Relationships between demographic change and economic restructuring in rural Europe at the beginning of the 21st century.

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Abstract

This paper draws heavily upon the EDORA project (European Development Opportunities for Rural Areas), part of the ESPON 2013 programme. Two regional typologies play a central role in the analysis: The first is a typology of demographic change, developed in the context of both the ESPON programme, and DG Agriculture's SERA (Study on Employment in Rural Areas) project. The second is a typology of economic restructuring, developed in EDORA. These two typologies will be used as a framework within which to explore patterns of demographic change within rural areas at different stages in the process of restructuring, from agrarian economies through to the New Rural Economy, with its orientation towards market service activities. The distribution of demographic types allows the roles of natural increase, migration and total population change in different kinds of rural areas, to be distinguished. The paper will conclude with a brief discussion of the implications of the findings in terms of the persistence of macro-scale patterns from the past and the need to accommodate this in the design of rural cohesion policy.

1 Introduction

In this paper we consider the relationship between economic structure and demographic situation at a regional level (NUTS 3), across rural[1] Europe. This is operationalised by comparing two regional typologies which have been developed in the context of the ESPON 2013 programme. The first is a simple classification of (non-urban) regions according economic structure, developed within the context of the EDORA project. The second is a classification of regions according to demographic status, developed in the context of ESPON 2006 programme, and updated for the DG Agriculture SERA project, and the ESPON 2013 programme.

[1] It is perhaps more correct to refer to the territory covered by this paper as "non-urban", since it excludes only those regions classified by the OECD classification as "Predominantly Urban".

The findings show, as might be anticipated, that regions which still have a substantial primary sector tend also to have relatively negative demographic characteristics. At the other extreme, diversified areas, in which the Market Services Sector is strong, tend to show relatively positive demographic trends. Rural regions in which the economy is more active in exploiting countryside public goods (through tourism, recreation, conservation and so on) and those with more substantial secondary sectors, occupy an intermediate and "mixed" position.

The geographical pattern of rural economic structure across Europe is partly a consequence of past accessibility constraints, partly a consequence of inertia, caused by "sunk capital" (human and physical), and of course in the New Member States of low capacity to adapt to the market economy. This "structural inheritance" needs to be recognised and carefully "factored into" rural policy for the post 2013 period.

2 An Introduction to the EDORA Project.

The over-arching aim of the EDORA project is to better understand the development opportunities and challenges facing rural areas in Europe, in order to support targeted policy development, especially in relation to job creation and social change. In particular, insights should help with the practical implementation of spatial development principles which have evolved out of the Fifth Cohesion Report, and the Territorial Cohesion Green Paper. Three key issues are;

- the need to better understand patterns of differentiation, between different kinds of rural area,
- the nature of the different opportunities for development which each of them faces, and,
- the way in which such opportunities depend upon, and may be strengthened by, interaction between rural and urban areas.

In order to address these issues the EDORA researchers have sought to draw together contemporary academic interpretations of the process of rural change, with the most up-to date data, so that robust and empirically valid findings can form a firm foundation for policy recommendations.

The broad structure of the project (Figure 1) is specifically designed to avoid picking up the conventional rural development bias towards land-based industries. It comprised three broad phases: In the first phase the theoretical literature was reviewed, in order to establish the contemporary interpretation of rural change. In the second a regional evidence base was constructed, including both recent trends and anticipated Future Perspectives. In the third and final phase the theoretical interpretations and empirical evidence were considered as a starting point for considering policy options for rural policy in the context of spatial cohesion objectives.

These findings relate to Cohesion policy generally, and more specifically to the third research question posed by the specification, i.e. the potential to design policy, which strengthens the economy and society of rural areas through various forms of urban-rural interaction.

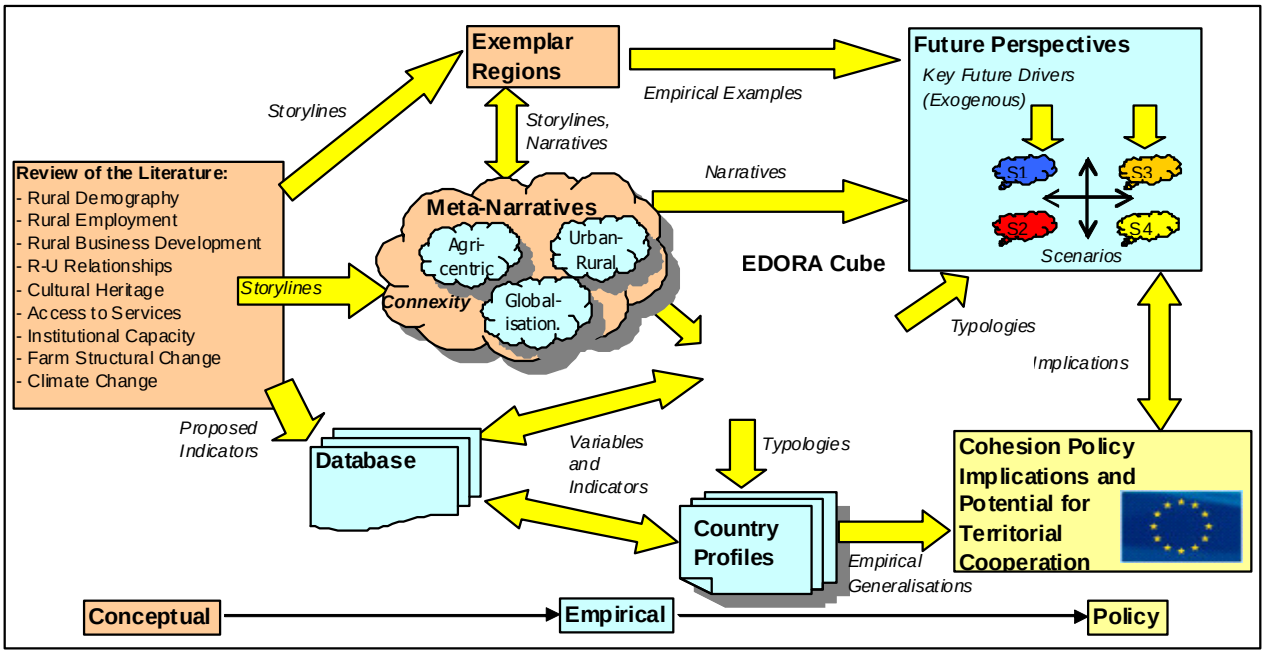


Figure 1:The Structure of the EDORA Project

In responding to the project specification's emphasis upon development opportunities for different kinds of rural areas the EDORA approach has sought to balance due regard for regional specificities against the need for appropriate generalisations to replace outdated stereotypes. It has also highlighted the fact that local potential is often defined by regional capacities and "soft factors" which determine the ability to respond to increasingly ubiquitous opportunities. The focus in this report is therefore often upon the determinants of that regional capacity to respond, rather than upon establishing a list of specific activities which show promise for growth in rural areas. The latter would inevitably be partial, and would risk becoming rapidly out of date.

2. Meta Narratives, and the EDORA Cube

The first phase of the project was a review of the literature on rural change, advised by the project specification's guidance towards activities outside agriculture and forestry. This took the form of nine thematic reviews, each of which generated a separate working paper. These thematic reviews revealed a large number of "story lines" of rural change, relating to economic, social, environmental and policy processes of change.

Woven through the nine thematic reviews is the "leitmotif" of *Connexity*; the increasing interconnectedness, over longer distances, of all aspects of rural economic and social activity. This means that the strength of linkages/relationships to sources of information, innovation, and business opportunities can, other things being equal, become more important that geographical location or proximity to resources. Within this overarching theme, three "meta-narratives" of contemporary rural change can help us to understand the complexity and variety of individual development paths. These are:

- The *Agri-Centric* meta-narrative, which draws together various "post-modernisation" or "post-productivist" concepts and strategies, such as "multifunctionality", "commodification", or "ecological modernisation", which all stress the fact that agriculture and farming communities are increasingly concerned with a broader range of objectives than maximising output of food and fibre. Again, the notion of para- and peri-productivism are fundamental to this meta-narrative.
- The *Urban-Rural* meta-narrative draws together various story lines relating to migration, rural-urban relationships, access to SGI, agglomeration (or its absence), and highlights the cumulative causation process which drives the differentiation of, and disparities between, accessible and remote/sparsely populated rural regions.
- The meta-narrative of *Global Competition* emphasises implications of increasing connexity and global trade liberalisation, in terms of the spatial segmentation of labour markets and the associated structural change of European rural areas. This points to strategies which depend upon the "knowledge economy", the role of the creative class, an emphasis upon quality, place marketing, niche markets and so on.

