The ESPON 2013 Programme

Applied Research Project 2013/1/2

EDORA

(European Development Opportunities for Rural Areas)

A Typology of Intermediate and Predominantly Rural NUTS 3 Regions

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LIST OF ABBREVIATIONS

A-D Accumulating-Depleting
AWU Annual Work Unit
CC Consumption Countryside
D-P Dijkstra-Poelman (Enhanced urban-rural typology of NUTS 3 regions)
ESU European Size Unit
GDP Gross Domestic Product
GVA Gross Value Added
IA Intermediate Accessible
IR Intermediate Remote
ISEZ Intermediate Socio-Economic Zone
NACE Statistical classification of economic activities in the European Community (Nomenclature statistique des activités économiques dans la Communauté européenne).
NMS New Member State
NRE New Rural Economy
MS Member State
PPS Purchasing Power Standard
PR Predominantly Rural
PRA Predominantly Rural Accessible
PRR Predominantly Rural Remote
PU Predominantly Urban

EXECUTIVE SUMMARY

Introduction

1. The EDORA Typology, (or typologies) play a pivotal role in the project, reflecting the findings of the early conceptual phase and structuring the subsequent analysis of future perspectives and policy implications.
2. The first phase of EDORA has attempted to paint a more accurate picture of contemporary rural socio-economic patterns and trends. It has illustrated the almost infinite variety of local situation and trend, produced by a bewildering range of drivers of change, mediated by local opportunities and constraints. These drivers combine in various ways, and in order to gain some understanding of these, three "meta-narratives" were presented in Working Paper 10. It is important to be clear that these meta-narratives are not exhaustive or inclusive of all the ways in which individual regions experience change. Neither is it possible to associate one meta-narrative with a particular type of region. All three, (and others not specified in WP10) may be at work, to some extent, in any individual region. The meta narratives thus play the role of "heuristic devices" to help us explore the processes of change through an ideographic approach.
3. The rural development policy literature is populated by stereotypes, some being more or less representative "stylised facts" and others being anachronistic "fallacies". Whilst recent policy design and implementation has attempted to incorporate a degree of flexibility to meet local circumstances (menu-based approaches, neo-endogenous approaches and so on), generalisations still have a very important role to play in policy design and targeting. It is extremely important that "stylised fallacies" should be superseded by generalisations which are more accurately representative of contemporary rural Europe. The EDORA typologies are an important element of that process of refreshing the stereotypes which underlie policy design and implementation.

The EDORA Analysis Framework: Overview and Links to the Theoretical Discourse.

4. The EDORA typologies are implemented at NUTS 3, and (in terms of the OECD classification) cover all Intermediate and Predominantly Rural regions. This accommodates the inclusion of the Dijkstra-Poelman (D-P) modified OECD typology, as specified in the technical specification of EDORA. It also reflects the theoretical arguments for not separating rural areas from the adjacent small and medium-sized towns with which they interact within local and regional economic networks. The EDORA typologies thus cover the areas of Europe which broadly equate to Gade's (1991, 1992) concept of an Intermediate Socio-Economic Region (ISEZ) and Saraceno's (1994) "Local Economy".
5. Instead of a single typology this working paper proposes an "analysis framework" in the form of three typologies reflecting three important dimensions of differentiation among non-urban regions. These are:
    - Rurality/accessibility.
    - Degree of economic restructuring.
    - Socio-economic performance (accumulation or depletion).

    These three dimensions have been represented diagrammatically as "the EDORA cube".
6. The first typology (the D-P classification according to rurality and accessibility) covers the EU27 plus Norway and Switzerland. At present the other two typologies cover the EU27, but it is planned to extend them to NO and CH in a later version of this paper.
7. The Structural typology derives its rationale in part from the second meta-narrative described in Working Paper 10 – "Economic Competitiveness and Global Capital". The long-term evolution of economic structures in non-urban areas (away from primary and

secondary activities and towards the expansion of market services) can be seen as the most recent phase of a long historical process of global/spatial division of labour. It also draws on the discourse regarding territorial and sectoral policy, the concept of "consumption countryside", and the importance of countryside public goods. The four types of non-urban region which are proposed reflect the constraints imposed by the availability of NUTS 3 data. They are:

- Agrarian Economies
- Consumption Countryside
- Diversified (with important Secondary Sector)
- Diversified (with important Market Services Sector).

8. The third (performance) typology derives mainly from the urban-rural meta-narrative, and places regions on a continuum between "depletion" and "accumulation" of various kinds of capital (human, financial, fixed, and so on). Although initially specified as a continuous variable, it is also presented in four categories.

The Data Used and Classification Method.

9. The Structural and Performance typologies have been 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.

10. The first step in both the Structural and Performance Typologies 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.

11. The outcome of this procedure was the selection of 27 raw data variables (predominantly from the Eurostat REGIO database) which were combined in various way to generate 17 ratio indicators. 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.

12. The first 13 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.
13. The geographical distribution of the above four Structural types reveals (in very broad-brush terms) an degree of association with peripherality. The Agrarian regions occupy an arc "on the edge of Europe", from Finland, south through the Baltic States, Poland, Slovakia, Romania, Bulgaria. And Greece, and then through S Italy, SW France, and into the southern and western half of the Iberian peninsular. The Consumption Countryside

regions occupy most of the Nordic Member States, much of Germany, Slovenia, Austria, parts of Italy, S France, coastal Spanish and Portuguese regions, and the more rural parts of the UK and Ireland. The Diversified regions tend to be more accessible. Those in which Secondary activities are dominant are found in the Czech Republic, Hungary, Slovenia, around Madrid and in the north of Spain, in parts of Germany and the English Midlands. Diversified (market Services) regions are rather conspicuous in northern and central France, but are also scattered across N Germany, N Italy, parts of the UK, and close to national capitals in the New Member States.

14. The remaining five indicators, (net migration, GDP per capita, average annual change in GDP, average annual change in total employment, and unemployment rate) were used to generate a synthetic regional performance indicator. This was achieved by simply calculating the unweighted mean of the Z scores. The synthetic indicator may be used either as a continuous variable, or converted to four ranges; “depleting”, “below average performance”, “above average performance”, and “accumulating”. The criteria were simply defined by the mean, and 0.5 standard deviations above/below the mean.

15. The geographical pattern of performance scores shows a very clear concentration of Depleting regions in the eastern New Member States and the New German Lander. Below average scores are also found in southern Italy, western Spain, Portugal, central and NE France, and the northern parts of the Nordic Member States and UK. The highest rates of “accumulation” are found along the Mediterranean coast of Spain, and north of Madrid, in Ireland (clearly a result which is unlikely to stand once more recent data is available), southern England, northern Netherlands. Above average performance is widespread among the French and German regions, Austria, N Italy, and adjacent New Member States, such as the Czech Republic and Slovenia.

16. The ability of the D-P and Structural types to differentiate between groups of non-urban regions in terms of their socio-economic performance was explored, as one means of assessing their validity as a part of the process of constructing new “stylised facts”, which can play a role in structuring the Future Perspectives and Policy Implications tasks of the second half of the EDORA research. This was carried out through a series of t-tests to assess whether the means and variances of the performance indicators associated with the various D-P and Structural types were consistent with the probability that the types were sampled from different populations. In general terms the results show that the structural typology has greater power to discriminate between non-urban regions in terms of their performance than does the D-P typology.

17. The same t-test procedure is used to explore the potential usefulness of combining the D-P and structural typologies into a single classification. It was found that the various configurations for combining the two typologies which were assessed resulted in reduced discrimination in terms of performance indicators. This is probably due to the small number of regions in some of the combined types. It was concluded that the statistical analysis served to confirm the earlier theoretical arguments for not separating Intermediate and Predominantly Rural regions within the structural typology. However the multi-criteria methodology used means that there are no particular practical barriers to presenting the structural types for the Intermediate and PR regions separately where policy considerations render this desirable.

Using the “EDORA Cube” to “triangulate” Rural Europe.

18. The analysis presented here is by no means exhaustive, further detail is reserved for the Future Perspectives working paper (WP24). Three simple approaches are followed:
    - Observation of the relative “weight” of the types within the D-P and Structural typologies.
    - Cross tabulation of types between all three typologies.

- Comparison of the D-P and Structural typologies in terms of some basic indicators of socio-economic performance.

19. The D-P typology could be said to be rather “unbalanced”, in terms of the relative “weight” of the different types. It is dominated by the Intermediate Accessible group, which accounts for almost half the regions, more than a third of total area, two-thirds of population, and more than two thirds of GDP. At the other extreme is the Intermediate Remote group, which comprises only 23 regions, and only 2% of land area, population and GDP. The Predominantly Rural Accessible (PRA) and Remote (PRR) groups account for 264 and 147 regions respectively. The former contains roughly a third of total area, a quarter of the population and 22% of non-urban GDP. The latter occupies 28% of total area, but has less than 10% of population, and only 8% of GDP.

20. The Structural Typology is rather less “skewed” in terms of the distribution of regions and total area. However, in terms of population (42%) and GDP (48%) the Diversified (Market Services) group is substantially larger than any of the other four. The Diversified (Secondary) group contains 22% of area, and 24% of both population and GDP. The Agrarian group comprises almost a quarter of the total non-urban area, and almost one-third of the agricultural area, but only 22% of population, and a mere 13% of GDP. Finally, the Consumption Countryside group occupies 22% of total area, but a much smaller share (9%) of agricultural land, of population (12%) and GDP, (15%).

21. Cross-tabulation of the three typologies suggests relationships between rurality, structure and performance. The following are some of the more interesting findings:
    - Common combinations of D-P and Structural classifications are: Intermediate Accessible with Diversified (Market Services) and Intermediate Accessible with Diversified (Secondary). Predominantly Rural Remote regions are commonly classified as Agrarian, and Intermediate Remote is often associated with Consumption Countryside.
    - Cross-tabulation of D-P and Structural types in terms of location quotients for GDP with respect to population reveals the relatively low productivity of the Agrarian regions and the relatively high productivity of Consumption Countryside regions (regardless of rurality category). Intermediate Accessible regions in the Diversified (Market Services) group exhibit very high location quotients for GDP in respect to population.
    - Almost 60% of the population of Intermediate Accessible regions was in the “above average” or “accumulating” groups of the Performance typology. In all three of the remaining D-P types the majority of the population lived in regions classified in the “below average” and “depleting” groups.
    - A similar cross-tabulation of the Structural and Performance typologies shows that more than half the population of the Agrarian group lived in “depleting” regions, and only one sixth lives in regions in the two positive performance categories. At the other end of the scale the Consumption Countryside and Diversified (Market services) groups have almost 70% and 66% of their populations in regions in the two positive performance categories. The Diversified (Secondary) group has almost 40% of its population in the above average performance group, but less than 20% in accumulating regions.

Conclusions:

22. The typologies presented in this working paper are not intended to be “general purpose”; they have been created with two overall objectives in mind:
    - To develop broad generalisations about rural Europe which might helpfully supersede the “stylised fallacies” which have all too often, in the past, influenced the design and implementation of European policies for non-urban areas.
    - To provide a simple but appropriate framework for analysis for the Future Perspectives (Activity 2.26) and Policy Activities (2.31 and 2.32).

