regional levels. A regional classification system has been developed called the Nomenclature des Unités du Territoire Statistique or NUTS, which is used for studies that cover the whole European Union (EU). This schema is used in Table X to organise information about the spatial units for which migration is available. Regional statistics are organised in database called REGIO, which has recently been provided with a Windows compatible, user friendly front end, for accessing the multidimensional tables contained therein and published by GeoInternational on CD-ROM. Migration information is provided in this system for some of the European Union member states. For example, migration flow matrices are provided for selected years at NUTS-2 or NUTS-1 scale. As will be appreciated from this survey, this information is only a fraction of that available in EU member states and a programme is currently underway at Eurostat to improve the demographic content of REGIO. The Statistical Offices of EU member states have been asked to provide data for the three faces of the migration cube at NUTS-2 level for a time series of years.

These data will be used in the development of the next round of national and regional population projections organised jointly by the European Commission and Eurostat. A consortium of institutions in the Netherlands, led by the Central Bureau of Statistics, has been commissioned to carry out the next round of projections, with improvements to regional migration scenarios being effected by a team at the Netherlands Interdisciplinary Demographic Institute (NIDI). There is a common methodology - regional population projection using multistate methods expanded and adapted to a multicountry system. The migration scenarios being developed at NIDI involve innovative use of statistical models (GLIM, IPF) for estimating the interregional migration intensities for input to the multistate projection model

(Van Imhoff et al 1995). For such studies the European Commission provides moderate levels of funding on an open tender basis.

To summarise, it is clear that there is considerable interest in the comparative study of internal migration in European states and that there are a great many potential collaborators available both in the specialist research and university sector. Internal migration has been studied as a spatial interaction process, a contributor to the population redistribution process and in terms of its demographic characteristics. However, we have no clear idea about the comparative levels in the 1990s of migration in different countries and of the comparative speeds at which populations are redistributing themselves, although there is quite a lot of knowledge about the directions of redistribution. In the fields of fertility and mortality we have robust measures for comparing the vital states of different national and regional populations. We have lots of similar indicators translated into the matrix space of interregional migration, but we are still remarkably uncertain about the comparability of one national measurement with another because of the dependence of migration on its spatial context. However, the survey of available data sources has indicated that it is now possible to carry out analysis at a wide variety of spatial scales and so move forward to a spatial spectrum of measures of migration intensity which can provide much better comparisons between countries.

## **5. WHAT KINDS OF RESEARCH CAN BE CARRIED OUT?**

Given the findings of the survey of available data and the review of past and current research efforts in the field of internal migration in Europe, what are the choices available to a research team, wishing to add to our common stock of knowledge about migration processes and regional population dynamics across Europe? Here we present a series of four options which descend in scale of funding requirement from large to small. The advantages and disadvantages of each option are presented. We assume that a fifth option, of doing nothing, is not on the table at the moment.

It should be noted that given the number and geographic extent of the member states of the Council of Europe it would be difficult to deal with very complicated research questions and to use very sophisticated research methodology. A successful project should concentrate on crucial research problems which are related to policy-making decisions and should apply fairly straightforward and easy to use methodology. This should not be mistaken with a simplistic or uneducated approach.

### **5.1 Research questions**

Given the considerations mentioned above the formulation of the proposal will start with identification of research questions which we think should be addressed. Then possible methodology or methodologies will be proposed.

We would like suggest three research problems which in our view are important from policy making point of view as well as interesting from research point of view. The problems are (1) Rural depopulation (2) Urbanisation, suburbanisation and counterurbanisation and (3) Analysis of changing migration patterns. First two problems pertain to the observed population change that is to the combined effect of internal and international migration as well as fertility and mortality. However it is quite clear that with regional patterns of fertility and mortality converging all over Europe the most important factor contributing to population change is migration. The last problem refers to the analysis of fundamental characteristics of migration streams themselves. The list of problems is by no means exhaustive. Each of problems constitute a valid research topic itself, but there is a room to combine them if a need arises. The third problem is, in our opinion, particularly attractive from cognitive point of view, whereas the first problem may be the most important from policy-making point of view.

#### *5.1.1 Rural depopulation*

The aim of this proposal is to examine the extent and the level of advancement of rural depopulation. The basic idea of the research would be to compare population stocks in comparable spatial units (administrative boundaries in 1994) over the period of 10 years (1984-1994) and identify areas where the decrease in population was particularly acute (>15%). Enhancement of this research, but also an increase in the cost would be to additionally compare the population change over the period 1974 - 1984 in the boundaries as in 1994. Another possible enhancement would be to look into components of change (i.e. using a Webb typology) in order to separate units which depopulate due to migration losses from those which depopulate due to natural decrease. This stage of the analysis would allow for preparation of a map of depopulating areas in the Council of Europe member states and in consequence in geographical delineation of larger, possibly continuous regions of depopulation. The next stage of the investigation should concentrate on detailed demographic analysis of such regions (age and sex structure) as well as identification of socio-economic characteristics of the population and economic characteristics of the regions concerned. This should allow for synthesis aiming at typology of depopulating regions and in turn formulation of policy measures needed to reverse or stop this process.