The process of structural change in the countryside is closely related to the third meta-narrative. It seems to be driven by a form of globalised "spatial division of labour" (Massey 1984) between non-urban areas in Europe and competing low-cost regions (both rural and urban) in emerging developing countries. The relative decline of agriculture and manufacturing, together with the rise of market services are part of a long-term structural evolution which historical geographers such as Richard Peet (1969, 1971, 1972), and economic historians such as Immanuel Wallerstein (1974) tell us began at least one hundred and fifty years ago, with the emergence of the "Modern World System" (Ibid).

The overarching theme of increasing connexity, and the three meta-narratives, are largely "exogenous"; common vectors of change, which act upon all rural regions. As such they are often part of an interactive web of socio-economic changes and trends which are global in scope and impact and are not easy to change by policy intervention. The observed increase in

regional diversity across rural Europe can therefore best be explained by differences in the local environment upon which these forces of change operate. They are also the key to appropriate forms of intervention for cohesion policy.

Having established the contemporary interpretation of rural change, the second phase of the project concentrated upon furnishing an evidence base. Fundamental to this was the creation of a regional database, containing both raw data from secondary sources, and derived indicators.

The Territorial Cohesion principle of "turning diversity into strength" seems to point towards an ideographical approach, but generalisations are nevertheless extremely useful, and it is important that some of the outdated stereotypes about rural areas which seem to lie behind conventional rural development policy are revised or superseded. The meta-narratives described above are a form of (theoretical) generalisation about common "ensembles" of processes of change. They are neither exhaustive or inclusive of all the ways in which individual regions experience change. Neither is it possible to associate one meta-narrative with one particular type of region. All three, (and perhaps others which we have not described) may be at work, to some extent, in any individual region.

The EDORA Cube

In pursuit of a form of generalisation which is more evidence-based the EDORA project developed an "analysis framework" composed of three discrete regional typologies. A single typology cannot easily encompass the salient aspects of differentiation of rural regions. The so called "EDORA cube" therefore comprises three typologies, reflecting three distinct dimensions of variation (Figure 2).

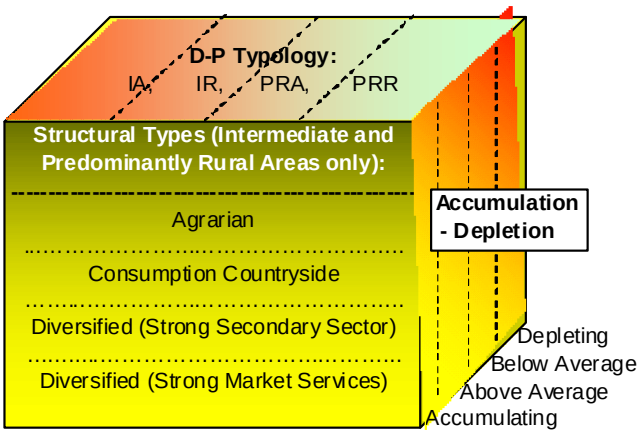
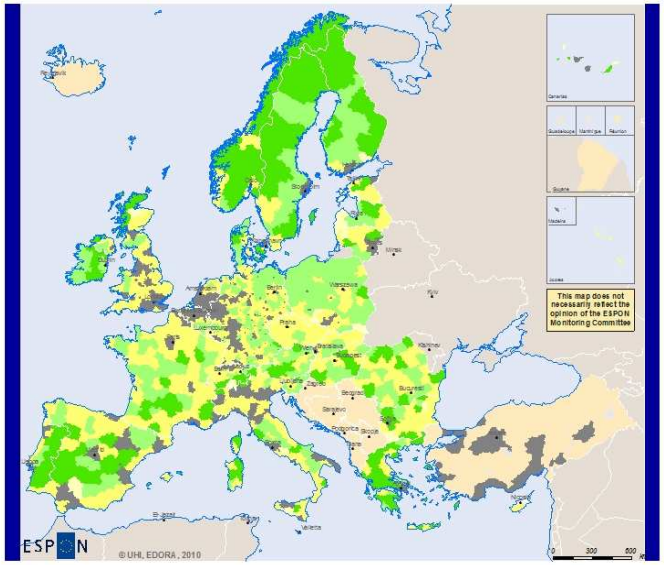


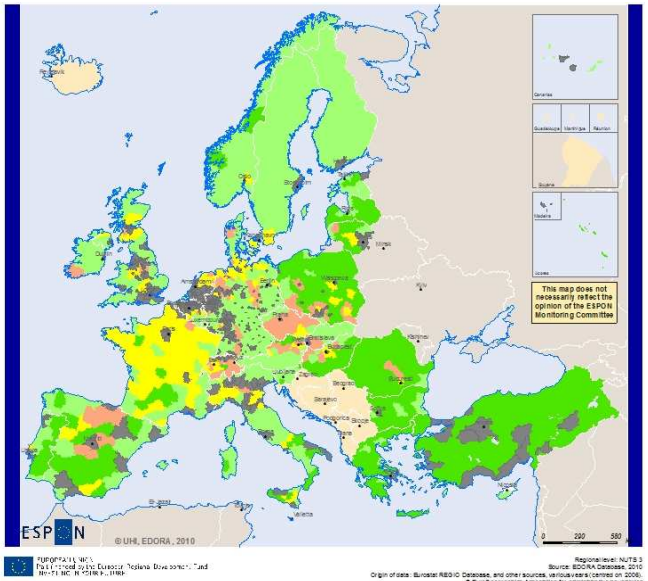
Figure 2: The EDORA Cube – a 3 dimensional framework for analysis

Note: IA = Intermediate Accessible, IR = Intermediate Remote
PRA= Predominantly Rural Accessible PRR = Predominantly Rural Remote



Urban-Rural Types (NUTS 3 Regions)

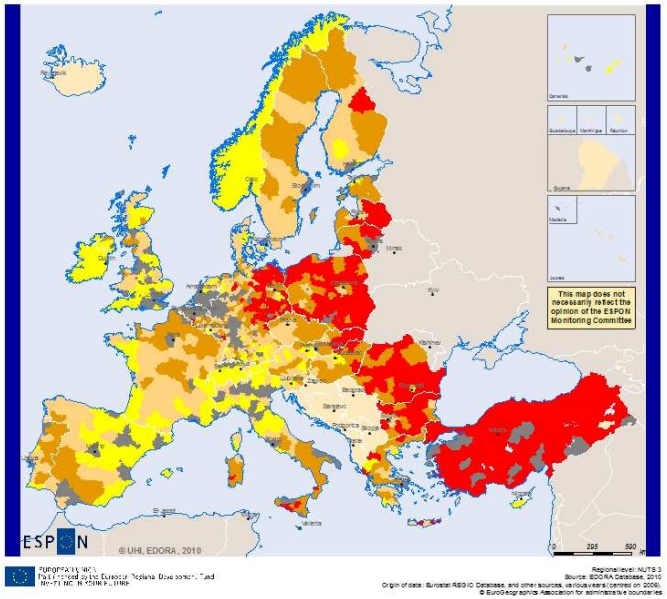
- No Data
- Predominantly Urban
- Intermediate Close to a City
- Intermediate Remote
- Predominantly Rural Close to a City
- Predominantly Remote



Structural Types (Intermediate and Predominantly Rural NUTS 3 Regions)

- No Data
- PU Regions
- Agrarian
- Consumption Countryside
- Diversified (Strong Secondary Sector)
- Diversified (Strong Private Services Sector)

Note: A simplified classification procedure was necessary in CH and TR, due to missing data. However it is anticipated that acquisition of a wider range of indicators would not materially change the outcome.



Performance (A-D) Types (Intermediate and Predominantly Rural NUTS 3 Regions)

- No Data
- PU Regions
- Depleting
- Below Average
- Above Average
- Accumulating

Note: The type allocation to TR and CH is based upon a reduced set of indicators, and should not be considered fully comparable with the typology for the EU27.