23. With respect to the first of these, it has been shown that:
    - Regions in which the primary sector plays a major role in the local economy are mainly concentrated in an arc stretching around the eastern and southern edges of the EU27.
    - The rest of the European space is characterised by a patchwork of three types of rural area, Consumption Countryside, Diversified (Secondary) and Diversified (Market services). Of these the last seems to be to some extent associated with the most accessible areas.
    - Broadly speaking there is a tendency for the Agrarian regions to be relatively low performers, showing many of the characteristics of the process of socio-economic "Depletion". The Diversified (Secondary) regions also tend to be relatively poor performers, perhaps because they are dependent upon declining manufacturing industries.
    - The Consumption Countryside regions and the Diversified (Market Services) group are both high performers, and likely to continue to "accumulate" in the immediate future.

24. These are very simple, broad-brush generalisations, which, of course, cannot "do justice" to the wealth of local variation in rural areas across the ESPON space, or to the infinite number of possible combinations of drivers, opportunities and constraints. Nevertheless within the context of the debate about the future of European (cohesion) policy for rural areas, it would seem that the four Structural Types may be more useful as stereotypes than the prevalent, but outdated association of rural exclusively with Agrarian rural economies, or even with the Consumption Countryside. The rather different needs and potentials associated with Diversified rural economies (whether strong in secondary activities or market services) would seem to deserve far more attention in the context of the policy debate than they have heretofore received.

25. As a first step, the use of the structural typology as a framework for the Future Perspectives analysis and subsequent Policy tasks will allow the validity of these broad generalisations to be further assessed.

26. The final section of the report provides a tentative discussion of the way in which a combination of the Typologies and the Meta Narratives might serve as the basis for a rationale for differential intervention which better reflects the diversity of rural Europe. Such differentiation would work best as part of a neo-endogenous place-based rural policy, in which the combination of "measures" in any individual region would ideally be a matter for decision at a regional level, within the context of support from the national and EU levels.

1. INTRODUCTION

1.1. Aims and objectives of EDORA

The EDORA project belongs to the first strand of the ESPON 2013 programme: “Applied research on territorial development, competitiveness and cohesion: Evidence on European territorial trends, perspectives and policy impacts”. As such it is intended to “create information and evidence on territorial challenges and opportunities for success for the development of regions.” It requires a cross-thematic and applied approach.

The over-arching aim of the project is to develop a better understanding of the development opportunities and challenges facing diverse types of rural areas in Europe. The underlying demand for such knowledge is to support targeted policy development, relating (inter alia) to job creation and social change. In particular, insights should support the practical implementation - across a range of policy fields – of spatial development principles which have evolved out of perspectives presented in the Fifth Cohesion Report, and elaborated in the recent Territorial Cohesion Green Paper. In particular the project should support the further integration of the Lisbon and Gothenberg agendas into the post-2013 Common Agricultural Policy (CAP).

Three key issues are fundamental to the project specification;

- 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.

Addressing these issues requires a research approach which fully reflects recent conceptual advances, and constructs hypotheses derived from contemporary interpretations of the process of rural change in the full range of European rural environments. At the same time it requires a comprehensive utilisation of available data sources, so that robust and empirically valid findings can form a firm foundation for policy recommendations.

Two key research questions have been set by the technical specification of this project:

- What are the development opportunities of diverse types of European rural areas and how can these resources contribute to improved competitiveness, both within the respective countries and on a European scale?
- What are the opportunities for increasing regional strengths through territorial cooperation, establishing both urban-rural and/or rural-rural partnerships, supporting a better territorial balance and cohesion?

There is a very clear policy rationale for this project’s focus upon rural differentiation, drivers of change, opportunities and constraints. It has three main elements:

- The 2000 Lisbon agenda, which sets overarching objectives for growth through building a competitive knowledge economy, increasing employment, through innovation and entrepreneurship, whilst respecting and enhancing social cohesion.
- The Gothenburg Agenda, which seeks to ensure that growth is compatible with environmental objectives.
- The Fourth Cohesion Report, and, more recently the Green Paper on Territorial Cohesion which have drawn attention to regional specificities as a potential resource, which may provide an alternative to agglomeration, as a foundation for economic development.

1.2. Generalisations, Stereotypes and "Stylised Fallacies" relating to Rural Change

The underlying rationale for the EDORA project stresses the need to recognise the diversity of rural areas, their recent trends, and potential future development. This both resonates with the policy concept revealed by the sub-title of the Territorial Cohesion Green Paper (EC 2008) "Turning Territorial Diversity into Strength", and also implies that an idiographic approach has a role to play in highlighting the inadequacies of commonly held stereotypes about rural areas, rural change, and policy diagnoses. Hodge (2004) notes that "stylised fallacies" (rather than an adequate evidence-base) all too often drive the rural policy debate.

Despite the role played by "menu-based approaches" to Rural Development (as in CAP Pillar 2 under Regulation 1698) and the acknowledgement of the role of local and regional agencies in the design of development programmes (especially, for example, in LEADER), *such generalisations still play a key role in policy design and implementation*. All too often these are less evidence-based than anachronistic stereotypes, often perpetuated by powerful interest groups.

Such rural stereotypes have often been quite negative, and have included, for example:

- The *agrarian countryside*, in which the role of land-based industries is overestimated at the expense of other forms of economic activity which are of greater and increasing importance to socio-economic development.
- The *"rural exodus":* characterised by out-migration and demographic ageing. This ignores the fact that many rural areas show in-migration, population increase and relatively young age structures.
- Rural *"dependency culture"* – an attachment to policy supports and compensation for disadvantage as the main policy option. In reality many rural areas, even remote ones, show evidence of dynamism, innovation and growth.
- Rural *labour markets* are commonly associated with *segmentation*, in which a dominant "secondary" component, characterised by low levels of human capital, insecurity, low activity rates (especially for females), disguised unemployment, and high levels of self-employment. All of these characteristics are certainly present in some (but by no means all) rural areas.
- Similarly, rural areas are often perceived as characterised by *barriers to entrepreneurship*, whilst the impacts of *globalisation processes are believed to be predominantly negative* (whilst they are positive for many large cities).

Clearly rural change is an extremely complex and nuanced phenomenon; the more that policy makers can understand of the details of the local experience, and that more policy can accommodate the full range of regional differences, the more effective it will be. It is not desirable that one set of "stylised fallacies" be replaced by generalisations which, although they are closer to contemporary realities, introduce a new set of inflexibilities.

Nevertheless, it is apparent that the debate concerning policy options for "non-urban" Europe cannot be sustained by a phenomenological approach alone; broad generalisations have an important role to play. It is therefore very important that the debate begins to move away from anachronistic stereotypes, and is informed by generalisations which are soundly based upon up-to-date evidence. It is hoped that the conceptual phase of EDORA may make a contribution to development of more appropriate "stylised facts" and meta-narratives of change, to support development policy for rural and intermediate areas in Europe. Although subject to a range of limitations in terms of available data, and weaknesses associated with the regional framework, such generalisations may (at least in part) be given a geographical manifestation in the typologies and "analysis framework" developed in this working paper.

1.3. The Role of Typologies in EDORA

One of the key consequences of the agrarian tradition of European rural development research is the relative abundance of data relating to farm structures, productivity and employment, contrasting with the relative scarcity of harmonised regional indicators measuring aspects of the rest of the rural economy and society, including the key issues of quality of life and access to services, which are the focus of Axis 3 of the Rural Development Regulation. A simple inductive approach, starting from a review of the available data, would therefore be particularly risky for EDORA, since the balance of the available empirical information could cause the analysis, like many before it, to gravitate towards farming and related issues. Whilst it is recognised that primary industries still dominate rural Europe in land-use terms, it was a specific requirement of the terms of reference for EDORA (p6) that: "Particular attention shall be paid to development opportunities *outside the agriculture and forestry sectors*." This explains the EDORA consortium's preference for a more "deductive" approach, in which the emphasis upon empirical evidence remains very strong (in the ESPON tradition), but in which a preliminary conceptual stage has the vital role of establishing the direction and balance of data collection and analysis.

The detailed structure of the second (research) workpackage of EDORA is shown in Figure 1. The work programme is divided into three phases, Conceptual, Empirical, and Policy Orientated. The typology is a pivotal component in the empirical work, reflecting the findings of the Conceptual phase, and providing the underlying structure for both Future Perspectives, and Policy Analysis.

The conceptual element of the EDORA research methodology is represented by activities numbered from 2.11 to 2.13. In Activity 2.11 the aim has been to identify the key drivers of change, opportunities, and constraints (D.O.C.) in the context of 9 themes (reported in Working Papers 1-9). Activity 2.12 (Working Paper 10) has attempted to synthesise these in terms of a limited number of "Meta-Narratives", which are illustrative of the many complex ways in which the processes identified in the thematic analyses interact with each other in the real world. Activity 2.13 has contributed to the understanding of the D.O.C and "Meta-Narratives", by exploring the processes of change within a set of "exemplar regions".

The findings of the conceptual phase are intended to guide and illuminate the empirical element of EDORA. For example the choice of the Exemplar Regions (2.24) was designed to capture a wide range of different kinds of change, and to provide real-world evidence of the Meta-Narratives.

At this point it is necessary to acknowledge the fact that the findings of the conceptual phase of EDORA have taken a slightly different form than that envisaged at the planning stage, and that some adjustments are necessary in subsequent tasks. When designing the project methodology it was assumed (with hindsight, simplistically) that the "Meta-Narratives" of 2.12 could specify a limited number of typical development paths which are commonly followed by a limited number of different types of rural areas (which could then form the basis of the typology). In the sense that the types were to be defined by different "development paths" the typology would portray the geographical pattern of rural socio-economic dynamics within the "ESPON space".