The spatial systems used should be based on as small units as possible that is NUTS-5 or equivalent (communes, Gemeinde etc.). If data are not available for that detailed geographical disaggregation it is

possible to use inter-NUTS-4 or equivalent (Kreise). Larger units will provide unsound results due to ‘averaging’ effects.

Major technical problem will be in the recalculation of population in different points in time to a unified spatial system of administrative units. There are tools available to perform this task. Geographic Information Systems provide a high-tech solution but may be somewhat too complicated for those who have no previous experience in using them. Alternatively ‘manual’ methods of recalculation can be used.

### *5.1.2 Urbanisation, suburbanisation and counterurbanisation*

This research would concentrate on the processes of urbanisation, suburbanisation and counterurbanisation and would aim at the identification of areas where they play an important role and on the assessment of their advancement in different states. The structure of the research would be similar to the one described in section 5.1.1. A typology of regions where we can observe each of the processes should be created and a deepened analysis should aim at identification of socio-demographic and economic characteristics of regions with respectively high urbanisation, suburbanisation and counterurbanisation. An attempt at analysing the processes observed in the light of existing theories should be made. Recommendation on possible policy measures would be the ultimate goal of the research.

Steps identified in 5.1.1 can be directly applied in the case of this research. All technical remarks made in 5.1.1 are relevant for this research. However it should be noted, that application of GIS is more difficult in the case of urban regions and manual recalculations may be more appropriate in this case.

Research proposed in sections 5.1.1 and 5.1.2 are technically very similar and of complementary nature and if both were to be conducted should be combined and run by the same research group to reduce cost.

### *5.1.3 Analysis of changing migration patterns*

The aim of the study is to discover how the spatial age and sex patterns of internal migration have changed over the last decade and what lessons for the future can policy-makers learn from the past changes. Particular attention should be paid to the identification of the streams of “migration for higher education”, “migration after receiving higher education/in search for entry level jobs”, “mid-career labour migration” and “retirement migration”. Identification of the main geographical directions of migration by age and sex would be made; then a classification of identified patterns and analysis of these patterns in the light of existing migration theories would be attempted. Recommendations for policy makers would complete the job.

The study should focus on investigating of internal migration activity pattern and trend in each of the Council of Europe member states. This will involve both index construction and age-sex standardisation and probably some simple modelling of both migration as an interaction phenomenon and as a key component in regional population change. Migration intensities (occurrence-exposure rates or migration probabilities, conditional on survival or unconditional) would be computed for each country at a selected spatial scale for a time span of the latest 10 years of data available.

The spatial systems used should include at least two different levels of units namely equivalents of NUTS-4 and NUTS-3. If finance is available it is possible and beneficial from the cognitive point of view to extend the research on smaller and/or larger units such as equivalent of NUTS-1, NUTS-2 and NUTS-5 (communal level).

The measures of internal migration activity cannot be just taken at face value and compared across countries. The measures are dependent on the number and size of regions for which migration is defined. The measures therefore need to be systematically linked to region properties, both in terms of spatial structure of regional system(s) and its socio-economic and settlement context. It would be extremely beneficial to analyse the dynamics of the migration system over time (time series analysis). A range of methods (Courgeau 1973) to do so exist and they can be applied as and when the co-ordinator(s) of the research would require them.

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**Table I:**  
**Data on internal migration from population registers: full flow matrix**

	Country	Status of entry	Spatial units	Time units	Time span	Sex
2	Belgium	OR	Province	Annual	1961-80, 1981-	Yes
			Arrondissement	Annual	1961-80, 1981-	Yes
			Commune	Annual	1961-88, 1989-	Yes
3	Bulgaria	OR	Regions	Annual	1988-94	Yes
			Towns	Annual	1988-94	Yes
4	Czech Republic	OR	Republic	Annual, Quarterly	?	Yes
			District	Annual, Quarterly	?	Yes
5	Denmark	OR	County	Annual	1973-	Yes
			Municipality	Annual	1973-	Yes
6	Estonia <sup>b</sup>	OR	County	Annual	1993	No
7	Finland	OR	Municipality <sup>a</sup>	Annual	?	Yes
9	Germany	OR	Federal Republic	Annual	1991-	No
			Land	Annual	1991-	No
			Kreis	Annual	1991-	Yes
			Kreis	Quarterly	1991-	Yes

**Table I: Continued**

	Country	Status of entry	Spatial units	Time units	Time span	Sex
11	Hungary	OR	Municipality	Annual	1980-94	Yes
12	Iceland	OR	Region Municipality	Monthly Monthly	1986- 1986-	Yes Yes
14	Italy	OR	Region Province Municipality <sup>a</sup>	Annual Annual Annual	1969-92 1969-92 1969-92	No No No
15	Latvia	OR	Country Districts	Annual Annual	1994 1994	Yes Yes
16	Lithuania	OR	Regions Towns & town type settlements	Annual Annual	1993-94 1993-94	Yes <sup>a</sup> Yes <sup>a</sup>
17	Netherlands	OR	Netherlands NUTS-2 NUTS-3 Municipality	Annual, Monthly Annual Annual Annual	1983-1993 1983-1993 1983-1993 1983-1993	Yes Yes Yes Yes
18	Norway	OR	Country County Municipality	Annual Annual Annual	1967-94 1967-94 1967-94	Yes Yes 'Yes