The three typologies attempt to capture the following aspects of rural differentiation:

(i) *Rurality/accessibility*. This typology relates to the Urban-Rural meta-narrative, and was developed (at DG Regio) from the OECD typology. Four types of (non-urban) regions are distinguished; Intermediate Accessible, Intermediate Remote, Predominantly Rural Accessible, and Predominantly Rural Remote.

(ii) *Economic Restructuring*. This typology relates to both the Agri-Centric and Global Competition meta-narratives, and was developed from 13 indicators, using a multi-criteria, disaggregative approach. Again four types of non-urban regions were distinguished: Agrarian, Consumption Countryside, Diversified (with strong secondary sector) and Diversified (with strong market services sector).

(iii) *Performance*. This typology places regions on a continuum between "accumulation" and "depletion", and derives its rationale mainly from the urban-rural meta-narrative. It is based upon a synthetic index of performance, incorporating 5 indicators. Four types of region are distinguished; Accumulating, Above Average, Below Average, and Depleting.

3 The EDORA Structural Typology

3.1 Methodology and Data

The Structural Typology was developed using a deductive disaggregative approach, which offers greater transparency in the definition of types, reduces the risk of "agrarian bias" due to data availability, and allows types to be predefined according to theoretical or policy requirements.

The first step was to explore the regional patterns associated with potentially useful variables and indicators. As part of this process indicators in which there were substantial missing data problems, or which produced maps which seemed to be unduly affected by harmonisation issues were discarded.

The outcome of this procedure was the selection of 34 raw data variables (predominantly from the Eurostat REGIO database – see appendix 1) of which 27 were combined in various ways to generate the 17 ratio indicators from which the Structural Typology is derived. Those indicators which relate to a single point in time were extracted for the most recent year (in each member state) for which data was available. In most cases the great majority of regions had data for the same year, most commonly 2006, but ranging from 2005 to 2008. A small number of change variables was also incorporated, these related to the period 1995-2006. The number of missing data cells was minimised in various ways, (substituting data from

another year, use of NUTS 2 averages, and so on). All the indicators were converted to normalised (Z) scores, using the non-urban (NUTS 3) mean and standard deviation.

Table 1: The Structural Typology Indicators

No.	Short Name	Description	Variables used	Base Year	Intermed. and PR Mean	PU Region Mean	EU27 Mean
Ag1	PCPrimeE(Tot)	% Employment in Primary Activities	V18,V16	2006	10.45	1.65	7.60
Ag2	PCPrimeE	% Private Sector Employment in Primary Activities	V18,V17	2006	13.94	2.36	10.19
Ag3	PCPrimeG(Tot)	% GVA from Primary Activities	V11,V9	2006	4.78	0.85	3.51
Ag4	PCPrimeG	% Private Sector GVA from Primary Activities	V11,V10	2006	6.23	1.12	4.57
Ag5	AWUPEmp	AWU as a % of Total Private Employment	V24,V16	2007	13.12	2.02	9.76
CC1	HotCat	% of employmet in Hotels and Catering	V26,V25	2007	9.57	9.85	9.66
CC2	BPPC	Bed Places per Capita	V27,V1	2006-8	86.36	35.65	69.93
CC3	NSRES	Nights Spent by Residents per capita	V29,V1	2008	342.75	284.79	323.90
CC4	NSNON	Nights Spent by Non-Residents per capita	V30,V1	2008	232.41	145.18	204.16
CC5	NSTOT	Nights Spent (Total) per capita	V31,V1	2008	575.33	431.96	528.89
CC6	ANA	Access to Natural Areas	V28	2008	125.92	91.50	114.79
CC7	PCOGA	% of holdings with OGA	V32	2005	37.40	37.94	37.57
CC8	LT4ESU	% of Holdings <4 ESU	V33,V34	2007	48.31	39.27	45.46
NR1	CEGKGR	Ratio of GVA from NACE CE to GK	V12,V14	2007	0.61	0.52	0.58
NR2	CEGPGR	Ratio of GVA from NACE CE to GP	V12,V15	2007	0.39	0.34	0.38
NR3	CFGPGR	Ratio of GVA from NACE CF to GP	V13,V15	2007	0.51	0.42	0.48
NR4	CEGKEMP	Ratio of Employ. in NACE CE to GK	V19,V20	2007	0.67	0.47	0.60
NR5	CEGPEMP	Ratio of Employ. in NACE CE to GP	V19,V21	2007	0.36	0.27	0.33

These indicators were used to define the four Structural types, using a simple multi-criteria procedure based upon the Z scores. Thus:

- Agrarian regions were defined as those in which all three indicators of the relative importance of agriculture (% employment in the primary sector, % of GVA from primary sector, and AWU as a percentage of total employment) exceeded the EU27 non-urban region mean.
- Consumption Countryside regions were defined by 8 indicators, in three groups, relating to tourism capacity and intensity, access to natural areas, and “peri-productivist” (i.e small scale and diversified) agriculture.
- The remaining regions were deemed to be “diversified” and were separated into two groups on the basis of the ratio of the GVA derived from Secondary activities to that from market services.

3.2 Results

Geographic Patterns

An analysis of the typology maps, together with cross-tabulation analysis, provided a useful “triangulation” of European rural regions. The principal findings were:

- Agrarian regions are concentrated in an eastern and southern arc, stretching from the Finland, the Baltic States, through Poland, Slovakia, Romania, Bulgaria and Greece, S Italy, Corsica, SW France, southern and western Spain, and eastern Portugal.
- The rest of the European space is characterised by a patchwork of three types of rural area, Consumption Countryside, Diversified (Secondary) and Diversified (Private Services). Of these the last seems to be to some extent associated with the most accessible areas.
- Consumption Countryside regions are often closely associated with Agrarian ones. Indeed some Mediterranean regions, especially in Greece, meet the criteria for both types. Consumption Countryside regions cover much of Sweden and Finland, more accessible coastal areas of the Baltic States, parts of Slovenia, Austria, much of eastern and southern Germany, much of central and southern Italy, Corsica, southern and central France, eastern and northern Spain, the coastal regions of Portugal, and most of the less densely populated parts of the UK and Ireland.
- The Diversified (Strong Secondary Sector) regions are found in the Czech Republic, Slovenia, and Slovakia, northern and Eastern Germany, around Madrid, and in northern Spain, and the English Midlands.
- The last category – Diversified (Strong Market services) is conspicuous in northern and central France, northern Germany, southern Denmark, the Skåne region in the extreme south of Sweden, parts of central England, southern Scotland, and in a few regions of Spain and Italy. In the New Member States this type of region is associated with regions close to national capitals (Budapest, Bucharest, Vilnius).

The "Performance" of the Structural Types.

Table 2 shows a cross-tabulation, of the structural types (rows) against the Performance types (columns), according to percentage of EU population (excluding PU regions). The relatively negative situation in the Agrarian regions is graphically illustrated by the fact that almost half the population is found in Depleting regions. A further 40% lives in below average regions, and only a tenth lives in regions in the two positive performance categories.

Table 2: Cross Tabulation of D-P and Structural Types:- Percentage of Population

A-D Types → / Structural Types ↓	Depleting	Below Average	Above Average	Acumulating	% in Positive Types
Agrarian	47.36	40.63	9.26	2.74	**12.01**
Consumption Countryside	9.77	23.08	36.50	30.65	**67.15**
Diversified (Secondary)	22.05	22.36	34.37	21.22	**55.59**
Diversified (market services)	5.57	27.58	40.60	26.26	**66.86**
All Structural Types	**19.10**	**28.23**	**30.71**	**21.95**	**52.67**

It is rather interesting to see that the structural type with the largest share of population in regions in the two positive performance categories (over 67%) is Consumption Countryside. Very close behind is the Diversified (Market services) category, in which two thirds of the population is in the positive categories. The Diversified (Secondary) category has almost 56% in the “above average” group, but more than 20% of its population in each of the below average performance categories.