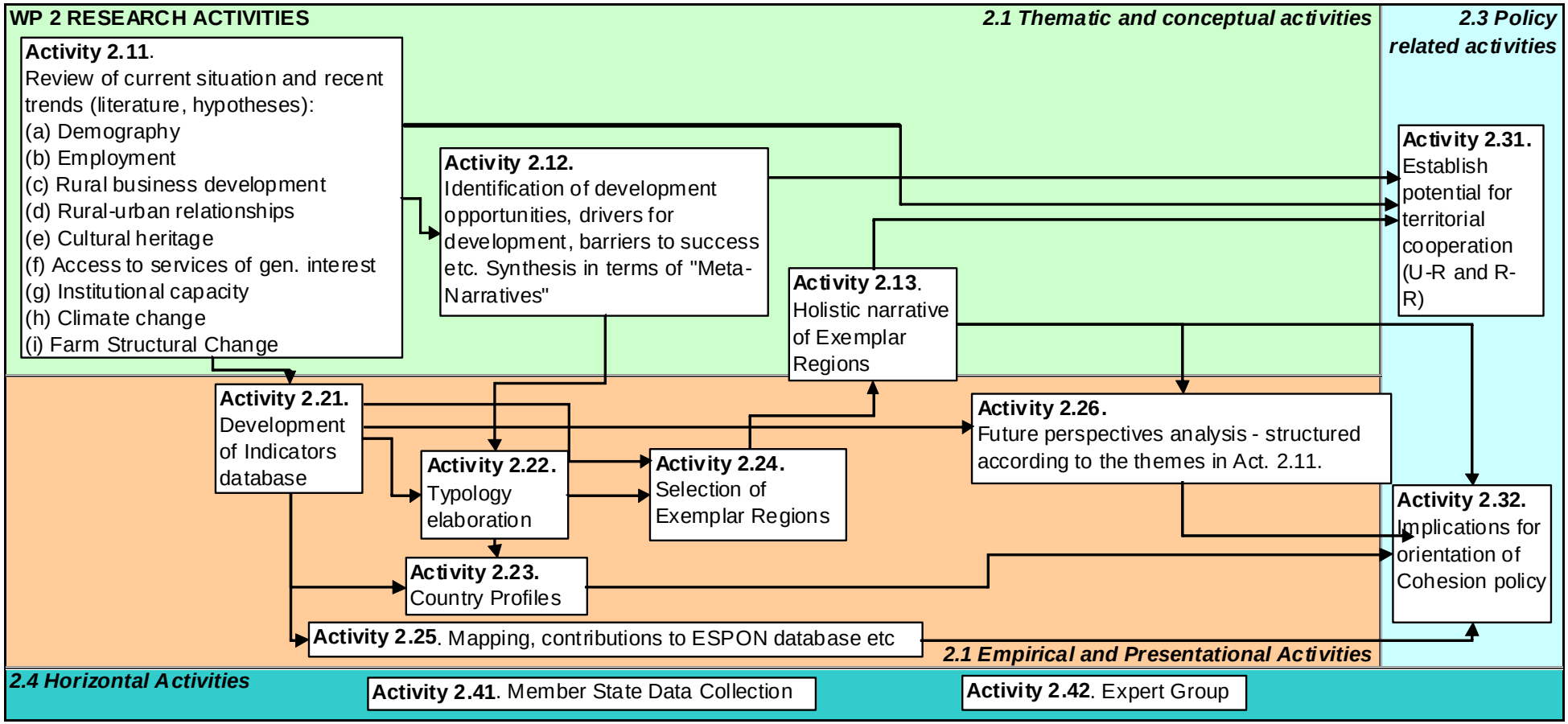


Figure 1: Structure of EDORA Work Package 2

In fact the Meta-Narratives which are presented in Working Paper 10 should rather be considered as “heuristic devices”, which help us to understand the way in which different facets of rural change interact. Thus the three Meta-Narratives described (urban-rural, agricultural restructuring, and capitalist penetration) do not represent an exhaustive list of discrete regional development paths. Nor are they associated in a one-to-one way with different kinds of rural areas. Rather they may, in various (unique) combinations, help us to understand change in individual rural areas. One consequence of this is that it is not possible to have a simple direct relationship between the Meta-Narratives and the methodology of the EDORA typology.

At the time the Inception Report was written, the typology (Activity 2.22) was envisaged as an attempt to map the geography of the most common development paths identified by the conceptual activities described above (2.11, 2.12, 2.13). After reflecting on the findings of the thematic reviews of rural change, and what may be learned about more synthetic processes of change, as illustrated by the Meta-Narratives, the role and conception of the typology has been re-specified in terms of three (interlinked) classifications, reflecting the main kinds of environment within which change operates, in terms of

(a) rurality/accessibility,
(b) progress of economic restructuring, and,
(c) an overall assessment of socio-economic performance.

As such it is considered to be well adapted to fulfil its role as a means of structuring the subsequent “Future Perspective” and Policy Analysis tasks. Furthermore, although it incorporates a very considerable cartographic component, it should not be thought of as a single map, but as a more comprehensive three-dimensional analytical framework (see section 2.2 below).

2. METHODOLOGY

2.1. Some Preliminary Considerations

Before embarking upon any regional typology-building exercise it is necessary to make some basic choices to specify the analysis. These include deciding on the geographical coverage and the spatial units to be used, and selecting a statistical approach/methodology. In the case of EDORA the degree of flexibility on these issues is quite tightly constrained.

2.1.1 Geographical coverage and units.

As in all ESPON 2013 projects, the requirement is to cover (as far as is possible) the "ESPON space". This currently includes the EU27, Norway, Iceland, Switzerland, Lichtenstein, the Western Balkans and Turkey. This working paper is based upon analysis of EU27+NO+CH+TR[1]. The analysis for the non-EU27 countries is necessarily simplified, due to data constraints. It has not yet proved feasible to include the Western Balkans.

The geographical units for the analysis are NUTS 3 regions. Not only is this the preferred level of analysis for ESPON 2013 projects, but it is fixed by the incorporation of the existing, (Dijkstra and Poelman 2008) modified OECD Rural-Urban typology, which is implemented at this level.

Since this is specified as a typology of "rural areas", most of the analysis excludes those regions defined by the OECD classification as "Predominantly Urban". It thus focuses on the "non-urban" regions of Europe, (including both Intermediate and Predominantly Rural regions – see below) rather than "rural areas" *per se*. This choice follows partly from the specification of NUTS 3 regions as the units of analysis.

Much has been written about the disadvantages of NUTS 3 regions as a geographical framework for analysis rural socio-economic phenomena and change. The OECD classification, - and the Dijkstra-Poelman (D-P) variant - is a rather imprecise tool for separating urban and rural areas. Very few NUTS 3 regions are exclusively rural (or urban). Intermediate regions exhibit a wide variety of spatial configurations - some having nucleated settlement patterns combined with sparse hinterlands, others more uniform (moderate) densities. Most Predominantly Rural (PR) regions incorporate medium-sized towns. In addition there are a range of comparability issues (within the OECD and D-P classes) which derive from the Modifiable Areal Unit Problem (MAUP).

However, from a more theoretical perspective, rural areas cannot, in any case, be separated from adjacent settlements, with which their economy is closely connected by a complex web of daily interactions[2]. It thus does not make very good sense to try to focus exclusively on rural areas as distinct from the (small-medium sized) towns embedded within them, and with which they are very much integrated in terms of their economic life. As long ago as 1991 Ole Gade (Gade 1991, 1992, also Appendix 3) developed a descriptive spatial model of the "Intermediate Socio-Economic Zone" (ISEZ[3]). In 1994 Saraceno similarly argued for a "local economy" approach as the key to understanding "the present logic of spatial differentiation" in Italy. The ISEZ was first conceived in a US context, and some of the details would not perhaps transfer "neatly" to the politically much more complex European space. It nevertheless may well provide a useful foundation upon which to build a new framework of "stylised facts" about the emerging economic geography of non-metropolitan Europe. Thus the concept of an integrated and indivisible "non-metropolitan" regional economic entity, may

[1] LI is also included where data availability allows.
[2] This is the rationale for the emphasis upon urban-rural interaction in Task 3.1 of EDORA.
[3] In an earlier version Gade uses the term "region" rather than "zone", and the abbreviation is ISER.

turn out to be a key to better understanding regional economic development, and very relevant to the issues treated by EDORA.

Although far from ideal, for a variety of practical reasons, (in particular the requirement to retain comparability with the Dijkstra-Poelman typology), the "non-metropolitan" or "ISEZ" regions of the EU27 will be defined as all regions outside the PU, (i.e. all intermediate and predominantly rural regions).

2.1.2 Statistical Approach/Methodology

There are broadly two methodological approaches to regional typologies (Copus *et al* 2008):

(a) Inductive aggregative approaches.
(b) Deductive disaggregative approaches.

The former is more commonly used in academic studies, for a variety of reasons, including the availability of "off the shelf software", and an assumption that it is more "objective". In a policy context, however, the second, deductive, approach has a number of advantages, including the greater transparency of the classification process, and the facility to predefine types which are relevant from a policy standpoint (*ibid*).

Within the EDORA context, where the types we are looking for are to some extent "pre-defined" by the conceptual phase of the project, where inductive procedures are risky due to the "agrarian bias" in the data resource, and where it is important to ensure that the outcome is meaningful in a policy context, a deductive, disaggregative approach seems most appropriate.

2.2. The EDORA Cube – more of a Framework for Analysis than a single Typology

2.2.1 The Technical Specification as the Starting Point

In addition to building on the findings of previous EDORA research activities, and seeking to provide a structural component of subsequent tasks, the typology must address the project specification. The latter states (p6) that the modified OECD Urban-Rural typology, developed by Lewis Dijkstra and Hugo Poelman "shall be the starting point for this applied research project." The D-P typology is a classification of NUTS 3 regions in terms of their degree of "rurality", (as indicated by the proportion of regional population in densely populated sub-regions), and of access to urban areas.

It is not appropriate or necessary to enter into a discussion here of the relative merits of defining rurality in this way, or of the merits of distinguishing remote and accessible rural areas. Both these issues are explored in the literature already[4], and in any case the adoption of the D-P typology is a fixed point deriving from the project specification. However it is important to state that the authors accept the D-P typology as an appropriate starting point because it has an easily comprehended rationale, and because the basic OECD classification is widely accepted and used to discriminate between NUTS 3 regions in terms of degree of rurality. In saying this we are fully aware of the many and varied criticisms which have been levelled against the OECD classification. However we feel that it is a pragmatic solution, which is unlikely to be substantially improved upon in the near future, given the "fundamentally flawed[5]" nature of the NUTS statistical region framework.

[4] See for example ESPON project 1.1.2 Urban-Rural Relations, or Bryden *et al* 2004

[5] David Freshwater, OECD (one of the authors of the typology), speaking at a recent seminar organised by DG Regio. ("How does cohesion policy support rural development" – Brussels 1st October 2009 http://ec.europa.eu/regional_policy/conferences/urban_development/index_en.cfm?nmenu=1)

2.2.2 Structure and Performance as additional dimensions

The D-P typology thus provides the "first dimension" of the EDORA analysis framework. Two further dimensions have been added, taking into consideration both the theoretical/conceptual findings of Activities 2.11 and 2.12, together with the substantial limitations in terms of availability of NUTS 3 data.

The second dimension seeks to capture the most important, "broad brush", differences in economic structure between the Intermediate and Predominantly Rural regions of the ESPON space. The third dimension considers variations in socio-economic "performance". This approach is illustrated in Figure 2.

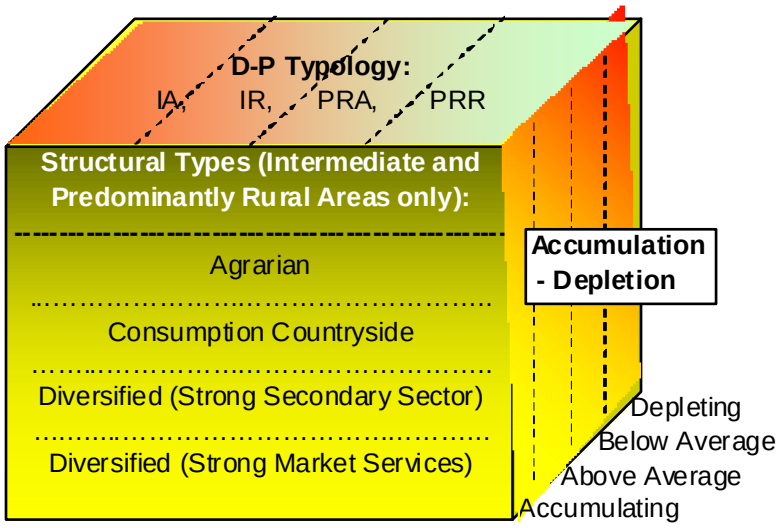


Figure 2: The EDORA Cube – a 3 dimensional framework for analysis

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

The first two dimensions reflect the "current" situation (2005-07), whilst the third dimension is partly based upon change indicators for the 1995-2006 period. There is thus a lag of up to five years, and the typology cannot (for example) capture recent recession impacts.

Clearly these three aspects of variation (rurality, structure and performance) interact considerably. Since the relationships between them are complex and variable, it is arguably not appropriate (from a theoretical point of view) to collapse them into a single typology. Furthermore statistical analysis presented in section 2.7 shows that merging the Structural and Rurality dimensions reduces their capacity to differentiate (in an objective and statistically significant way) between groups of regions in terms of their socio-economic "performance". Therefore three separate perspectives, associated with rurality, structure and performance are retained. It will be shown below (in section 3), that they allow an instructive "triangulation" of the complex pattern of variation in rural Europe.