**Table I: Continued**

	Country	Status of entry	Spatial units	Time units	Time span	Sex
19	Poland	OR	Voivodships	Annual	1985-94	Yes
21	Romania	OR	County	Annual		Yes
23	Slovenia	OR	Country Region Community Settlement	Annual Annual Annual Annual	1982-1994 1982-1994 1982-1994 1982-1994	Yes Yes Yes Yes
24	Spain	OR	Provincia Municipio	Annual Monthly	1961-1987 1988-1994	Yes Yes
25	Sweden	OR	County Commune	Annual Annual	1972-1994 1972-1994	No, Yes <sup>a</sup> No, Yes <sup>a</sup>
26	Switzerland	OR	NA			
28	United Kingdom	OR	Region (NUTS-1) Region (NUTS-1) County/Scottish region (NUTS-2) County/Scottish region (NUTS-2) FHSA/AHB FHSA/AHB	Annual Quarterly Annual Quarterly Annual Quarterly	1975-83, 1983-94 <sup>a</sup> 1975-83, 1983-94 1975-83, 1983-94 <sup>a</sup> 1975-83, 1983-94 1975-83, 1983-94 <sup>a</sup> 1975-83, 1983-94 <sup>a</sup>	Yes Yes Yes Yes Yes Yes

**Table II and Table III:**

Data on internal migration from population registers: departures [total in-migration] and arrivals [total out-migration]

	Country	Status of entry	Spatial units	Time units	Time span	Sex
2	Belgium	OR	Province	Annual	1961-80, 1981-	Yes
			Arrondissement	Annual	1961-80, 1981-	Yes
			Commune	Annual	1961-88, 1989-	Yes
3	Bulgaria	OR	Regions	Annual	1978-94	Yes
4	Czech Republic	OR	Republic	Annual, Quarterly	?	Yes
			District	Annual, Quarterly	?	Yes
5	Denmark	OR	Country	Annual	1973-	Yes
			County	Annual	1973-	Yes
			Municipality	Annual	1973-	Yes
6	Estonia <sup>b</sup>	OR	County	Monthly	1995 <sup>a</sup>	No
			Towns and rural districts	Annual	1992-1993	Yes
7	Finland	OR	Municipality	Annual	?	Yes
9	Germany	OR	Kreis	Annual	1991	Yes
			Kreis	Quarterly	1991	Yes
			Land	Annual	1991	Yes
			Land	Quarterly	1991	Yes
			Federal Republic	Annual	1991	No
11	Hungary	OR	Capital	Annual	1980-94	Yes
			Counties	Annual	1980-94	Yes
			Towns	Annual	1980-94	Yes
			Villages	Annual	1980-94	Yes

**Tables II & III: Continued**

	Country	Status of entry	Spatial units	Time units	Time span	Sex
12	Iceland	OR	Region Municipality	Monthly Monthly	1986- 1986-	Yes Yes
14	Italy <sup>a</sup>	OR	Region Province Municipality	Annual Annual Annual	1969-92 1969-92 1969-92	No No No
15	Latvia	OR	Districts <sup>a</sup> Districts <sup>a</sup>	Annual Annual	1991-1993 1994	Yes Yes
16	Lithuania	OR	Regions Towns	Annual Annual	1993-94 1993-94	Yes <sup>a</sup> Yes <sup>a</sup>
17	Netherlands	OR	Country NUTS-2 (Province) NUTS-3 (COROP) Municipality	Annual, Monthly Annual Annual Annual	1983-1993 1983-1993 1983-1993 1983-1993	Yes Yes Yes Yes
18	Norway	OR	Country County Municipality	Annual Annual Annual	1967-94 1967-94 1967-94	Yes Yes Yes
19	Poland	OR	<i>Voivodships</i> <i>Voivodships</i> Towns and communities	Annual Annual Annual	1985-94 1985-94 1985-94	Yes Yes Yes

**Tables II & III: Continued**

	Country	Status of entry	Spatial units	Time units	Time span	Sex	1 year	5 yea
21	Romania	OR	County	Annual		Yes	No	Yes
23	Slovenia	OR	Country Region Community Settlement	Annual Annual Annual Annual	1982-94 1982-1994 1982-1994 1982-1994	Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes
24	Spain	OR	<i>Provincia</i> <i>Municipio</i>	Annual Monthly	1961-1987 1988-1994	Yes Yes	No No	Yes Yes
25	Sweden	OR	Commune Commune Parish	Annual Quarterly Annual	1972-1994 1980-1994 1980-1994	Yes Yes No	No No No	Yes Yes No
26	Switzerland	OR	Cantons Communes	Annual Annual	1981- 1981-	Yes Yes	Yes No	Sum No
28	United Kingdom	OR	Region (NUTS-1) Region (NUTS-1) County/Scottish Region (NUTS-3) County/Scottish Region (NUTS-3) FHSA/AHB FHSA/AHB	Annual, Quarterly Annual, Quarterly Annual, Quarterly Annual, Quarterly Annual, Quarterly	1975- 1983 <sup>a</sup> 1983- 1994 <sup>a</sup> 1975- 1983 <sup>a</sup> 1983- 1994 <sup>a</sup> 1975- 1983 <sup>a</sup> 1983- 1994 <sup>a</sup>	Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes

**Table IV: Data on internal migration from population registers: total number of migrations**

**Table V: Data on internal migration from population registers: net migration**

**Table VI: Data on population change from population registers**

**Table VI.A: Data on fertility**

**Table VI.B: Data on mortality**

**Table VI.C: Data on net international migration**

The questionnaire included tables (listed above) requesting information on the other components of population change, to available from any other source on internal migration. Most countries reporting availability of internal migration from R similar information available for populations, population change and the vital components, with the exception of net internat

Immigrations are available from many registers at regional scale but Statistical Offices reported that emigrations could be tra Register with less confidence than immigrations. Norway, Denmark and the other Nordic countries are able to track addresses.

Emigration is probably best estimated at regional scale from a survey question about relatives or other household mem example.

**Table VII: List of censuses and surveys and Table VIII: Census data on internal migrants**

	Country	Status of entry	Spatial units	Times of Censuses and surveys	Time spans	Sex		Ag 5 yea
						1 year	5 years	
1	Austria	OR	<i>Bundesländer</i> Districts Communes	Censuses 12.5.81 & 15.5.91	1976-81 & 1986-91 (5 years)	Yes	Yes	No Yes
3	Bulgaria	OR	Municipality	Census 4.12.1992	Previous residence 1.1.1986-4.12.92	Yes	No	Yes
8	France	OR	Régions  Départements  Communes	Censuses  4.3.82 & 5.3.90  Censuses	1.1.75-4.3.82 & 1.1.82-5.3.90 (7 years 3 months, 8 years 4 months)	Yes	Yes <sup>b</sup>	Yes <sup>b</sup>
10	Greece	OR	Municipalities/Com munities	Censuses 5.4.81 & 17.3.91	17.3.90-17.3.91 & Dec. 85-17.3.91 Dec. 75-5.4.81	Yes	Yes	Yes
11	Hungary	OR <sup>a,b</sup>	Capital Counties Towns Villages Enumeration districts	Censuses 1.1.80 & 1.1.90	1.1.80-1.1.90 (10 years)			Se

Notes: This table reports only on those countries with recent retrospective questions on migration in their Censuses.  
We have not included countries which simply ask a place of birth question.

**Tables VII and VIII: (Continued)**

	Country	Status of entry	Spatial units	Times of Censuses and Surveys	Time spans
13	Ireland	OR <sup>a,b</sup>	Planning regions Counties District Electoral Divisions and Wards	Censuses 13.4.86 & 21.4.91	21.4.90-21.4.91 (1 year)
		OR	Planning Regions	Labour Force Survey, Annual	Residence 1 year ago
20	Portugal	OR	NUTS-1 NUTS-2 NUTS-3 <i>Concelho</i> <i>Freguesia</i> <i>Lugar</i> <i>Secção</i> <i>Sub Secção</i>	Censuses 16.3.81 & 15.4.91	31.12.73-16.3.81 31.12.79-16.3.81 31.12.85-15.4.91 31.12.89-15.4.91 (1+ year)
22	Slovak Republic	OR	NUTS-2 regions (7)	Labour Force Survey, Annual	1984-1991, 1992-1994 <sup>a</sup> (1 year)
		OR	Country	Inquerito aos Movimentos Migratorios de Saída <sup>b</sup>	1993-1994, Annual
		OR	NUTS-1 NUTS-2 Regions Districts Municipalities	Migration Survey Migration Survey Migration Survey	Annual, 1950- Annual, 1950- Annual, 1950-
23	Slovenia	OR	Country Communities Settlements Enumeration districts	Censuses 31.3.1981 31.3.1991	31.3.81-31.3.91