An analysis was also carried out to assess the degree to which the Structural types contain regions which are statistically different in terms of economic performance (using the performance index generated for the third typology), using a t-test methodology. The resulting probability matrix (Figure 3) indicates that all possible combinations of the four Structural types were statistically different from each other in terms of performance index (at the 90% significance level or higher), except the Agrarian and Consumption Countryside (72%). The significance of the difference in performance between Consumption Countryside and Diversified (Secondary) was also slightly “weaker”, at 93%. The Diversified (Market Services) type is very distinctive in terms of performance, the statistical significance rising to >99% for each of the three comparisons with other structural types.

A-D Index	PU	Ag	CC	Dsec	DPServ
PU					
Ag	N/A	*1.00*			
CC	N/A	0.28	*1.00*		
DSec	N/A	0.02	0.07	*1.00*	
DPServ	N/A	0.00	0.00	0.00	*1.00*

Figure 3: t-test Probability Matrix - Structural and Performance Typologies

4 The Demographic Typology

In the ESPON 2006 project 1.1.4; “Spatial effects of demographic trends and migration”, a typology based on the demographic equation (i.e. regional population change = natural population change + net-migration) was produced. The six-fold typology comprised each combination of the three demographic components. The result is a concise summary of the demographic situation in each region and the preconditions with regard to future population trends, shedding light on issues such as sustainability, population growth, depopulation and ageing. The typology that was presented in ESPON 1.1.4 covered the period 1996-1999. It has since been updated, developed and extended in relation to the period 2000-2005, in Copus *et.al*. (2006) and Johansson (2009). In this study the estimations have been

developed to include almost every NUTS3-region (1,343) within the "ESPON space"[2]. Although the typology is based upon long established concepts, its application as a guide to regional patterns of sustainable or unsustainable demographic development is innovative.

In order to avoid confusion between the two typologies and their constituent types they will hereafter be referred to as the "Structural" and "Demographic" typologies.

4.1 Methods, data and data problems

The method that is used concerning annual total population change is estimations based on the demographic equation. The demographic equation can be expressed as:

Total population change = (births – deaths) + (in-migration – out-migration).

Annual total population change in percent is estimated as:

*100 * (EXP(LN(End year/base year)/N)-1)*

where N = the number of years between the start year and the end year – in his case the number of years of change. The natural population change is then estimated as the relation between natural population change and total population change expressed in relative terms (percent). Migration will then be the difference between total and natural population change.

The estimations of natural population development are based on the number of births and deaths during the investigated period – in this case the years 2001-2005. Both total and natural population development include consequently the same number of years. The same will also be the case concerning the estimations of the migration balances. At regional level – in this case NUTS3 – it is difficult to separate international migration from internal regional migration as the migration variable is estimated as a residual.

Most of the data derives from Eurostat. The 2006 NUTS region definitions have been used. For the great majority of countries and their regions the required data is available. However, some data problems arose due to revisions of the NUTS-delimitations, or because data has not been delivered to Eurostat. In particular the data for Denmark 2000-2005 are not in line with the data for the other countries. In order to integrate Denmark and its new NUTS3-regions into the analyses some estimations were carried out. As the demographic equation is based upon relative processes – annual changes in percent – estimation is relatively easy. In other cases where data is missing for single years interpolation or extrapolation, based on

[2] ESPON covers the EU27 plus "partner countries", the principal ones being Norway, Switzerland, Turkey and Iceland.

the annual development has been used in order to construct a consistent series. This will, however, not disturb the results in any significant way.

Table 3: A schematic typology with regard to sustainable demographic development

Type	PT	PM	PN	Regional characteristics
1	PT>0	PM>0	PN>0	**Double positive regions** - In-migration and young population/"high" TFR. High sustainability both in short and long term. The most favourable case
2	PT>0	PM>0	PN<0	**Growth regions with natural decrease** - In-migration of people with low TFR. Natural population decrease because of lopsided age structure and/or low TFR. Dependent on in-migration. No sustainability in long term – weak reproduction potential.
3	PT>0	PM<0	PN>0	**Growth regions with out-migration** - Out-migration and young population/"high" TFR and natural population increase. Short term – sustainability. Long term – eroding sustainability because of lopsided age structure (out-migration).
4	PT<0	PM<0	PN>0	**Declining regions with natural increase** - Out-migration but still young population/"high" TFR. Traditionally high fertility regions. Falling TFR -> low sustainability
5	PT<0	PM>0	PN<0	**Declining regions with in-migration** - In-migration and lop-sided age structure (old population)/low TFR. In-migration of elderly people and/or singles, low reproduction potential. Dependent on in-migration. Low sustainability both in short and long run.
6	PT<0	PM<0	PN<0	**Double negative regions** - Out-migration and lop-sided age structure with old population/low TFR. No sustainability in short as well as long term. Depopulation. The worst case.

PT= Total population change
PM= Migratory balance, net-migration
PN= Natural population change
TFR = Total Fertility Rate

Source: ESPON 1.1.4, Copus et.al. 2006 and Johansson 2009.

4.2 The 2000-2005 Version

The Demographic typology and the distribution of the differing types are presented in Map 1 and Table 4. In Table 4 the population size of the types are also estimated and related to the number of regions. From these figures it is also possible to see if large and small regions are over- or underrepresented within the six types. One way to analyse if various large regions are over- or underrepresented in the different types is to relate the relative distribution of the total population to the relative distribution of the number of regions. An index is then created by calculating the share of people in the relevant types in types *i* divided with the share of total number of regions in types *i*, and then multiply it with 100. If the result is over/under 100

the share of the population is higher/lower in the type *i* compared to the distribution of the total number of regions and vice versa. The size index (SI) can thus be written as:

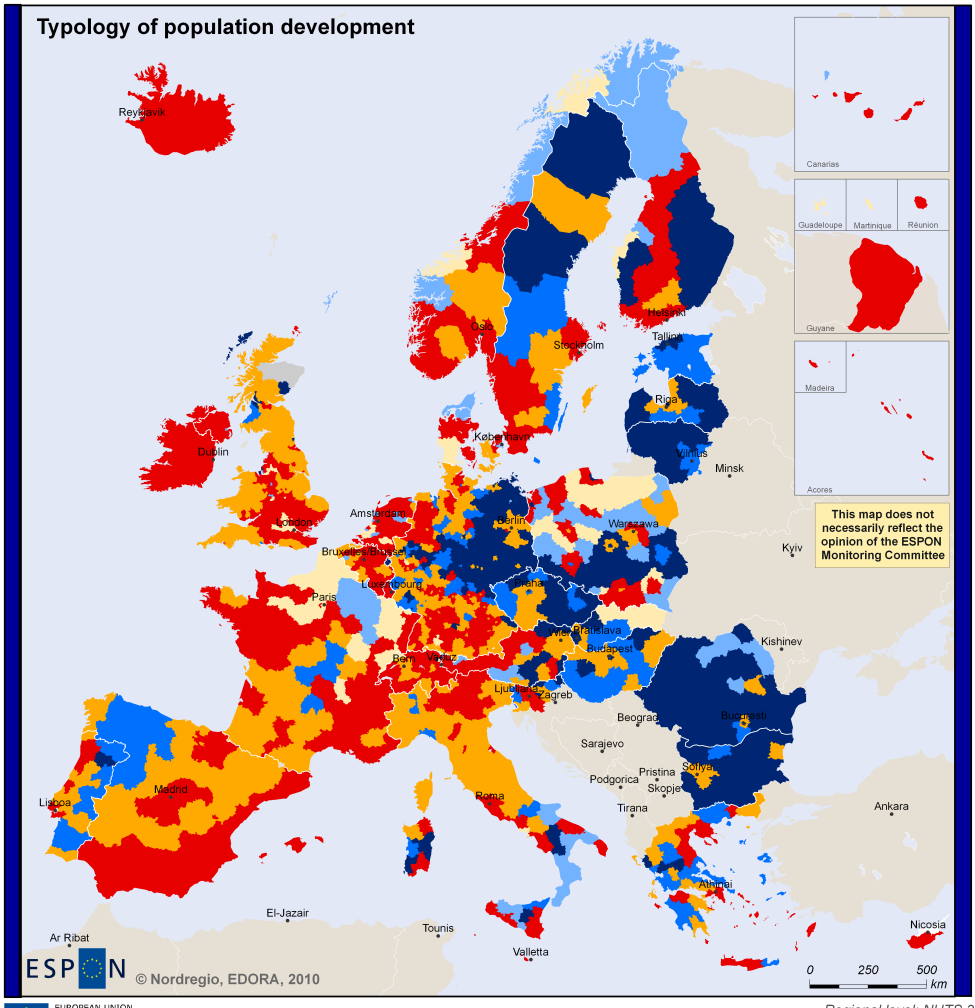
$SI = (P_i/R_i) *100$ (F1)

SI (Size Index) = weighted index according to size

P_i = share of the total population in type *i* (percent)

R_i = share of all regions in type *i* (percent)

The over- and underrepresentation with relation to population size is shown in Table 4.