2.2.3 Defining the Structural Types.

The definition of the Structural Types has inevitably represented a compromise between a deductive process, broadly informed by the conceptual phase of the project, and a pragmatic assessment of what is feasible with available regional data. It also reflects a key debate from the rural policy context.

To explain the background to the types in more detail, it is perhaps easiest to begin with the influence of the policy context, in which the debate in recent years has been characterised by

a tension between “Sectoral” and “Territorial” approaches (Copus and Dax 2008). The choice between these is of course predicated on the relative importance of “land-based” or primary sector industries. In recent years the recognition that the primary sector is a significant source of employment and income in a decreasing minority of Intermediate and Predominantly Rural regions has led to an emphasis upon the role of “multi-functional” agriculture as the guardian of landscape and environmental public goods which form the basis of a range of recreation and tourism activities. These are supported mainly through agri-environmental policies, but also interventions to support farm diversification, especially in relation to tourism and recreation. By contrast, those who favour “broad” territorial rural policy, addressing the needs of the full range of activities which take place in the European countryside, point to the fact that in many regions the economy has already diversified, and that here the structure has much in common with that of urban areas. This phenomena has sometimes been described by the term “New Rural Economy” (NRE).

The outcomes of the conceptual phase of the project, including the Thematic and Synthetic Working Papers (1-10), and the Exemplar Region reports, also provide several useful pointers for the definition of structural types:

- They bring forward evidence to illustrate the role of landscape and environment-based activities (outside or in association with farming and forestry). This new form of rural economy is neatly described by the term “Consumption Countryside”.
- Accounts of “rural restructuring” often emphasise the increasing importance of tertiary (service) activities, at the expense of secondary (and of course primary) production.

The process of structural change in the countryside is closely related to the second meta-narrative described in Working Paper 10 –“Economic Competitiveness and Global Capital”. 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 above policy context and broad generalisations regarding structural change must be kept in mind when considering available data sources on which to base definitions of structural types. It has often been acknowledged that NUTS 3 regional analysis of socio-economic patterns and trends is very constrained by the availability of data at this level. Missing data, questionable “harmonisation” of definitions, and periodic changes in the NUTS 3 boundaries all weaken and limit the possibilities. A review of the most promising/relevant data tables in the Eurostat Regio database was therefore carried out, in order to identify variables and indicators which are sufficiently complete and reliable to be included in a typology covering the Espon space. The details of the outcome will be described below, and at this point it is sufficient to highlight the central role played by Regional Accounts data on Employment and Gross Value Added (GVA). These have been produced for a number of years, and are complete enough, and apparently consistent enough, to provide some core indicators, around which others can be gathered.

Taking account of the above policy, conceptual, and empirical considerations and following a careful examination of regional patterns of available indicators, four “Structural Types” are proposed:

(i) Agrarian economies.
(ii) Consumption countryside.
(iii) Diversified (with important Secondary Sector).
(iv) Diversified (with important Market Services Sector).

In (iv) public sector services are excluded since (although they are important sources of economic activity in many rural regions) their relative importance in any particular Member State (MS) is very much affected by national political traditions, and trans-national comparisons are rather difficult to interpret.

2.2.4 The Performance Axis

The third axis of the proposed EDORA analysis framework is socio-economic "performance". It derives its rationale mainly from the first (urban-rural) meta-narrative. Unlike the first two dimensions, this is essentially envisaged as a continuum, between the two poles of "Accumulation" and "Depletion" (Copus 2006). Regions in the former category receive human capital by net in-migration, financial and fixed capital by investment, and are characterised by relatively high levels of income. Depleting regions have a net outflow of population, disinvestment, and low incomes. Although conceived as a continuous variable, the range may be divided into discrete types to allow more convenient presentation of results (see below).

2.3. The Underlying Classification Rationale and Methodology

This section provides a broad overview of the rationale and methodology of the EDORA analysis framework (typologies). Further detail on the specific indicators and their treatment follows in sections 2.4 - 2.6.

The underlying rationale and methodology was developed after exploring the regional patterns revealed by maps of a range of indicators derived from Eurostat Regio data. This was an iterative process; the understanding of spatial patterns gained through statistical mapping being used to suggest key indicators, and to narrow down the choice by eliminating redundancy. Thus by a process of "informed experimentation" the following procedures were devised:

Structural typology: A stepwise decision tree was used as follows:

- "Agrarian" regions were first identified, (using a composite indicator of the importance of primary sector activity).
- Secondly, within the non-agrarian residual, regions in which "Consumption Countryside" development seem important were identified (using a composite indicator of access to environmental assets, tourism capacity, and farm diversification)[6].
- The remaining regions were denominate as "diversified", and, (using an indicator defined as the ratio of Secondary Sector to Market Services GVA) they were subdivided into;
    - those in which secondary activities are important, and
    - those in which market services have become dominant.

Accumulation – Depletion Scores and Categories:

- 5 performance indicators were converted to Z scores, and an unweighted average calculated.
- This continuous variable was converted to a set of discrete categories (for easier comparative analysis), using -0.5, 0 and +0.5 (standard deviations) to define the ranges.

[6] There is in fact a small overlap between the Agrarian and Consumption Countryside types. 99 regions fulfil both the criteria for Agrarian and Consumption Countryside. Such regions are found mainly in GR, BG, RO, and PT.

2.4. The Typology Indicators.

2.4.1 Variables and Indicators

Before providing a catalogue and description of the indicators used in the typology it is perhaps helpful to make a distinction between "variables" and "indicators". Indicators have been said to possess the following defining characteristics (Copus *et al* 2003):

(i) They are normally quantitative.
(ii) They have "*a representative and simplifying function, …to encapsulate complex processes, rather as an executive summary may provide a simple concise overview of a complex, closely argued discussion*" (Ibid p15)
(iii) They have a monitoring capability "*They are designed to answer the question "How might I know objectively whether things are getting worse or better*" Tubridy (2002).
(iv) In an environmental context there are often critical thresholds, in a socio-economic context these may be replaced by political target, or a benchmark such as (for example) a national average.
(v) They have a didactic function, they teach and inform about an issue.

Indicators may be "composite"; i.e. based upon more than one raw data variable. In the context of sustainability, Jesinghaus describes such *composite indicators* as the tip of the "information iceberg", emphasising that the goal of an overall "index" (in this case of sustainability) can only be achieved after much "invisible" development work on raw data, processed data, statistics and indicators. Other writers describe the same process in terms of an "information pyramid", with raw data at the base, overlain successively by *statistics*, *indicators*, an *indicator set* and an *index* (Pastille 2002 p15, Montmollin and Altwegg 2000 p5).

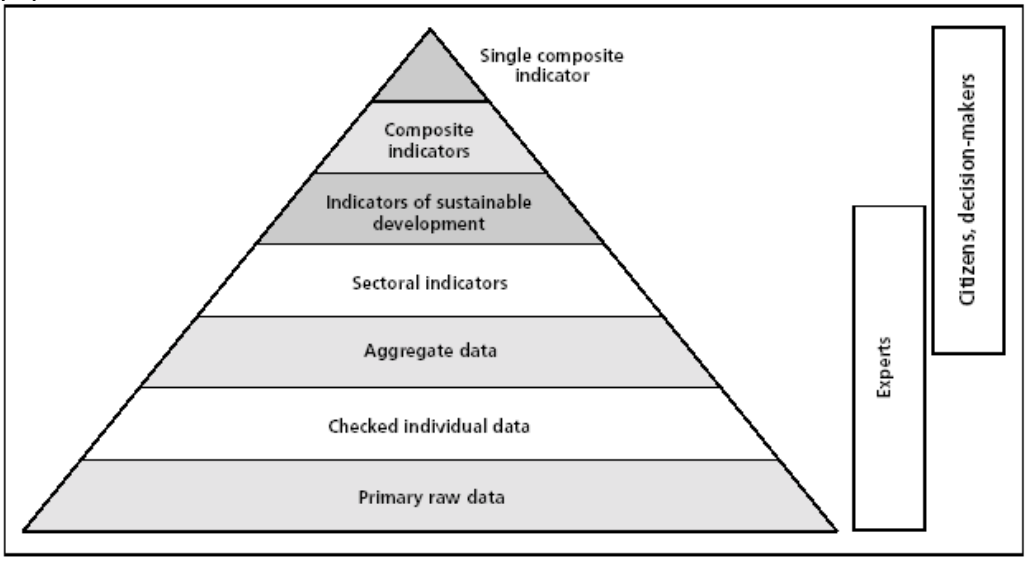


Figure 3: The Information Pyramid
(Source:Montmollin and Altwegg 2000 p5)

In the context of the EDORA typology much of the "invisible" work with (primary) raw data has already been carried out by National Statistical Offices and by Eurostat. Our task is;

(i) to "add value" to raw data variables by expressing them in the form of ratios or percentages – thus forming "indicators",
(ii) (where appropriate), to combine several indicators to form a "composite" or "synthetic" indicator, and finally,
(iii) to devise a set of classes or types of regions using thresholds informed by both conceptual and policy considerations.

2.4.2 Raw Data Variables and "enhancement".

As already stated, the starting point in the search for "raw" data which could be used for the Structural and Performance dimensions of the EDORA analysis framework was the Eurostat REGIO database. The list of 34 variables provided in Table 1 shows that the data derives from ten different REGIO tables. Several additional (non-REGIO) sources are cited. Two of these trace their roots to REGIO, and one has been generated by analysis carried out by DG Regio for the Territorial Cohesion Green Paper. National sources have been used to provide data in NO and CH.

Of the thirteen European sources used, eight provide data at NUTS 3 region level, two provide data only at NUTS 2 level, and one contains NUTS 3 data for all MS except Germany, where the level is NUTS 2. The use of NUTS 2 data has thus been minimised. The only way to use such data is to apply NUTS 2 ratio indicators to all constituent NUTS 3 regions. This carries with it a strong risk of "blurring" differences between urban and rural regions, since many NUTS 2 are composed of regions in more than one D-P category.

Almost all the tables have some missing data in the most recent available year (which varies from 2006 to 2008). In order to minimise the number of "missing data" cells in the database, each of the columns of raw data combines data for the most recent year available for each Member State (MS).

The raw data variables extracted from REGIO and the other sources have thus been "enhanced" to create a NUTS 3 database with the minimum number of missing data cells.

2.4.3 Inclusion of Non-EU27 Countries of the ESPON Space

Few of the variables are available for regions in non-EU27 MS. The D-P typology currently extends to Norway and Switzerland only. Turkey's regions are classified in the OECD (PU/I/PR) typology, but not with the D-P subdivision according to access to a city. It has therefore proved possible to include NO and CH in all three typologies (but on the basis of fewer indicators and simplified criteria). TR has also been included in the Structural and Performance typologies (although with lower "confidence levels").

Table 1 : The "Raw Data" Variables used to generate the 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)

2.4.4 The Typology Indicators

The 34 raw data variables (Table 1) were used to generate 23 ratio indicators, which are listed in Table 2. Maps of each of these indicators are provided in Appendix 1.

Table 2: The 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
AD1	NETMIG	Net Migration (rate)	V3,V1	2001-05	0.25	0.31	0.27
AD2	GDPpercap	GDP per Capita	V7,V1	2007	19,067	28,918	22,257
AD3	GDPCh	Average annual change in GDP	V8	1995-2006	4.10	3.88	4.03
AD4	TotEmpCh	Average annual change in Employment	V22	1995-2006	0.43	0.70	0.52
AD5	Unemp	Unemployment Rate	V23,V6	2008	5.44	5.57	5.48

2.5. The Structural Typology

Of the 23 indicators listed in Table 2, the first 18 indicators were used to define the four structural types. The procedure used to define the structural types was as follows.