**Tables VII and VIII: (Continued)**

	Country	Status of entry	Spatial units	Times of Censuses and Surveys	Time spans	Sex		Ag 1 year	Ag 5 yea
						1 year	5 years		
24	Spain	OR	<i>Nacional Comunidad Autonoma Provincia Municipio Distrito Seccion</i>	1.3.81 & 1.3.91	1.3.81-1.3.91 (10 years)	Yes	Yes	Yes	Yes
		OR			1.7.86-1.3.91 (5 years)	Yes	Yes <sup>b</sup>	Yes	Yes <sup>b</sup>
					1.3.90-1.3.91 (1 year)	Yes	Yes <sup>b</sup>	Yes	Yes <sup>b</sup>
				<i>Encuesta Sociodemografica, last Quarter 1991</i>		Yes	No	No	No
26	Switzerland	OR	Cantons	2.12.1980 & 4.12.1990	1975-80 & 1985-90	Yes	Yes	Sum	
			Communes		(5 years)	Yes	Yes	Sum	
27	Turkey	OR	Province	20.10.85 & 21.10.90	20.10.85-21.10.90 (5 Years)	Yes	No	Yes	
			District			Yes	No	Yes	
28	United Kingdom	OR	Region (NUTS-1) County/Scottish Region (NUTS-2) District Ward/Pseudo Postcode Sector	5.4.81 & 21.4.91	21.4.90-21.4.91 (1 year)	Yes	No	Yes	Yes
						Yes	No	Yes	Yes
						Yes	No	Yes	No

**Table IX. Data on the stocks of population**

All countries are able to provide population counts or estimates by age and sex for those spatial units for which migration data are available.

**Table X: Spatial and administrative units used**

Country	Data Source	Large NUTS-1 <sup>4</sup>	Spatial	Scale	NUTS-4 <sup>4</sup>	Small NUTS-5 <sup>4</sup>
			NUTS-2 <sup>4</sup>	Medium NUTS-3 <sup>4</sup>		
1 Austria	Census		<i>Bundesländer</i>		<i>Politische Bezirke</i> (Districts)	<i>Communes</i>
			9		99	2333
2 Belgium	Register		Province	<i>Arrondissement</i>	<i>Commune</i>	
			9	43		
3 Bulgaria	Register			Regions	Towns	
				9	238	
4 Czech Republic	Register		Region	District	Community	Basic settlement unit
			8	75	6097	21991
5 Denmark	Register		Regions	<i>Amt/Counties</i>	Municipality	
			3	15	275	
6 Estonia	Register			County	Towns & rural districts	
				15	57+198	
7 Finland	Register	Mainland, Islands	Regions	Counties	Municipality	
		2	6	19	455	
8 France	Census	ZEATs	<i>Régions</i> 22+4 (DOM)	<i>Départements</i> 96+4 (DOM)	<i>Communes</i>	
9 Germany <sup>b</sup>	Register	<i>Bundesländer</i>	<i>Regierungsbezirke</i>	<i>Kreise</i>		
		16	29	444		
10 Greece	Census	Geographical regions	Development regions	Departments	Communes or municipalities	
		4	13	51	361, 5560	
11 Hungary	Register			Counties		Towns, Villages
				19		193, 2920
12 Iceland	Register			Regions	Municipalities	
				9	223 (1986)	
					169 (1995)	
13 Ireland	Census			Planning regions	Counties	DEDS/Wards
				9	26	3440
14 Italy			Regions	Provinces	Municipalities	
			20	95	8100	

**Table X: Spatial and administrative units used (continued)**

	Country	Data Source	Large NUTS-1 <sup>a</sup>	Spatial NUTS-2 <sup>a</sup>	Scale Medium NUTS-3 <sup>a</sup>	NUTS-4 <sup>a</sup>	Small NUTS-5 <sup>a</sup>
15	Latvia	Register			Towns, Districts 76, 26		
16	Lithuania	Register				Administrative Regions <sup>b</sup> 144	
17	Netherlands	Register		Provinces 12	COROP regions 40	Municipalities 633	
18	Norway	Register			County 19	Municipalities	
19	Poland	Register			Voivodships 49		Towns, Communities 860, 1623
20	Portugal	Register	NUTS-1	NUTS-2	NUTS-3, Distrito	Concelho	Lugar, Secção, Sub Secção 27998, 106995
		Census	3	7	30, 29	305	
21	Romania	Register			County, Bucharest 40		Towns, Communes 262, 2686
22	Slovak Republic	Survey		Region	District	Municipalities (základná územná jednotka, ZÚJ) 2858	Basic settlement unit (základná sídelná jednotka, ZSJ) 7413
				4	38		
23	Slovenia	Register			Regions	Communities	Settlements, Enumeration districts 5945, 13000
		Census			12	62	
24	Spain	Register	Agrupacion de Comunidad Autonoma 7	Comunidad Autonoma	Provincia		Municipio, Distrito, Sección 8077, 10545, 31881
		Census		17	52		
25	Sweden	Register		NUTS-2 8	County 24	Commune 288	Parish 2600
26	Switzerland	Register Census			Cantons 26	Communes 2911	
27	Turkey	Census			Province 73	District	
28	United Kingdom	Register	England & Wales regions, Scotland, Northern Ireland 11	NUTS-2	NUTS-3, Scottish regions, Northern Ireland 66	FHAs, AHBs, Northern Ireland	
		Census	Regions in England & Wales, Scotland 10	NUTS-2 except Northern Ireland 35	Counties in England & Wales / Scottish regions 65	Districts in Great Britain 125	Wards in England & Wales, Postcode Sectors in Scotland 459 9930, 1003=10,933

## Notes to the Tables

### *General notes on table entries*

1. *Status of entry:* OR = Official Return; RA = Response Awaited; AE = Authors' Entry.
2. *Spatial units:* NA = information Not Available.
3. *Age:* Sum= aggregations can be made.
4. *Spatial scale:* The columns labelled "NUTS-1", "NUTS-2" etc are indicative only. The NUTS classification of EUROSTAT only applies to European Union member states.