Map 1. The demographic typology for the period 2000-2005 (NUTS3, N=1345)

Table 4: The distribution among the types with regard to number of regions and population size. (Iceland and two UK regions excluded).

2000-2005	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
Number of regions (N=1343)	31,1	29,5	4,5	4,5	10,3	20,0
Population Size (N=1343)	42,1	23,1	8,9	4,6	6,5	14,7
Size/numbers Index: 100	135,4	78,4	196,4	100,7	63,5	73,6

Source: Source: Estimations based on data from Eurostat and Statistics Denmark.

4.3 Description of Findings

Type 1: Double Positive Regions

The first three categories of regions have all experienced a positive population development in the sense that population has increased. The most favourable case is Type 1, where both natural population change and net-migration were positive and they reinforced each other, with population increase as a consequence. The regions in Type 1 do not necessarily have the fastest population increase – but it is a function of both natural population change and net-migration. From a sustainable point of view this case is, however, the most favourable combination and the only one that is sustainable in the long term. Long-term sustainability depends to a great extent on the mix and relationship between natural population change and in-migration.

From Table M2 it seems obvious that Type 1 is the most frequent type (both with regard to the number of regions and size of population). Type 1 is frequent in the Pentagon, metropolitan areas in the Nordic countries and regions with good climate, amenities and living conditions such as the southern part of Spain and parts of Greece.

Almost one third of the regions were represented in this type 2000-2005. Compared to the situation during the second half of the 1990s Type 1 has become more dominant over time (Johansson 2009). This is also more pronounced concerning population concentration – In 2005 42 percent of the population within the ESPON space was in this category. This indicates that the largest regions have better preconditions to grow and expand than the smaller ones. This is also an indication that the largest regions have grown as a consequence of both in-migration and positive natural population change and even if migration is the prime driver behind population change it also has effects on natural population increase. It must be kept in mind that differing migratory movements with regard to gender and age have consequences for the natural population changes and reproduction potentials in differing kinds of regions. In short, in-migration areas are in a better situation both with regard to natural population increase and reproduction potential than out-migration

areas. This is a consequence of the higher share of fertile women in the in-migration areas just as a consequence of net in-migration.

Type 2: Growth regions with natural decrease

In the second type population increase is still dependent on in-migration but contrary to Type 1 the negative natural population change hampers the population increase but not so much that it results in population decrease. This phenomenon is often the case in "dynamic" regions where many households, especially among the in-movers, consist of singles and small households. The result is weak and eroding reproduction potentials and a low sustainability in long term as a consequence of low fertility rates. This phenomenon is apparent in the expanding parts of Northern Italy as well as metropolitan areas in the Eastern Europe as the Warsaw, Prague, Bratislava, Budapest regions and even the Sophia area located in a country with a problematic population development. Even growing areas in Spain, France and United Kingdom and Germany have regions that are characterised by in-migration in combination with negative natural population change. This development seems also to have been accentuated during 2000-2005 compared to 1996-1999 (Johansson 2009).

Comparing to Type 2 the relation between the shares of regions and population concentration 2000-2005 was contrary to the relation in Type 1. The number of regions were overrepresented compared the share of population concentration – 23 percent of the ESPON inhabitants were living in 30 percent of the regions (see Table M2). Even in this case positive migratory movements may stimulate natural population change even if the latter still is negative.

Type 3: Growth regions with out-migration

In this type, the positive effect of natural population change neutralises a negative migration effect. Even in this case, preconditions for a sustainable population development are good – at least in short term – as the population base is still favourable because of natural population increase. In the long term, one of the likely results of out-migration is a drain of younger people, a skewed age structure, a weak reproduction potential, and in the end an undermining of a sustainable population development.

Type 3 is not frequently represented within the ESPON space, accounting around 5 percent of the regions 2000-2005. The low level has been accentuated since the second half of the 1990s when 10 percent of the regions were in type 3 (Johansson 2009). This is perhaps not surprising as natural population increase is seldom as large or larger than change due to net in-migration.

Type 3 regions are represented in the north-eastern parts of Poland and the north-western parts of France, western parts of Switzerland, northern Slovakia and some parts of Finland

(Map 1). Compared to the second half of the 1990s the share of regions within this type has almost been halved and many regions have changed position. Still Poland – even if there has been a shift westwards – and France are most frequently represented within this type and the same is valid for northern Slovakia.

Even for Type 3 there seems to be an overrepresentation of large regions despite the negative net-migration. Even if the shares in Type 3 were halved between 1995-1999 and 2000-2005 – probably as an effect of out-migration – a natural population increase could still be observed but not as important as in the second half of the 1990s. The overrepresentation of the large regions is – perhaps surprisingly – most pronounced in this category. One explanation to this phenomenon can be an effect of the small number of regions in this type. It must be kept in mind that small number of regions implies that changes with regard to numbers and size must be interpreted with some caution. Small changes may well result in considerable redistribution effects.

Type 4: Declining regions with natural increase

Type 4 regions are similar to Type 3, combining negative net migration with positive natural population change, but in this case the impact on total population development is negative. In the long term there is an obvious risk for this group that migration induced changes in age structure and fertility will result in natural change turning negative, and shifting the regions into Type 6. There is thus a threat that the vulnerable situation of Type 4 will worsen and the preconditions for a sustainable population development will disappear.

The Type 4 regions are predominantly localised in the peripheral and sparsely populated rural areas of the ESPON space - parts of Finland and Norway, eastern Poland, southern Italy, France, Spain and Bulgaria. Type 4 has the same signs of the components – but of different relative size – as Type 3 with differing outcome concerning the effects on total population. Then it would not be surprising if they should alter between each other over time. This seems, however, not to have been the case as the shares with respect to the signs seem to be very similar regarding the number of regions during the two periods and this is also underlined by data. That something has happened seems, however, obvious if the share of population is compared over time as the population shares have decreased dramatically. The drop in the number of regions in Type 4 resulted in a rather balanced relation 2000-2005. This implies that it was the largest regions with natural population increase that changed signs from net out-migration to net in-migration.

This is of course only one explanation but the tendencies towards increased importance of Type 1 don't work against this hypothesis even if there are a lot of other alterations. The hypothesis of changing positions from Type 3 and Type 4 to Type 1 is also confirmed by

analysing the alterations of differing types from the data set that show that a large part of the above discussed types changed positions between (see Johansson 2009, Table 3). In both cases the strategic variable is the changed sign of net-migration.

Type 5: Declining regions with in-migration

Type 5 is characterised by in-migration in combination with negative natural population change. This is typical for regions that are attractive in terms of settlement patterns and living conditions for elderly people, but also concerning areas that are dynamic with a lot of singles and highly educated people among the in-migrants. This results in a negative natural population development that is large enough to counteract the positive sign of net migration. These regions are similar to those of Type 2, which are distinguished by their positive total population development. Type 5 regions are, however, in a more problematic situation in long term with regard to sustainable population development as the lopsided age structure combined with low fertility rates might result in accentuated population decline and depopulation. Regions where retirement migration is a central ingredient for the total population development will then accentuate the development towards a non-sustainable population development.

Even if there are some regions in Southern Europe most of the regions in Type 5 seem, however, not to be “retirement paradises”. Instead, most regions are predominately localised in Eastern Europe and Germany. By comparing Spain and Germany between 1995-1999 and 2000-2005 it is obvious that many Type 5 regions have converted to Type 2. This means that the net-migration has been more important than the natural population change with regard to total population change with the result that total population development has changed from being negative to positive. The natural population decrease indicates, however, for these altering regions that the potentials for a sustainable population development with good reproduction potentials still are shaky.