1. The mean and standard deviation for all EU27 “non-urban“ (i.e. Intermediate or Predominantly Rural) regions were calculated, and used to convert all indicators into Z scores. Predominantly Urban regions were excluded from this and further analysis.
2. **Agrarian Regions**: - These were defined as those regions in which all three indicators Ag1-Ag3 were above the “rural mean” (i.e. all three Z scores >0). These are mapped in Map 1 (below).
3. The 8 **Consumption Countryside** (CC) indicators were reduced to three composite indicators, relating to:
    a. Tourism Capacity and Intensity CC1-CC5,
    b. Access to Natural Areas, (CC6), and
    c. Peri-Productivist Agriculture (CC7-CC8).

    The score for each of these groups of indicators was taken as the largest of the constituent indicators. Regions in which at least two groups of indicators had a Z score above the “rural” average were placed in the “Consumption Countryside” category. The Consumption Countryside scores are shown in Map 2.
4. The remaining regions were deemed to be neither Agrarian, nor characterised by “Consumption Countryside”, but “Diversified”.
    a. Some of these still have a relatively important secondary sector.
    b. In others the market services sector has developed more prominently.

These two types were distinguished by calculating the ratio GVA from NACE categories C-E (secondary) to that deriving from G-K (market services). This ratio is shown in Map 3. Where this ratio was above the "rural" average (i.e. Z score >0) the region was placed in the "**Diversified – Strong Secondary Sector**" group. The remaining regions were placed in the "**Diversified – Strong Market Services"** group[7].

The above procedure resulted in the simple four-fold structural classification of " Non-Urban" regions shown in Map 4. This reveals (in very "broad brush" terms) a degree of association of the first two types with peripheral or less accessible regions[8], and of the diversified types with more "central" regions.

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.

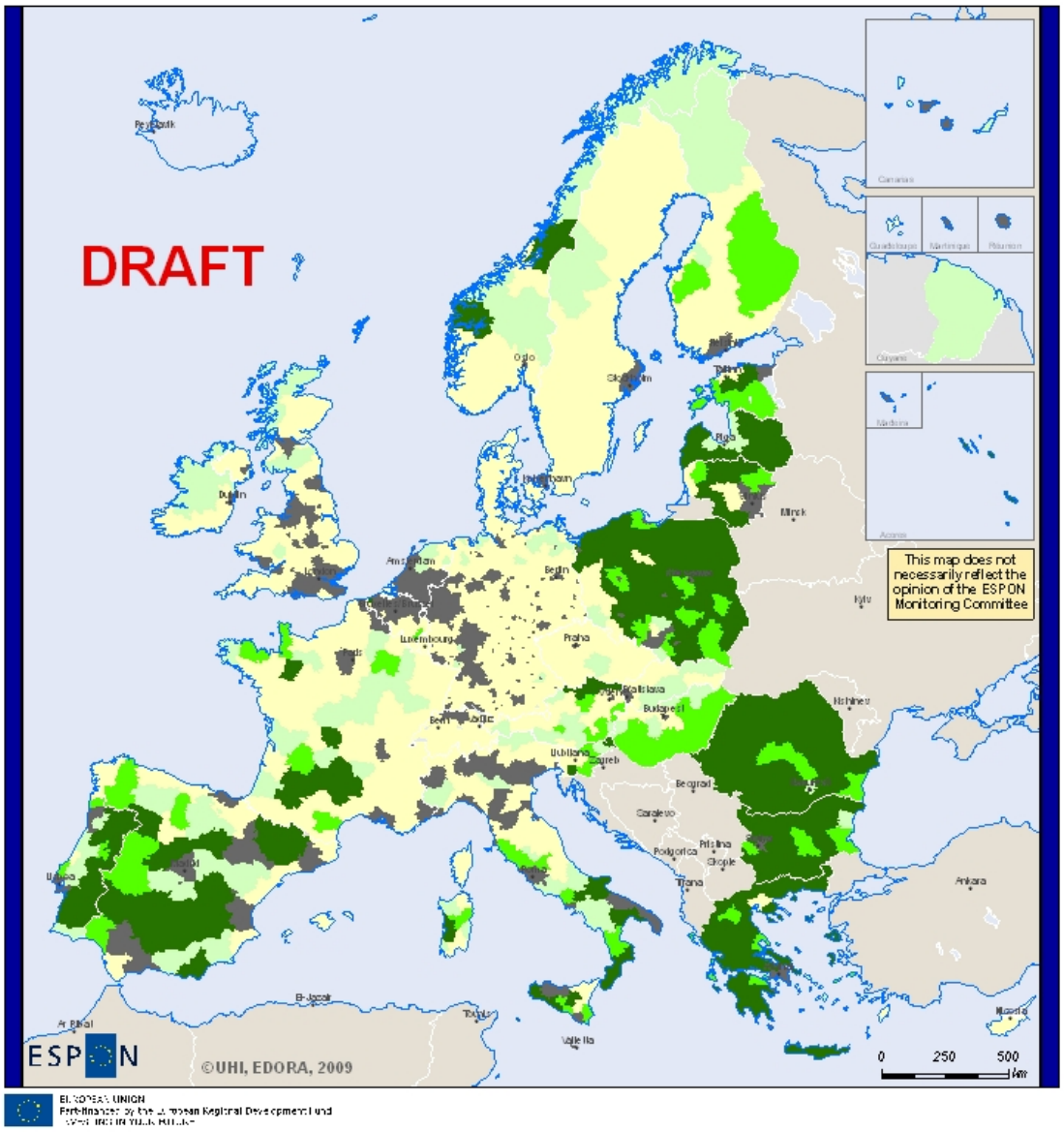
Consumption Countryside regions are often closely associated with Agrarian ones. Indeed some Mediterranean regions, especially in Greece, meet the criteria for both types. Consumption Countryside regions cover much of Sweden and Finland, more accessible coastal areas of the Baltic States, parts of Slovenia, 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).

[7] In a few countries indicator NR1 was not available, and here NR2-5 were substituted.

[8] However it must also be recognised that the pattern may also be interpreted in terms of an association of a low level of structural change with the New Member States.



Agrarian Rural Economy Indicators

NUTS 3

Number of Indicators exceeding the NUTS 3 Mean

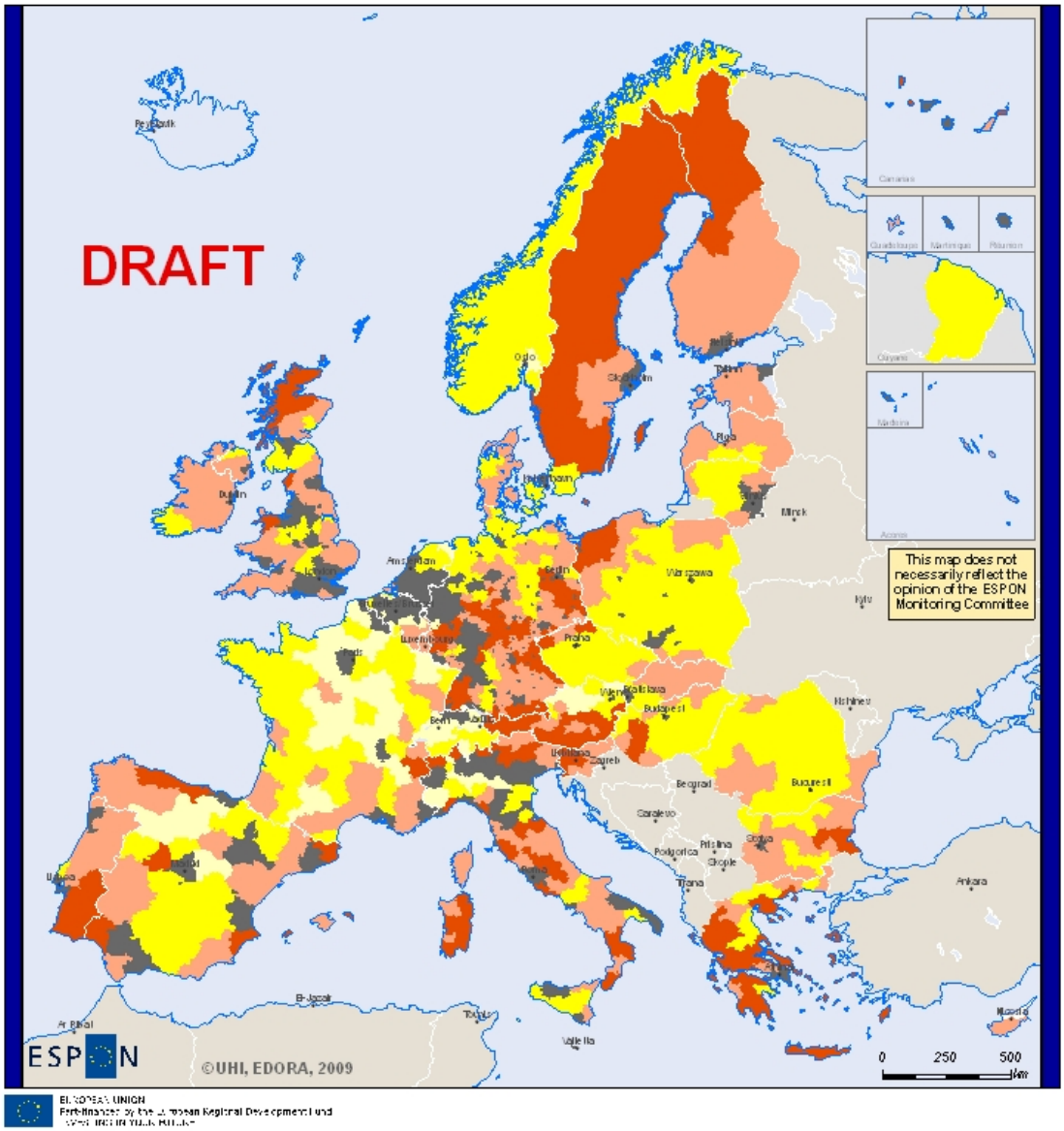
- 0
- 1
- 2
- 3
- PU Regions

Note:

This map shows the number of the following indicators exceeding the NUTS3 mean:
(i) Percentage of Private Sector GVA from Primary Industries.
(ii) Percentange of Private Sector Employment in Primary Industries.
(iii) AWU as a percentage of Total Private Sector Employment.

Map 1: Agrarian Rural Economy Indicators

Note: Maps 1-3 were created before the most recent version of the database (incorporating CH and TR) was available, they will be redrawn for the Final version of this report.