### *Country notes*

#### 2. *Belgium*

- a. From 1988 information on migration available by age can theoretically be generated but is not published as tables. Before 1988, the data could be provided from the National Register but full tables are available from the Communes.

#### 6. *Estonia*

- a. The entry for Counties refers to monthly data available from 1995, but only as totals. The data for towns and rural areas can be aggregated to Counties.
- b. The State Statistical Office of Estonia holds migration on every migration event from 1986 and so, in principle, any kind of table involving origin, destination, age and sex could be produced

#### 7. *Finland*

- a. Flow matrices for other regions may be obtained by aggregation. e.g. NUTS-1 = 2 units - Mainland, Islands; NUTS-2 = 6 county combinations; NUTS-3 = 19 counties.

#### 8. *France*

- a. For examples of analyses that have been carried out using the 1990 census data on migrants see Baccaïni B, Courgeau D, Desplanques G (1993) 'Les migrations internes en France de 1982 à 1990: comparaison avec les périodes antérieures', *Population*, 48, 6, 1771-90  
Baccaïni B (1993) 'Régions attractives et régions réplusives entre 1982 et 1990: comparaison avec la période 1975-1982 et spécificité des différentes classes d'âges', *Population*, 48, 6, 1791-1812.
- b. In principle, any kind of tabulation can be prepared by spatial unit and age, and other census characteristics, subject to 'diffusion restriction' (disclosure control). The rules governing publication of data are defined by CNIL - Commission Nationale Informatique et Libertés.

#### 9. *Germany*

- a. Age bands for Kreis-level migration: 0-17,18-24,25-29,30-49,50-64,65+.
- b. Regions as at 31.12.1994.

*11. Hungary*

- a. The 1990 Census migrant data are based on a 20% sample, which have yet to be processed.
- b. The Hungarian CSO have produced a Compact Disc that holds all the records (anonymised) from the 1990 Census together with tabulation and mapping software. In principle, this means that any kind of table of migrants can be produced from enumeration districts upwards.

*12. Iceland*

- a. Migration data from the Register are available from 1960 but the system was changed radically from 1986.

*13. Ireland*

- a. Use is also made of the Annual Labour Force Survey (LFS) held in April each year. A question on usual residence the previous April is asked and tabulations can be made for Planning Regions.
- b. Gross flows (inward and outward) are published from the Labour Force Survey each year and are published as part of the Census tabulation. There are also some tables giving details of place of birth.
- c. Special tabulations can be derived from the 1991 Census but the resources required will need to be charged for.

*14. Italy*

- a. The table reports on the standard tabulations. It is theoretically possible to produce from the individual records more detailed tables (e.g. a flow matrix for municipalities). This would involve a lot of programming effort. It is also possible to produce flow data by 1 year age groups: such data for 20 x 20 regions (NUTS-2) have been analysed at the Netherlands Interdisciplinary Demographic Institute in a project to develop Migration Scenarios for European regions for Eurostat/European Commission.
- b. There is a retrospective question in the Italian Census on migration (residence five years before) but no tabulations are produced at the moment. In principle, migration tabulations could be generated for territorial scales down to *sezione*, which contain 150 individuals on average.

*15. Latvia*

- a. The districts are classified into the capital (Riga), the republican cities, towns and rural districts.
- b. Three main age groups: under working age, of working age, over working age.

*16. Lithuania*

- a. Available only for 1993-94.
- b. The administrative regions are classified into towns (82) and urban settlements (18) and rural areas (44).

*17. Netherlands*

- a. For reasons of data protection, the published figures are rounded off.
- b. Just a part of the data available has been published.

*19. Poland*

- a. Working ages.
- b. Age groups: 0-4, 5-14, 15-29, 30-59, 60+

*20. Portugal*

- a. In the 1984-1991 LFS, regions of former residence tabulated are NUTS-2 regions for Portugal and country of residence for other countries. In the 1992-94 LFS, regions of former residence tabulated are NUTS-2 regions for the European Union and country of residence for other countries.
- b. This is a survey of emigration from Portugal.
- c. The age groups tabulated are 0-14, 15-39 and 40+.

*22. Slovak Republic*

- a. Data on internal migration in the Slovak Republic are collected through the statistical migration survey. This survey covers all persons who migrate during a year between municipalities or between a municipality and a foreign country. The questionnaire is completed when the migrant leaves the origin municipality. The information requested on the survey form includes birth date, date of migration, sex, family status, citizenship, educational qualification, nationality, reason for migration, places of former and new residence. The details of what kinds of flows are available at what spatial scale differ according to the period. From 1993 the data are available for internal and external arrivals and departures but for earlier years this breakdown is only available for district towns and towns with 10,000 or more inhabitants.