Type 6: Double negative regions

Type 6, where the natural population decrease reinforces the effects of out-migration is the least favourable in terms of sustainability. This is the infamous “vicious circle” or “negative spiral” process. This is also the worst case and these regions are in a very bad situation with unsustainable population development and the chances of changing this process are not good.

From Map M1 it seems apparent that many of the Type 6 regions are located in the European periphery. Large parts of Sweden, Baltic States, Hungary, but even parts of Spain and Germany are in this category. It can also be seen from Table M2 that it is predominantly small regions that are localised in Type 6. It is also obvious that small regions are

overrepresented in this category – a phenomenon that has been accentuated since the second half of the 1990s.

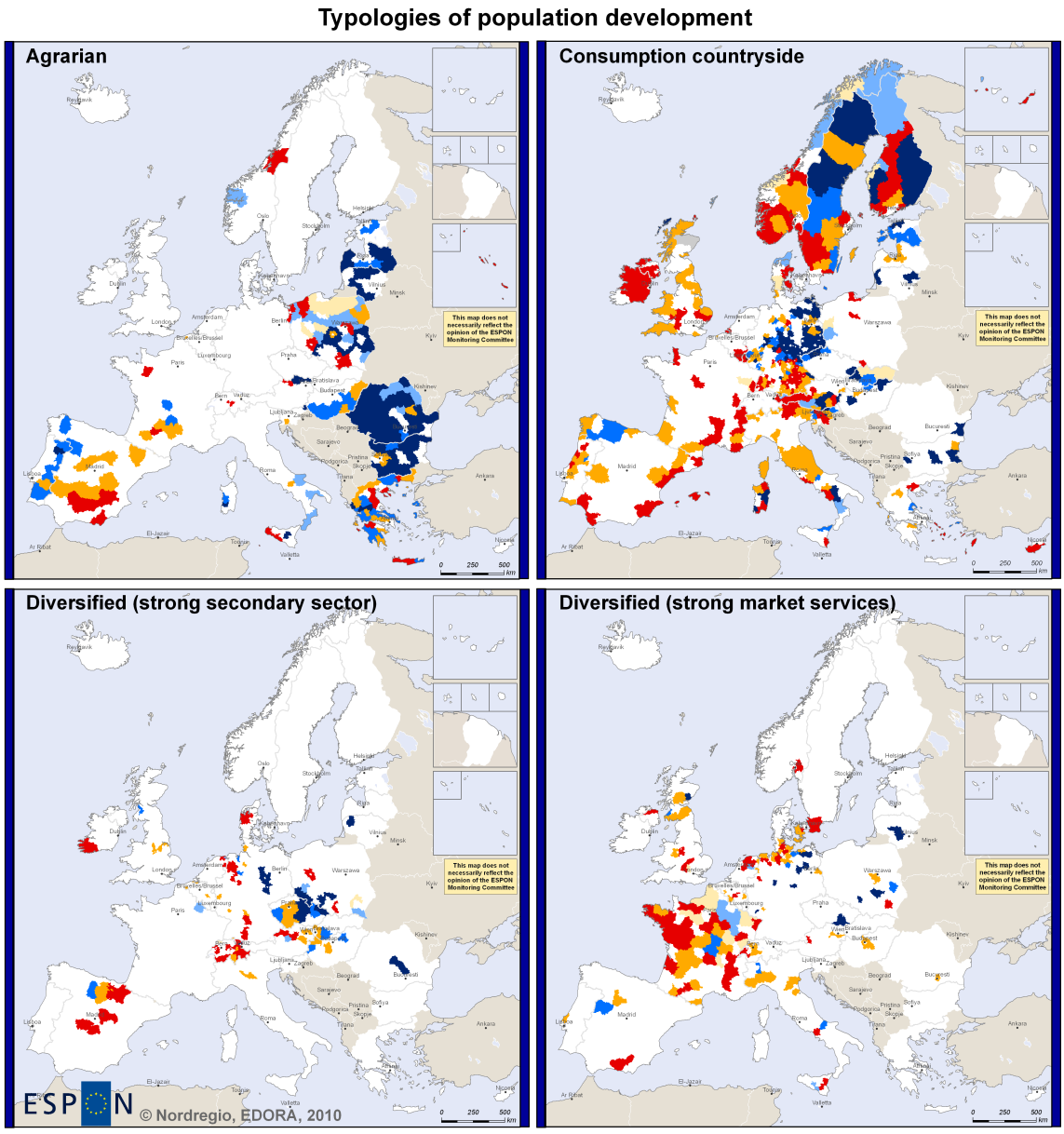
On the other hand history can witness of a lot of cases of reversal processes concerning negative economic, social and demographic development.

There are, however, sign changed development paths from viscous circle to a virtuous one for some regions in this category. From a non-static point of view it is also a fact that regions that seem to have bad preconditions – at least at a first glance – instead have changed this backward situation to a favourable situation with respect to change and development. All these changes are results of the shifting regional migratory balance from negative to positive signs. This underlines the great impact of migration on and its role as the prime driver for regional demographic development. It is also symptomatic that only in a few cases the advancement from Type 6 was a function of a positive natural population development (Johansson 2009, Table 3).

Comparing with the situation during the second half of the 1990s it is still obvious that at least the Eastern European countries have considerable demographic problems that weaken the preconditions for a sustainable demographic development with eroding territorial cohesion as one consequence. Population decrease combined with negative natural population change is not a good and promising mix from a sustainable development point of view.

5 Cross tabulation of the Structural and Demographic typologies

In this part of the study the Demographic types are cross-tabulated against the Structural types in order to investigate the differences between the five Structural types concerning sustainable population development and depopulation. Some conclusions can be drawn based on the tables below and consisting of almost all regions within the ESPON Space with the exception of Iceland. The number of regions and the size of the different Structural types are shown in Table 5 below.



Map 1. The Demographic Typology concerning the four non-urban Structural types for the period 2000-2005 (NUTS3).

Table 5: The distribution of the five Structural types. Based on numbers of regions (NUTS3) and population size (%).

Structural Types, N=1343	%N	%size	Size index
0. Predominantly Urban	31,9	43,9	137,6
1. Agrarian	15,6	13,1	84,0
2. Consumption Countryside	34,2	23,7	69,3
3. Diversified (strong secondary sector)	7,0	6,3	90,0
4. Diversified (strong market services)	11,2	13,0	116,1

Note: Size index (F1), over- or underrepresented with regard to size (index=100, neither nor).Table 6 (number of regions) and Table 8 (population size) the Demographic types are distributed with respect to the Structural types. As can be seen in Table 6 it is clear that the Structural types follow the Demographic distribution to some degree only.

Table 6: The distribution of the Demographic types with regard to the five Structural types. Numbers of regions (%). Period 2000-2005.

Structural Types	% Demographic Types, N=1343					
	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
Structural Types Total	**31,1**	**29,5**	**4,5**	**4,5**	**10,3**	**20,0**
0. Predominantly Urban	39,4	28,9	6,3	3,5	8,9	13,1
1. Agrarian	14,3	17,1	4,3	10,5	18,1	35,7
2. Consumption Countryside	28,5	33,3	2,4	2,8	9,6	23,3
3. Diversified (strong secondary sector)	37,2	25,5	2,1	5,3	9,6	20,2
4. Diversified (strong market services)	35,1	39,1	7,9	4,0	6,0	7,9

Note: Combinations highlighted in yellow are those where the share (%) exceeds the average for all Structural types.

Three Structural types are “overrepresented” in Type 1 – the most favourable type from a sustainable demographic point of view. These are the ”Predominantly Urban” and the two “Diversified rural types”. All three have a higher share of regions in Type 1 compared to the total share of all ESPON regions (see Table 7). The predominantly urban areas show the expected pattern with high shares in Type 1 and Type 2.

Table 7: Over- and underrepresentation of the various Demographic types with regard to number of regions in the Structural types. Period 2000-2005.

Over-/underrepresentation. Index = 100 neither/nor						
Structural/Demographic Types totally, N=1343, NUTS3						
	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
0. Predominantly Urban	126,7	98,0	139,9	77,7	86,0	65,3
1. Agrarian	45,9	58,1	95,2	232,8	175,7	178,6
2. Consumption Countryside	91,8	113,0	53,3	62,9	93,1	116,6
3. Diversified (strong secondary sector)	119,7	86,5	47,3	118,2	93,0	101,1
4. Diversified (strong market services)	112,9	132,5	176,6	88,3	57,9	39,7

Note: Combinations highlighted in yellow are those where the share (%) exceeds the average for all Structural types.