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Consumption Countryside Indicators

NUTS 3

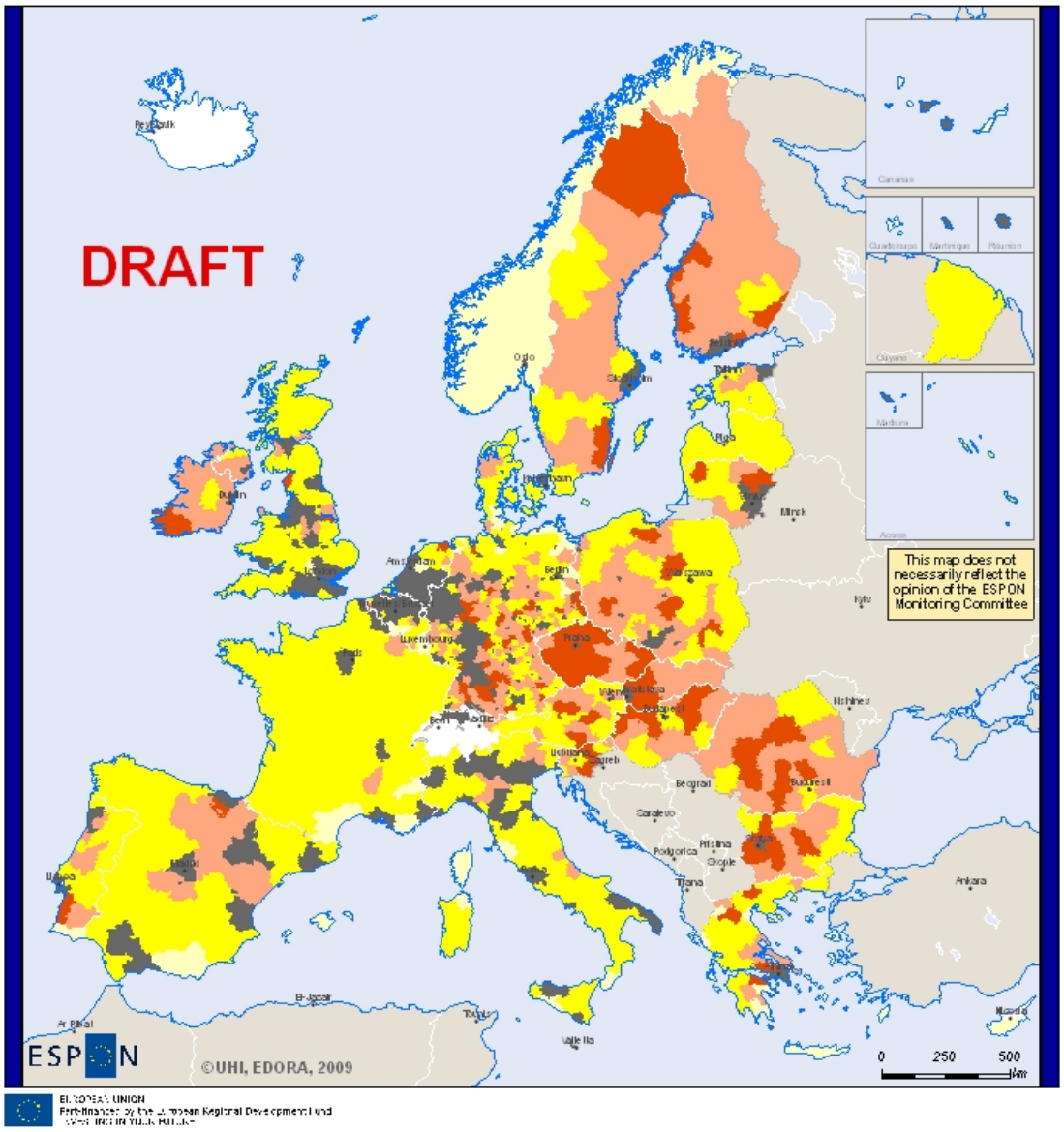
Number of Indicators exceeding the NUTS 3 mean

- 0
- 1
- 2
- 3
- PU Regions

Note:
This map shows the number of the following indicator groups with at least one indicator exceeding the Rural NUTS3 mean:
(i) Tourism capacity and intensity
(ii) Proximity of natural public goods
(iii) Peri-productivist agriculture

Map 2: Consumption Countryside Indicators

Note: Maps 1-3 were created before the most recent version of the database (incorporating CH and TR) was available, they will be redrawn for the Final version of this report



Secondary to Private Services Ratio (GVA)

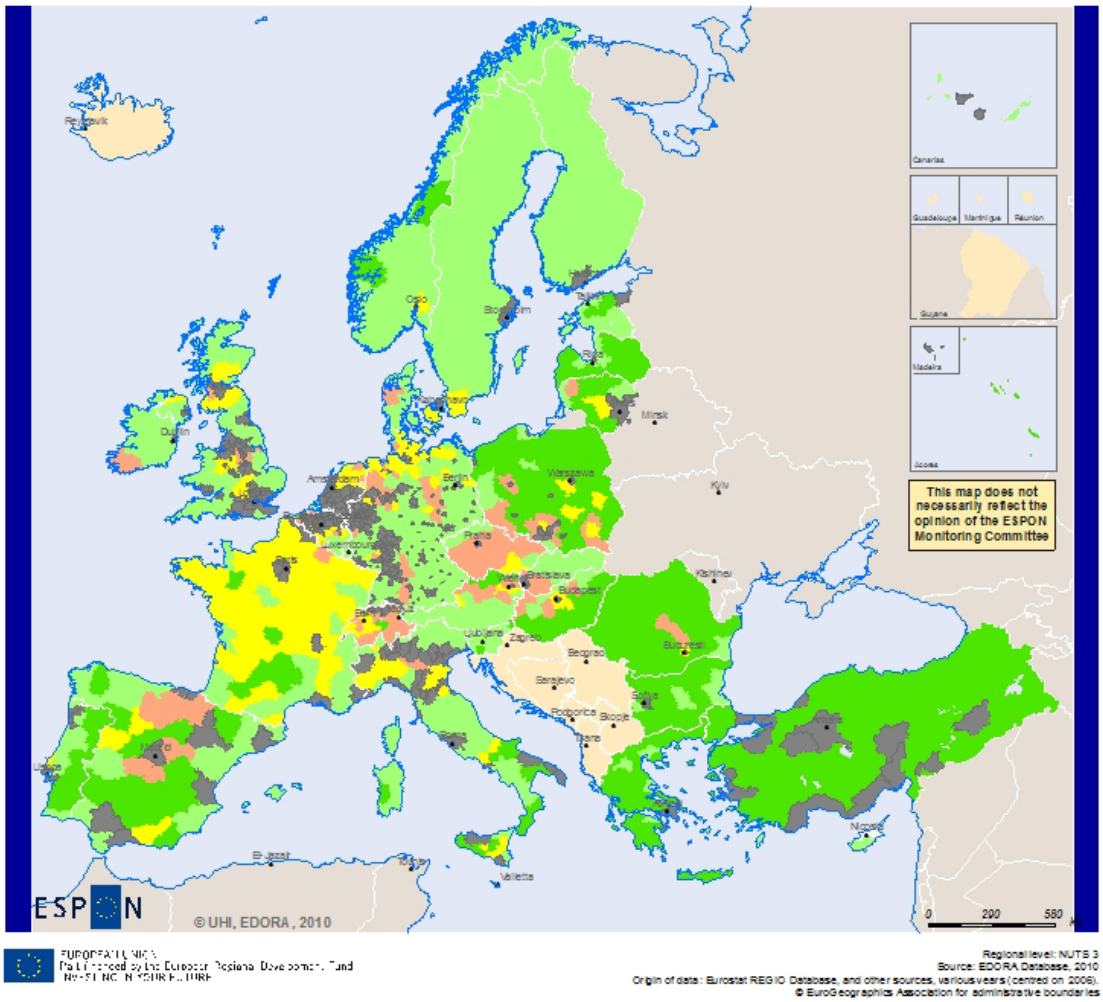
NUTS 3

Z Scores GVA CE-GK Ratio (Rural NUTS 3 only)

- >-1
- -1.0 - 0.0
- 0.1 - 1.0
- >1
- PU Regions
- No data available

Map 3: The Secondary to Market Services Ratio (GVA)

Note: Maps 1-3 were created before the most recent version of the database (incorporating CH and TR) was available, they will be redrawn for the Final version of this report



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.

Map 4: The Structural Typology

2.6. The Accumulation-Depletion (Performance) Typology

Five indicators were used in the calculation of a composite regional performance indicator. These were;

(a) net migration,
(b) GDP per capita,
(c) average annual change in GDP,
(d) average annual change in total employment,
(e) and unemployment rate.

Particular care is needed when using annual change indicators, which can be very much affected by short-term adjustments which can give misleading impressions. An example of this is the rapid increase in GDP for many of the NMS12 regions, which reflect accession effects rather than strong economic performance *per se*. For this reason indicator (c) has been excluded for regions where (b) is below the "non-urban" mean.

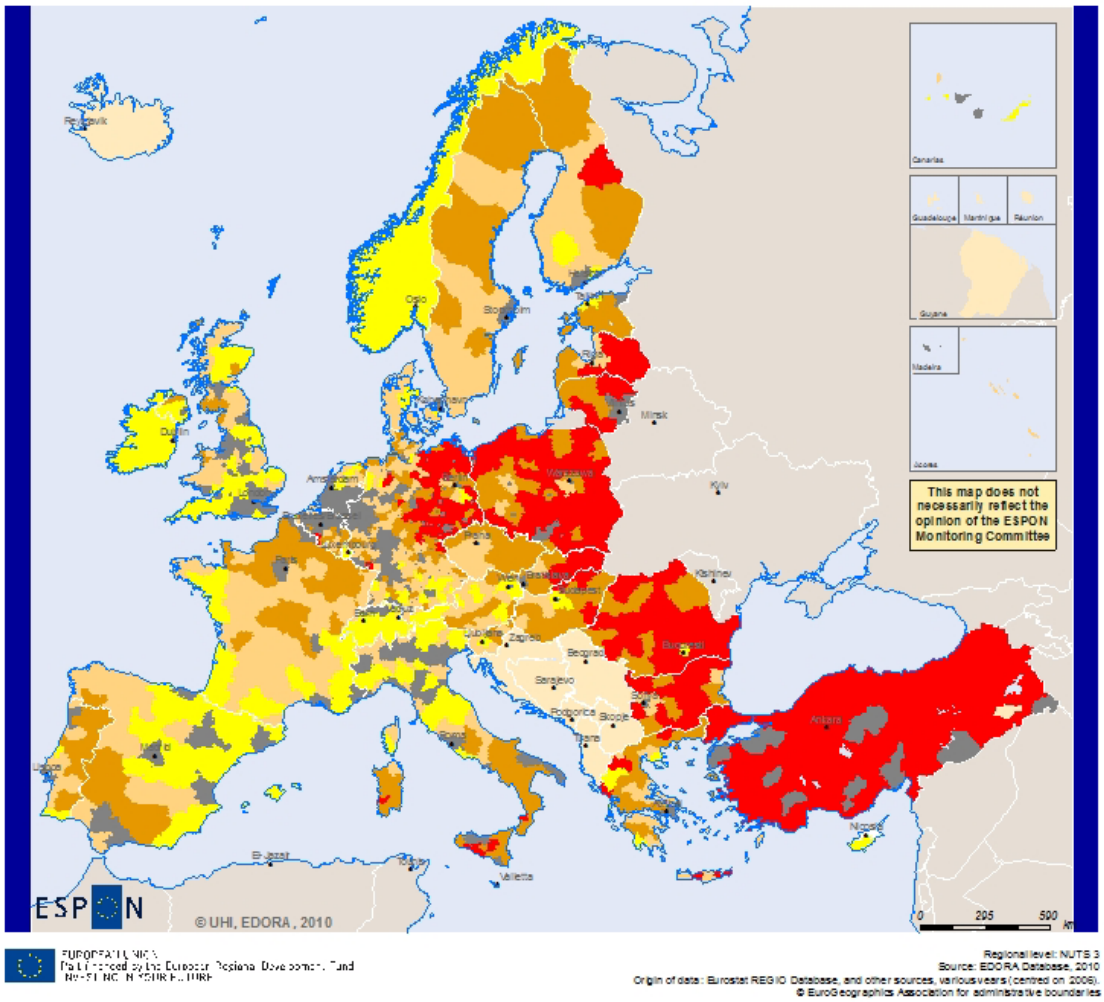
The composite indicator was simply calculated as the average of the normalised (Z) scores for the five indicators[9].