*23. Slovenia*

- a. Special tables can be prepared.

*24. Spain*

- a. The CD-ROM contains standard tables from the Census. There is also a microdata sample available at provincial level, for provinces and municipalities with at least 20,000 inhabitants.
- b. Special tabulations can be prepared but the type of data that can be released is governed by the rules laid down by the Committee for Data Protection of the Higher Council of Statistics.

*25. Sweden*

- a. The Register data are available from 1968 as individual records so that a full flow matrix can be produced by single or five year age and sex if required.

## 28. United Kingdom

The Migration Statistics Unit (MSU) of the Office of Population Censuses and Surveys (OPCS) provides internal and international migration data used as a component in the production of population estimates and population projections.

- a. Published internal migration figures are available from *Key Population and Vital Statistics (series VS)*, and *Social Trends*, both HMSO publications. Customised tables on inter-area flows are available on request from OPCS for data for 1975-94.
- b. The cost depends on the size of the arrays involved which can be produced as printout or on diskettes.
- c. Not available on the Internet.
- d. From the 1981 and 1991 Censuses, OPCS and GRO(S) have developed a variety of migration tabulations:
  - (1) national tables giving single year of age detail for Great Britain and a large age-sex disgregated migration array for regions and metro counties/major cities (35 units, but not NUTS-2);
  - (2) detailed regional migration tables giving migration tables for counties/Scottish regions (NUTS-3) and districts;
  - (3) migration tables for all areas down to wards in the Local Base Statistics (LBS) and to enumeration districts in the Small Area Statistics (these data only record inward migration);
  - (4) the Special Migration Statistics which gives matrices for all GB districts (459 areas in 1991) by sex and five year age group and for all wards (England and Wales) and pseudo-postal sectors (Scotland) by 5 broad age groups (there are also a set of socio-economic tables associated with SMS inter-district flows).
  - (5) a Sample of Anonymised Records or SAR (2% Individual Sample), which provides flow matrices with county origins and district based areas (278 areas with at least 120,000 inhabitants) as destinations which can be crosstabulated against any census characteristic.

The SAS, LBS, SMS and SAR are machine readable data files purchased by ESRC/JISC and have been made available from the University of Manchester for academic use via the Internet.

- e. International migration at standard region scale (NUTS-1) is available on an annual or mid-year to mid-year basis from 1975-93. The information is based on the International Passenger Survey which is a sample of passengers moving through UK sea- and air-ports.

## **Appendix: List of Contact Persons and Addresses**

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Country	Organisation/ Contact Person
1. Austria	Österreichischen Statistischen Zentralamtes, Wien (Austrian Central Statistical Office, Vienna) Mag. Erich BADER, President Tel +43 1 711280
2. Belgium	National Instituut voor de Statistiek/Institut National de Statistique, Brussel/Bruxelles (National Institute for Statistics, Brussels) M. Claude CHERUY, Directeur General Tel +32 2 548 6211, Fax +32 2 548 6262
3. Bulgaria	National Statistical Institute, Sofia (National Institute of Statistics, Sofia) M. Zakhari KARAMFILOV, President Tel +359 2 443119, Fax +359 2 443395 Boyka TODOROVA, Head, Information Service Tel +359 2 43401, Fax +359 2 441583
4. Czech Republic	Ceský Statistický Úrad, Praha (Czech Statistical Office, Prague) Jan FRIEDLAENDER, Director, International Co-operation Division Tel +42 2 6631 1229, +42 2 6604 1111, Fax +42 2 822490
5. Denmark	Danmarks Statistik, København (Statistics Denmark, Copenhagen) Anita LANGE Tel + 45 3917 3917, Fax + 45 3118 4801
6. Estonia	Riigi Statistikaamet, Tallinn (State Statistical Office of Estonia, Tallinn) Helina VIGLA, Deputy Director General Anne HERM, Senior Economist, Population Statistics Section Tel +372 62 59 201,+372 2 45 19 73, +372 62 59 264 Fax + 372 2 45 39 23
7. Finland	Tilastokeskus, Helsinki (Statistics Finland, Helsinki) Mauri NIEMINEN, Senior Adviser, Population Statistics Tel +358 0 17343255, Fax +358 0 1734 2990
8. France	Institut National de la Statistique et des Études Économiques, Département de la Démographie, Cellule Statistiques et études sur les populations étrangères, Paris (National Institute for Statistics and Economic Studies, Paris) S. THAVE, La responsable de la Cellule Statistiques et études sur les populations étrangères Tel +33 1 4117 5050, Fax +33 1 4117 6666

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## Appendix: List of Contact Persons and Addresses (Continued)