The relatively good population development in the *diversified countryside with a strong secondary sector* is perhaps less expected. This type of region accounts for only 7 percent of the regions and 6 percent of the population within the ESPON space, and are concentrated in the Czech Republic, Poland and Spain. The diversified countryside with a strong secondary sector has also gone through a deindustrialisation process with the result that these regions have experienced a vicious circle with regard to migration and natural population development. Almost 28 percent of these regions experienced net out-migration during the period 2000-2005 – perhaps a surprisingly low figure for regions dependent on the declining manufacturing industries. The situation is, however, more precarious when the natural population development is taken into consideration – 55 percent of the regions with 60 percent of the population in this structural type experienced natural population decrease. In many cases this hampered the positive effects of the net in-migration. Thus around 20 percent of these regions, consisting of 26 percent of the population were in the worst performing Demographic category (Type 6) where the natural population decrease reinforces the negative effects of net out-migration (Table 6 and Table 8).

Table 8: The distribution of the Demographic types with regard to the five Structural types. Based on population size (%) 2005. Period 2000-2005. Combinations highlighted in yellow are those where the share (%) exceeds the average for all Structural types.

Size: % Structural and Demographic Types, N=1343, NUTS3						
	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
Structural Types Total	**42,1**	**23,1**	**8,9**	**4,6**	**6,5**	**14,7**
0. Predominantly Urban	**51,5**	20,7	**12,1**	2,9	4,7	8,2
1. Agrarian	15,5	12,1	6,3	**15,7**	**11,2**	**39,1**
2. Consumption Countryside	38,5	**32,2**	3,9	2,4	**7,9**	**15,1**
3. Diversified (strong secondary sector)	33,7	**23,6**	2,2	4,5	**10,5**	**25,6**
4. Diversified (strong market services)	**45,4**	**27,9**	**13,5**	3,2	3,6	6,4

Note: Combinations highlighted in yellow are those where the share (%) exceeds the average for all Structural types.

Map 2 shows that the diversified countryside with a strong secondary sector type has a polarised geographical localisation. The expanding areas are to be found in the central or western parts of the ESPON space while the retarding and declining ones are to be found in the old industrial districts in the new eastern member states. This implies that the first category already had been reconstructed and changed the viscous circle to a virtuous one with population increase as one result. This seems to have taken place during the deindustrialisation period the decades before the new century. The most unproductive units were closed down during the deindustrialisation process and the most productive and knowledge-based survived even if the employment decreased.

This was not the fact in the old state-owned factories in the former central planned economies. Instead of renewal and reconstruction development was in many cases characterised by rigidity and "lock-in" mechanisms that prolonged negative development. The new rurality or the new rural economy seems neither to have an alternative to the retarding and stagnating economic development. These phenomena might be some of the reasons to the unstable and unsustainable demographic situation in some of these rural areas.

The *diversified countryside with strong market services* structural type accounts for 11 percent of the regions within the ESPON Space and 13 percent of the population. This category shows, as does the *Consumption Countryside group,* good population development and accounts for 34 percent of the regions and 24 percent of the population. The prime driver behind the good demographic development in these categories is – as usual – in-migration. Among the structural type *diversified countryside with strong market services* 80 percent of the regions experienced net in-migration 2000–2005 and in the structural category *Consumption Countryside* the corresponding figure was 71 percent (see Table 6). With regard to the size of population in these two types the figures was 77 respectively 79 percent of total population in corresponding structural types. The latter figures are, by the way, about the same as for the predominantly urban type and somewhat higher than for the corresponding relative distribution of total population within the total ESPON Space regarding the demographic types (see Table 8).

These high figures might be an effect of the "new rurality" or the "new rural economic order" that has changed the performance of the countryside in many European countries and especially then in densely populated rural areas in the surroundings of big urban agglomerations. The densely populated rural regions are in a more favourable position with regard to population change and than other more peripheral rural regions. This is not especially surprising as densely populated rural regions have experienced a relatively positive population development during the past decades (Copus et.al., 2006; Johansson & Kupiszewski, 2009).

Despite the high net in-migration figures in the categories *"Consumption Countryside"* and *"Diversified (strong market services)"* the effects of the natural population decrease hamper the positive population change. In the first case 66 percent of the regions consisting of 55 percent of the population showed a negative natural population development during the period 2000-2005. It was, thus, the small regions that had the weakest reproduction potentials and this can be an effect of differing migration pattern with regard to large and small regions. Out-migration results often in natural population decrease as a consequence of shortage of young and fertile women in population. This seems to be a fact especially in Demographic Type 6 with both out-migration and natural population decrease (see Tables 6

and 8). It is not a qualified guess that many of these regions might be sparsely populated and localised far away from the metropolitan areas. From Map 2 it seems obvious that it is the peripheral areas in the northern part of Europe, which seem to be in the most troublesome situation but even central parts of Germany and some parts in the new member states are characterised by both natural population decrease and negative net migration. Here, it must also be noticed that 23 percent of the regions – but with only 15 percent of the net-migration. The regions in the eastern part of Europe show similarities with the agrarian regions in the same areas. This will result in a future precarious situation for these regions in general and for the rural ones especially.

This can be contrasted to the figures in the *diversified countryside* with strong market services were only 8 percent of the regions with 6 percent of the population are in Demographic Type 6 (see Tables 6 and 8). In this category it was 53 percent of the regions with only 38 percent of the population that was hurt by a negative natural population development 2000-2005. These rural areas are predominantly localised in the western part of Europe – and then especially in France – and it might also be in these kind of rural areas that the "new rurality" and has been established. It seems, however, also in this case to be small peripheral and sparsely rural regions that is hurt most by the demographic development with ageing and depopulation as one result (Johansson 2009, see also Map 1 and Tables 6 and 8). The few blue spots are to be found predominantly in the eastern part of Europe

The rural category with the most negative demographic development was the *Agrarian*. Only 36 percent of the regions with a population share of 34 percent showed population increase between the years 2000 and 2005. This negative development can also be illustrated of the fact that only 14 percent of the regions were to be found in Demographic Type 1 and as many as 36 percent and 39 percent of the agrarian population within the ESPON Space in Type 6. In other words, the Agrarian regions are in a very problematic situation from a sustainable demographic point of view. These regions are mainly found in Eastern Europe and parts of Spain and are associated with transformation problems. These regions are still waiting for the effects the "new rurality" or the "new economic rural order" and this situation is in many cases also reinforced by the economic transformation in other sectors that hamper the population development as a consequence of natural population decrease as well as net out-migration.

Even with regard to *agrarian regions* most of the rural regions in Eastern Europe are among the "degrading" ones. The overwhelming majority of these regions are from Bulgaria and Romania – countries that are characterised by a very deep and hard population crisis with population decline for both countries. The active component here is once again migration –

internal as well as external – that is the prime driver in this downgrading process. Despite this precarious situation it seems that it is mainly the metropolitan areas that experience positive population development. In Bulgaria three NUTS3-regions had a positive population development and in Romania the corresponding figure was two. The regions in Bulgaria are Varna and Sofia and its surroundings and in Romania it is the environs of Bucharest and the other is Ilfov – a region characterised by diversified countryside with strong market services. The pure agrarian regions seem – as in many other countries – to be involved in processes dominated by viscous circles and negative development spirals.

5.1 Large regions – better preconditions

The size index used here (Table 7) in order to investigate if the size has importance for the demographic development in the differing Structural types is constructed in same way as formula F1 above. By combining Tables 6 – 8 and the discussion above it seems obvious that large regions are in better positions concerning sustainable demographic development than small ones and this can also be seen in Table 7 where the over- or underrepresentation of large regions is presented.

The overrepresentation in the growing Demographic types is valid four almost all Structural types except the *diversified countryside* with a strong secondary sector – all other types are overrepresented in the growing Demographic types 1 and 3 (Table 7). In this case it is instead the types 5 and 6 where the large regions are overrepresented. This is an indication of the large transformation problems these regions have experienced with deindustrialisation and depopulation as one obvious result.