The geographical pattern of performance scores is shown in Map 5. This shows a very clear concentration of Depleting regions in the eastern New Member States and the New German Lander. Below average scores are also found in southern Italy, western Spain, Portugal, central and NE France, and the northern parts of the Nordic Member States and UK. The highest rates of "accumulation" are found along the Mediterranean coast of Spain, and north of Madrid, in Ireland (clearly a result which is unlikely to stand once more recent data is available), southern England, northern Netherlands. Above average performance is widespread among the French and German regions, Austria, N Italy, and adjacent New Member States, such as the Czech Republic and Slovenia.

Where discrete performance classes are required these were defined by the average standardised score, the four groups being:

1. <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean)
2. -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean)
3. 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
4. <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

[9] In CH, and TR there are many gaps in the data. In CH the A-D score is based only upon Net Migration and Unemployment, whilst for TR on GDP per capita and GDP change are present. The A-D scores, ant typology codes for these countries are therefore not comparable with those for EU27 and NO.



Map 5: The Performance Typology

2.7. Statistical Analysis of the D-P and Structural Typologies, and Relationships between them.

Before using the "EDORA cube" to provide a framework for a "broad-brush" review of socio-economic performance across "non-urban" Europe (section 3) it will be helpful to provide a simple statistical assessment of the "independence" of the D-P and Structural types. The distinctiveness of the types may be assessed in a variety of different ways. For example the statistical differences between the types of each typology may be tested on the basis of the indicators used in the classification. Alternatively (since this would involve a degree of circularity of reasoning) it is perhaps more valid to examine the statistical significance of differences between types in terms of socio-economic performance. Ultimately the validity and usefulness of the typologies is determined by their ability to distinguish groups of regions which are performing differently. Arguably, in this context, a "good" typology is one in which the types are defined by indicators which in some way reflect the key processes of performance differentiation. The following section therefore presents some simple comparisons between and within the D-P and Structural typologies, using the five performance indicators, and the synthetic Depletion-Accumulation index.

Significant Differences in Performance between D-P Types.

Figure 4 shows the results of a series of t tests[10] to assess the statistical significance of differences in the means of the five performance indicators, and the synthetic A-D index, for each of the 11 possible combinations of the five D-P urban-rural types. The values in the matrices are essentially the probabilities that the indicators in the two types (column and row headings) came from a population with the same mean. Thus the values in the diagonal are 1, since when a type is compared with itself there is a 100% probability that the sample is from the same population. Elsewhere in the table a result of >0.1 (shaded red) is indicative that there is a probability of >10% that the two types do not represent distinct populations in terms of the given performance indicator. Combinations shaded pink have a probability of between 5% and 10%.

Thus, for example in the first matrix, it is evident that in terms of net migration (NETMIG) there is no significant difference (at the 90% probability level) between the PU regions and those in either the IA or the IR types. Four other possible combinations show no significant difference in migration rates at the 90% level. The IA and PRR "pass the test" at the 90% significance level, but not at the 95% level. This leave three possible combinations of D-P types which show a statistically significant difference in terms of net migration rates (at the 95% level).

Considering the first five matrices in Figure 4 it becomes clear that the D-P typology distinguishes between regions best in terms of GDP per capita (GDPCAP) and employment change (EMPCH). At the other extreme, there are only two combinations of types showing a significant difference at the 95% level in the unemployment (UNEMP) matrix. GDP change (GDPCH), like NETMIG, occupies an intermediate position.

[10] The Excel TTEST function was used, specifying the two-sample equal variance (homoscedastic) variant. Two tailed tests were carried out.

NETMIG	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.97	*1.00*			
IR	0.76	0.81	*1.00*		
PRA	0.00	0.01	0.20	*1.00*	
PRR	0.04	0.06	0.39	0.87	*1.00*

GDPCAP	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.00	*1.00*			
IR	0.00	0.00	*1.00*		
PRA	0.00	0.00	0.17	*1.00*	
PRR	0.00	0.00	0.26	0.57	*1.00*

GDPCH	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.04	*1.00*			
IR	0.01	0.08	*1.00*		
PRA	0.23	0.49	0.03	*1.00*	
PRR	0.04	0.54	0.22	0.27	*1.00*

TOTEMPC	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.19	*1.00*			
IR	0.24	0.13	*1.00*		
PRA	0.00	0.00	0.02	*1.00*	
PRR	0.82	0.53	0.37	0.01	*1.00*

UNEMP	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.17	*1.00*			
IR	0.12	0.02	*1.00*		
PRA	0.99	0.19	0.08	*1.00*	
PRR	0.86	0.37	0.04	0.84	*1.00*

A-D Index	PU	IA	IR	PRA	PRR
PU					
IA	N/A	*1.00*			
IR	N/A	0.46	*1.00*		
PRA	N/A	0.00	0.46	*1.00*	
PRR	N/A	0.07	0.94	0.17	*1.00*

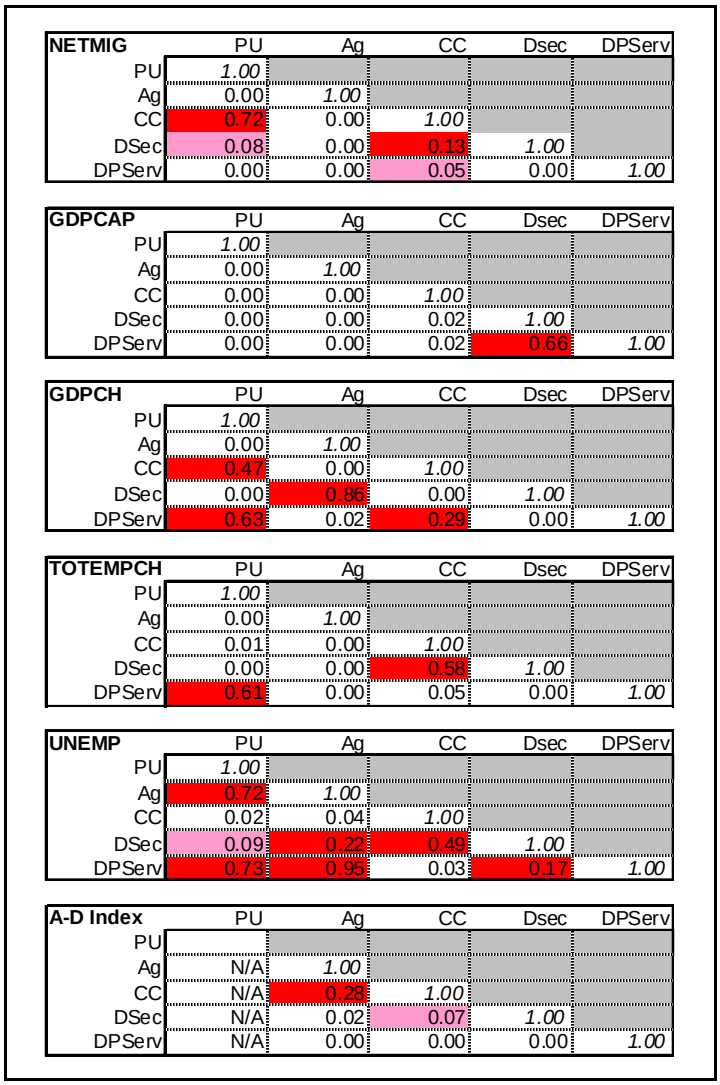
Figure 4: Probability Matrices, showing the results of t-tests to assess the difference between D-P types in terms of Accumulation-Depletion Indicators.

In the final (A-D index) matrix, the number of possible combinations is reduced to six, since the index was not calculated for PU regions. The majority of the valid combinations show no significant difference at the 90% level. The PRA and IA types show a significant difference at the 95% level, and the IA and PRR types show a significant difference at the 90% confidence level.

Significant Differences in Performance between Structural Types.

The same testing procedure was applied to the Structural Typology (Figure 5). The results suggest that the latter has better discrimination in terms of each of the individual performance indicators, and of the A-D synthetic index. In terms of GDP per capita, for example, all combinations except one (the two diversified types) show a significant difference at 95%. In the A-D Index matrix only one of six possible combinations (Agrarian and

Consumption Countryside) fails to show a significant difference at 90%. One other combination (CC and Diversified Secondary) fails at the 95% level.



NETMIG	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.72	0.00	*1.00*		
DSec	0.08	0.00	0.13	*1.00*	
DPServ	0.00	0.00	0.05	0.00	*1.00*

GDPCAP	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.00	0.00	*1.00*		
DSec	0.00	0.00	0.02	*1.00*	
DPServ	0.00	0.00	0.02	0.66	*1.00*

GDPCH	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.47	0.00	*1.00*		
DSec	0.00	0.86	0.00	*1.00*	
DPServ	0.63	0.02	0.29	0.00	*1.00*

TOTEMPCH	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.01	0.00	*1.00*		
DSec	0.00	0.00	0.58	*1.00*	
DPServ	0.61	0.00	0.05	0.00	*1.00*

UNEMP	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.72	*1.00*			
CC	0.02	0.04	*1.00*		
DSec	0.09	0.22	0.49	*1.00*	
DPServ	0.73	0.95	0.03	0.17	*1.00*

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 5: Probability Matrices, showing the results of t-tests to assess the difference between Structural types in terms of Accumulation-Depletion Indicators.

Potential to Combine the D-P and Structural Typologies

The above procedure for testing the statistical significance of performance differences between types can also be used to explore the potential benefits of combining the two typologies. It might be argued, for example, that despite (possible) structural similarities PR regions are, prima facie, very different, from Intermediate ones, and that the Structural Typology should therefore be applied to the Intermediate and PR regions, or to each of the D-P types separately.

Figure 4 provides some initial indications that such a combination of the two typologies might not provide additional discrimination, since a number of the combinations which fail the t test at 90% involve both intermediate and PR types.

A more direct approach to this question is to separate the Intermediate and PR regions and repeat the t-tests on the Structural types combinations. The results (Figure 6) for the A-D index are illustrative of those associated with the individual indicators (provided in Appendix 2). In fact, contrary to intuition, when applied to the two OECD types separately, the

Structural Typology appears to lose some of is discriminatory power. Thus within the intermediate group of regions (top left quadrant) three combinations fail at the 90% level, and also within the rural group (bottom right), the same number of six combinations fail at this confidence level.

A-D Index		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Inter-mediate	Ag	**1.00**								211
	CC	**0.00**	**1.00**							212
	DS	**0.00**	**0.80**	**1.00**						213
	DpS	**0.00**	**0.19**	**0.18**	**1.00**					214
Rural	Ag	0.49	0.00	0.00	0.00	**1.00**				311
	CC	0.00	0.58	0.92	0.07	**0.02**	**1.00**			312
	DS	0.00	0.62	0.58	0.93	**0.00**	**0.48**	**1.00**		313
	DpS	0.00	0.08	0.19	0.00	**0.00**	**0.12**	**0.12**	**1.00**	314
		211	212	213	214	311	312	313	314	

Figure 6:Probability Matrix, showing the results of t-tests to assess the difference between the OECD and Structural types in terms of the Accumulation-Depletion Index

Taking the idea of merging the two typologies a step further, Figure 7 shows the relationships between structural types within each D-P type. The results (in the large blocks adjacent to the diagonal) are broadly similar(in terms of the proportion of statistically significant differences) to those for the OECD types above.