Country	Organisation/ Contact Person
9. Germany	Statistisches Bundesamt, Wiesbaden (Federal Statistical Office, Wiesbaden) Mr. BRETZ Tel +49 0611 751 2668, Fax +49 0811 72 4000
10. Greece	National Statistical Service of Greece, Athens Mr TH. ZERVOU, Secretary General Tel +30 1 324 8512, +30 1 324 9302 Mrs Ourania ZARKOSTATHI Department of Migration, Population Division 43-45 Agisilaou Street, Athens Tel +30 1 523 771, Fax +30 1 523 4660
11. Hungary	Hungarian Central Statistical Office, Budapest Dr. Péter JÓZAN, Chief, Division of Population and Health Statistics Tel +361 212 6890, Fax +361 212 6678
12. Iceland	Hagstofa Íslands, Reykjavik (Statistics Iceland, Reykjavik) Gudni BALDURSSON, Head Population and Vital Statistics Tel +354 560 9800, Fax +354 562 8865
13. Ireland	An Phríomh Oifig Stáidrimh, Corcaigh (Central Statistics Office, Cork) Rosanne GREENE, Information Section Tel +353 (0)21 359000, Fax +353 (0)21 359090
14. Italy	Istituto Nazionale Di Statistica, Roma (National Institute of Statistics, Rome) Valerio TERRA ABRAMI, Head, Demographic Statistics Tel +39 6 8535 4414, Fax +39 6 8535 4401
15. Latvia	Central Statistical Bureau of Latvia, Riga (Central Statistical Bureau of Latvia, Riga) Uldis USACKIS, Head Demographic Statistics Division Tel + 371 270126, Fax +371 783 0137
16. Lithuania	Lithuanian Department of Statistics, Vilnius (Lithuanian Department of Statistics, Vilnius) Marija KARALIENE, Head, Population Statistics Service Tel +370 2 619556, Fax +370 2 223545
17. Netherlands	Centraal Bureau voor de Statistiek, Voorburg (Netherlands Central Bureau of Statistics, Voorburg) R. VERHOEF, Head, Population Department Tel +31 (0)70 337 3800, Fax +31 (0) 70 387 7429

## Appendix: List of Contact Persons and Addresses (Continued)

Country	Organisation/ Contact Person
18. Norway	Statistisk sentralbyrå, Kongsvinger (Statistics Norway, Kongsvinger) Paul Inge SEVEREIDE, Head, Division of Population and Education Statistics Tel +47 6288 5290, Fax +47 6288 5289 Dag Juvkam, Executive Officer, Tel +47 6288 5202
19. Poland	Central Statistical Office of Poland, Warsawa (Central Statistical Office of Poland, Warsaw) Lucyna NOWAK, Director, Division of Demography Tel +48 22 251703, Fax +48 22 253435 Urszula CEREGRA, Tel +48 22 250129
20. Portugal	Instituto Nacional de Estatística, Lisboa (National Institute of Statistics, Lisbon) Carlos Correa GAGO, President Tel + 351 1 847 0050, Fax +351 1 848 9480
21. Romania	Comisia Natională pentru Statistică, Bucuresti (National Commission for Statistics, Bucharest) Alexandru Radocea, President Tel +40 1 312 4875
22. Slovakia	Statistical Office of the Slovak Republic, Bratislava (Statistical Office of the Slovak Republic, Bratislava) Mária Schwartzová, Director, Comprehensive Analytical Works Division Tel +42 7 215 760, Fax +42 7 566 13 61
23. Slovenia	Statisticni Urad Republike Slovenije, Ljubljana (Statistical Office of the Republic of Slovenia, Ljubljana) Tomaz BANOVEC, Director Tel +386 (0)61 125 53 22, Fax +386 (0) 61 21 69 32
24. Spain	Instituto Nacional de Estadística, Madrid (National Institute of Statistics, Madrid) Jose Quevedo QUEVEDO, Presidente, INE Tel +34 91 583 9271, Fax +34 91 579 2713 C. ARRIBAS, Directora de la Oficina de Relaciones Internacionales, INE Tel +34 91 583 9241, +34 91 583 9150, Fax +34 91 583 7918, +34 91 579 2713
25. Sweden	Statistics Sweden, Örebro (Statistics Sweden, Örebro) Ingrid MELIN, Programme for Population Statistics Tel +46 19 17 65 96, Fax +46 019 17 69 42, Email i.melin@scb.se
26. Switzerland	Bundesamt für Statistik/Office fédéral de la statistique/Ufficio federale di statistica/Uffizi federali da statistica, Bern (Federal Statistics Office, Bern) Marc REICHLE, Vital Statistics and Population Trends Section, Population and Employment Division Tel + 41 31 322 87 86, Fax +41 31 382 27 95

## **Appendix: List of Contact Persons and Addresses (Continued)**

<b>Country</b>	<b>Organisation/ Contact Person</b>
27. Turkey	Devlet İstatistik Enstitüsü, Ankara (State Institute of Statistics, Ankara) Güldáne KABADAYI, Communication and Public Relations Division
28. United Kingdom	Office of Population Censuses and Surveys, London Mr Fred Ashworth, Head, Migration Statistics Unit, OPCS Mrs Meher Khan, Migration Statistics Unit, OPCS, Room 201 Tel +44 (0)171 396 2410, Fax +44 171 396 2057 Jenny Irvine, Migration Statistics Unit, OPCS Tel +44 (0)171 396 2153

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