It can also be noticed that large regions are overrepresented in Demographic Type 3. It must here be kept in mind that Type 3 is a small category both within all regions and the Structural categories. The highest share is to be found in the category *diversified countryside with strong market services* with 8 percent of the regions and 14 percent of the population in this Structural category (see Tables 6 and 8). The total distribution in relative terms is 5 and 9 percent respectively. This means also that small absolute changes can result in large relative effects with regard to the size index and the results ought to be interpreted with some care. One illustration of these shaky results is the large overrepresentation of almost all Structural types concerning the Demographic type 3. The same reasoning is also applicable with respect Demographic type 4. This type show, however, declining regions and this is also a hint about that large regions have better demographic development preconditions than small ones. It is only the *agrarian regions* that are overrepresented in this type. As can be seen large agrarian regions are overrepresented also in Demographic type 3. These large agrarian regions are thus characterised by a combination of out-migration and natural population increase. This is also an indication of the old truth that agrarian regions have higher fertility

than more urban ones were children is more like a consumption product than a production factor (Becker 1993). This gap seems, however, diminished as a consequence of the economic and social transformation, out-migration and defamilisation even in peripheral agrarian areas (ESPON 1.1.4 2005).

Table 9: Over- and underrepresentation of the various demographic (ESPON) types with regard to population size 2005 in the differing Structural types. Period 2000-2005.

Size/numbers:Edora/Demographic Types, N=1343. NUTS3. **Over 100 = large regions overrepresented,** **Under 100 = large regions underrepresented**						
	Type 1	**Type 2**	**Type 3**	**Type 4**	**Type 5**	**Type 6**
Structural Types Total	**135,4**	**78,4**	**196,4**	**100,7**	**63,5**	**73,6**
0. Predominantly Urban	**130,8**	71,6	**191,8**	81,6	52,7	62,6
1. Agrarian	**108,8**	70,8	**147,1**	**150,1**	61,9	**109,5**
2. Consumption Countryside	**134,9**	96,6	**160,7**	84,4	82,8	64,9
3. Diversified (strong secondary sector)	90,5	92,4	**101,3**	84,2	**109,2**	**126,7**
4. Diversified (strong market services)	**129,2**	71,5	**169,6**	81,3	61,0	80,2

6 Conclusions

This paper has compared two recently devised typologies of European NUTS 3 regions, a simple structural typology, and a typology of demographic status. It has shown that, as might be anticipated, there is some correspondence, at the extremes, between the two typologies. Thus (broadly speaking) the Agrarian regions of the structural typology tend to fall in the more negative categories of the demographic classification, whilst the diversified regions with strong market services generally fall in the demographic growth categories. The two intervening structural types are more ambivalent – having bi-polar distributions across the demographic types.

These findings suggest that despite the current fashion for emphasising the diversity of rural Europe, and the need to respect and build upon the uniqueness of each locality, it is still (to some extent) possible to identify macro-scale socio-economic patterns. This does not imply a return to macro-scale models/explanations, such as core-periphery concepts, since to a large degree the patterns are “relics” of past processes. Rural economies and societies, perhaps more than urban ones, are characterised by inertia. The historian’s term “palimpsest”, which describes the way in which a historical document may display evidence of text “overwritten” several times, is an apt description of the state of the European countryside. New patterns are constantly overlaying those associated by economic conditions of the past. Appropriate rural development policy therefore needs to take account of the legacies of (for example) core-periphery, the socialist era in the New Member States, and of structural characteristics

which were appropriate prior to globalisation, when the spatial division of labour within Europe was more differentiated. However it also needs to have a clear vision of the future – the post-recession economic world will not be the world of 2008. It will be necessary for Europe's rural regions to restructure in order to survive more intense competition from the BRIC countries, and to adjust to climate change, and the need for reduced carbon dependence. These issue will have profound implications for macro-scale economic structures and patterns, rural, as well as urban.

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Appendix 1 : The "Raw Data" Variables used to generate the Structural Typology Indicators

No.	Short Name	Description	Units	Source	Base Year/ Period	No. of Missing Data Regions*	Comments
V1	TOTPOP	Total Population	'000's	Regio: Table reg_d3avg	2007	0	
V2	TOTPOPNUTS2	Total Population of NUTS 2 Region	'000's	Calculated from ESPON (2008)	2001-05	0	The Mig. and N.I. rates given in ESPON 2008 were applied to V2
V3	MIG	Net Migration	'000's	Calculated from ESPON (2008)	2001-05	0	ditto
V4	CHILD	Persons <15 years	'000's	Regio: Table reg_d2avg	2005	0	The percentage of total population at NUTS 2 was applied to the NUTS 3 total population.
V5	PENS	Persons >65 years	'000's	Regio: Table reg_d2avg	2006	0	ditto
V6	WAP	Working age population (15-65)	'000's	Regio: Table reg_d2avg	2006	0	ditto
V7	GDP(PPS)	GPD (PPS)	€mio.	Regio: Table reg_e3gdp	2006	26	NO data (1998, 2006) estimated by apportioning NO total (reg_e3gdp) to regions on the basis of regional figures (in NOK) extracted from http://www.ssb.no/fnr_en/
V8	GDPCH	Average annual change in GDP	%	Regio: Table reg_e3gdp	1995-2006	26	1995-2006 is base period, shorter periods used according to data availability by region
V9	TOTGVA	Total GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE A-P
V10	TOTGVA(PR)	Total Private Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE A-K
V11	PRIMGVA	Primary Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE A-B
V12	C-E GVA	Secondary Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE C-E
V13	C-F GVA	Secondary Sector GVA (inc. Constr.)	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE C-F
V14	G-K GVA	Market Services GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE G-K
V15	G-P GVA	Service Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE G-P
V16	TOTEMP	Total Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE A-P CH data extracted from http://www.bfs.admin.ch/bfs/portal/en/index/regionen/regionalportraets.html
V17	TOTEMPPr	Total Private Sector Employment	'000's	Regio: Table reg_e3empl95	2006	26	Defined as NACE A-K
V18	PRIMEMP	Primary Sector Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE A-B. CH data extracted from website above
V19	C-E EMP	Secondary Sector Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE C-E. CH data extracted from website above
V20	G-K EMP	Market Services Employment	'000's	Regio: Table reg_e3empl95	2006	26	Defined as NACE G-K
V21	G-P EMP	Service Sector Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE G-P. CH data extracted from website above
V22	TOTEMPCH	Avg. annual change Total Employ.	%	Regio: Table reg_e3empl95	1995-2006	28	1995-2006 is base period, shorter periods used according to data availability by region
V23	UNEMP	Unemployed persons	'000's	Regio: Table reg_lfu3pers	2008	203	
V24	AWU	Annual Work Units	AWU	Regio: Table reg_ef_r_nuts	2007	68	DE data is for NUTS 2
V25	SBSEMPTOT	Total Persons Employed	No.	Regio: sbs_r_nuts03	2007	28	NUTS 2 data
V26	SBSHOTCAT	Employed in Hotels and Catering	No.	Regio: sbs_r_nuts03	2007	28	ditto
V27	BP	Bed Places	No.	Regio: Table tour_cap_nuts3	2006-08	15	Average of 2006-08
V28	ANA	Access to Natural Areas	Combined	Territorial Cohesion Green Paper EC	2008	30	NO regions have been given the same score as the nearest SE region
V29	NSRES	Nights Spent by Residents	No.	Regio: tour_occ_nin2	2008	47	Nuts 2 data
V30	NSNON	Nights Spent by Non-Residents	No.	Regio: tour_occ_nin2	2008	60	ditto
V31	NSTOT	Nights Spent (Total)	No.	Regio: tour_occ_nin2	2008	60	ditto
V32	PCOGA	% of holdings with OGA	%	Rural Development in the EU Chapter 3	2005	44	NO data supplied directly by Eurostat.
V33	LT4ESU	Number of holdings <4 ESU	No.	Regio: Table reg_ef_r_nuts	2007	29	DE data is for NUTS 2
V34	TOTESU	Total holdings (ESU size dist.)	No.	Regio: Table reg_ef_r_nuts	2007	27	ditto

Notes

* Calculated for EU27+NO+CH. (0 missing data = data for 1349 regions)