A-D Index		Accessible Intermediate				Remote Intermediate				Accessible Rural				Remote Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	**1.00**																211
	CC	**0.00**	**1.00**															212
	DS	**0.00**	**0.86**	**1.00**														213
	DpS	**0.00**	**0.11**	**0.27**	**1.00**													214
Remote Inter-mediate	Ag	0.72	0.02	0.02	0.00	**1.00**												221
	CC	0.00	0.11	0.14	0.10	**0.00**	**1.00**											222
	DS	0.74	0.11	0.11	0.00	**0.57**	**0.01**	**1.00**										223
	DpS	:	:	:	:	:	:	:	:									224
Access. Rural	Ag	0.64	0.00	0.00	0.00	0.51	0.00	0.81	:	**1.00**								311
	CC	0.00	0.10	0.25	0.00	0.04	0.03	0.13	:	**0.00**	**1.00**							312
	DS	0.00	0.39	0.51	0.79	0.03	0.49	0.15	:	**0.00**	**0.14**	**1.00**						313
	DpS	0.01	0.10	0.13	0.00	0.15	0.01	0.21	:	**0.00**	**0.37**	**0.10**	**1.00**					314
Remote Rural	Ag	0.08	0.00	0.00	0.00	0.58	0.00	0.43	:	0.03	0.00	0.00	0.13	**1.00**				321
	CC	0.00	0.10	0.26	0.58	0.01	0.42	0.07	:	0.00	0.01	0.95	0.01	**0.00**	**1.00**			322
	DS	0.55	0.40	0.52	0.14	0.08	0.07	0.46	:	0.42	0.59	0.43	0.77	**0.87**	**0.32**	**1.00**		323
	DpS	0.07	0.78	0.75	0.32	0.10	0.08	0.08	:	0.03	0.96	0.55	0.66	**0.26**	**0.45**	**0.38**	**1.00**	324
		211	212	213	214	221	222	223	224	311	312	313	314	321	322	323	324	

Figure 7: Probability Matrix, showing the results of t-tests to assess the difference between the all possible combinations of D-P and Structural types in terms of the Accumulation-Depletion Index

The probable explanation for the absence of statistical significant differences in many of the cells in Figure 7 is the relatively small number of regions in some combinations of D-P and Structural types (see Table 3 below). The IR type is particularly small, with only 23 regions. Combining the IR type with another D-P type might reduce the problem of small sample sizes. On the basis of the pattern of results in Figure 4 it could be argued that the best way to combine types would be to retain the two accessible types (IA and PRA) and to merge the two remote types (IRR and PRR). Figure 8 shows the results of t-tests between this simplified D-P typology and the Structural typology. Although there is some improvement on those exhibited by the combined (full) D-P and Structural typologies (Figure 6) a third of all combinations are not significant at 90% and almost half are not significant at 95%.

A-D Index		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.00	1.00											212
	DS	0.00	0.86	1.00										213
	DpS	0.00	0.11	0.27	1.00									214
Access. Rural	Ag	0.64	0.00	0.00	0.00	1.00								311
	CC	0.00	0.16	0.25	0.00	0.00	1.00							312
	DS	0.00	0.39	0.51	0.79	0.00	0.14	1.00						313
	DpS	0.01	0.10	0.13	0.00	0.00	0.37	0.10	1.00					314
Remote	Ag	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.09	1.00				401
	CC	0.00	0.04	0.15	0.36	0.00	0.00	0.84	0.01	0.00	1.00			402
	DS	0.85	0.10	0.10	0.00	0.70	0.15	0.12	0.28	0.69	0.03	1.00		403
	DpS	0.10	0.55	0.53	0.12	0.04	0.80	0.39	0.86	0.31	0.02	0.16	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

Figure 8: Probability Matrix, showing the results of t-tests to assess the difference between combinations of a simplified version of D-P and the Structural types in terms of the Accumulation-Depletion Index

Having thus explored the statistical relationships between the D-P and the Structural typologies it is concluded that:
(a) The Structural Typology provides slightly greater discrimination between regions in terms of their socio-economic performance (as reflected in the five indicators incorporated in the A-D index) than the D-P typology. Although we cannot claim to have proved so conclusively, this seems to suggest that sectoral structure is a more influential determinant of regional performance than is degree of rurality or accessibility. This is certainly an issue which deserves to be further explored.
(b) That merging the D-P and Structural typologies cannot result in types which discriminate well between regions in terms of socio-economic performance. Simplification by combining types within the A-D typology provides only a partial solution to the lack of discrimination caused by the small number of regions in some categories.

In conclusion, the above statistical analysis points to the retention of the Structural and D-P typologies as separate dimensions of the analysis framework which has been termed “the EDORA Cube”.

3. TRIANGULATING RURAL EUROPE: WHAT CAN THE EDORA CUBE TELL US?

3.1. Introduction

In this section the three dimensions of the "EDORA cube" will be used to build up a picture of the major patterns of variation between different kinds of rural area across Europe. This will be achieved through three approaches:

(i) By comparing the relative size and "weight" of the different types of region using some basic indicators of physical area, population, and economic activity.

(ii) By cross- tabulating the three dimensions of the EDORA cube, and observing the distribution of regions according to rurality, economic structure, and performance.

(iii) By comparing the D-P and Structural types according to some basic indicators of socio-economic "performance".

This analysis will involve both indicators already employed in the definition of types, but also some additional indicators.

3.2. Comparing the Relative Size and "Weight" of the D-P and Structural Types

The left hand column of pie charts in Figure 9 illustrates the relative size or "weight" of the four Intermediate and Predominantly Rural types in the Dijkstra-Poelman typology. (Predominantly Urban regions are excluded from this analysis[11]).

It is immediately apparent that the **Intermediate Accessible** group of regions dominate the Intermediate and PR areas of Europe, accounting for almost exactly half the regions, more than a third of total area, and almost two-thirds of population. The population of these accessible and "mixed" or "rurban" regions is also relatively productive and wealthy, since they account for more than two thirds of GDP. The relatively fertile and productive capability of the land in these regions is illustrated by the fact that although they account for just 38% of total area, they boast 46% of agricultural land.

At the other extreme (in terms of "weight") are the **Intermediate Remote** regions, of which there are only 23. They account for only 2% of land area, the same proportion of agricultural land, and of population and GDP.

The **Predominantly Rural Accessible** group is the second largest (264 regions). It accounts for roughly a third of both total area and of agricultural land. However these regions contain only a quarter of the "non-urban region" population of the EU, and produce only 22% of its GDP.

Finally, 147 regions are classified as **Predominantly Rural Remote**. These regions occupy 28% of the total non-urban area, but have less than a fifth of the total farmland. Their share of population is just 9%, and they produce only 8% of non-urban GDP.

In the right-hand column of Figure 9 the same information is provided for the four types in the EDORA Structural Typology. Here the "slices" of the pie charts are rather more even in size, signifying a less "skewed" distribution of size and "weight" between the types.

The largest group of regions (447) is the **Consumption Countryside** type. This group accounts for 50% of area, and 42% of agricultural area. Over 40% of the non-urban population lives in these regions, and they account for almost a half of non-urban GDP.

[11] These graphs also exclude TR, CH and NO.

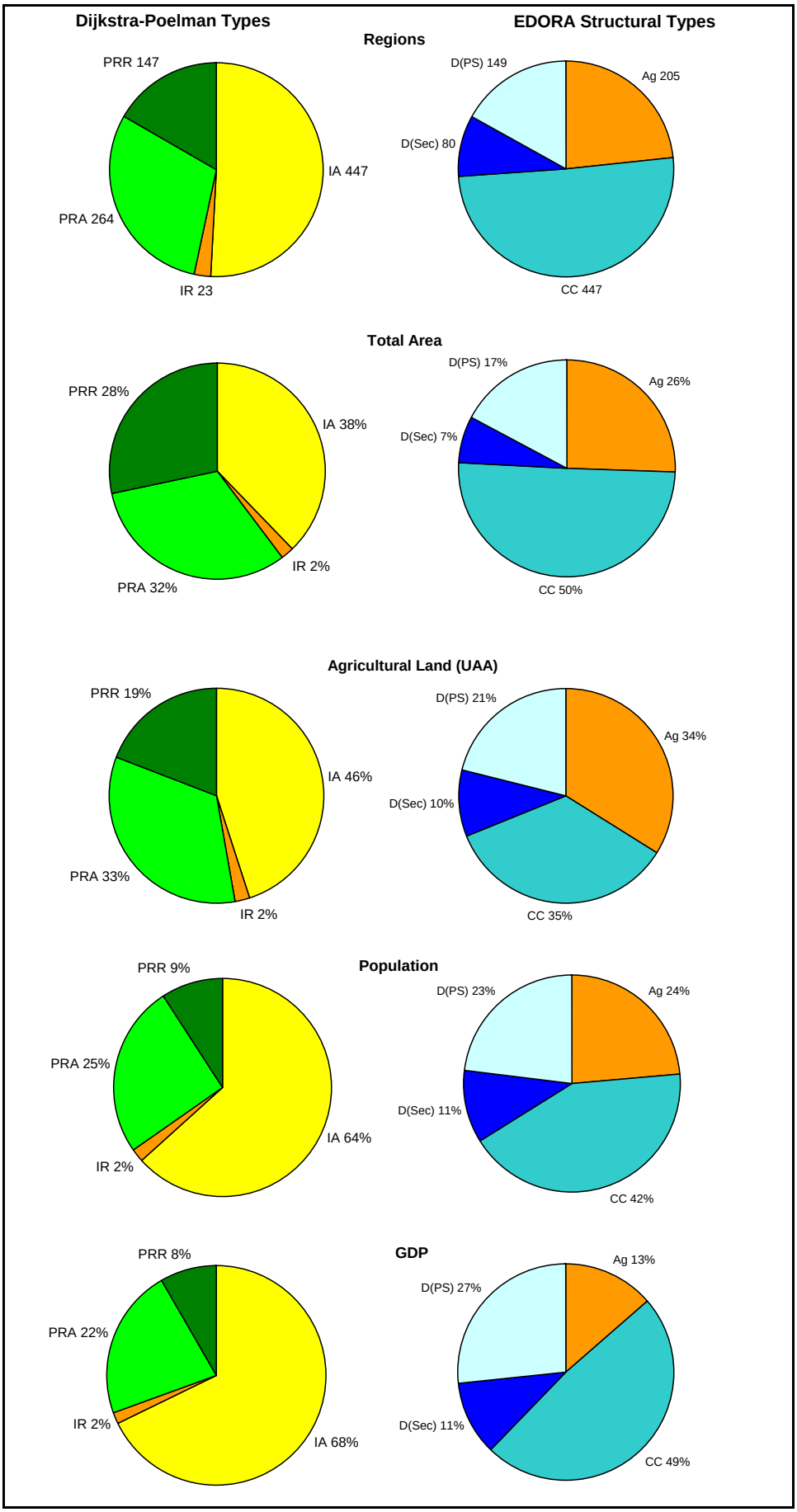


Figure 9: The Relative Size and "Weight" of the D-P and Structural Types

The **Agrarian** type applies to 205 regions, 26% of land area and 34% of agricultural area. This group's share of population is smaller, at 24%, and its share of non-urban GDP only a little over half that, at 13%.

The **Diversified (Market Services)** group has fewer regions (149), and just 17% of area, but accounts for a rather larger share of population (23%). At the same time it generates a much greater share of (non-urban) GPD, at 27%.

Finally the **Diversified (Secondary)** group contains 80 regions, and accounts for 17% of total area, and 21% of agricultural area. Just over one-tenth of the non-urban population lives in these regions, and they account for an equivalent proportion of GDP.

3.3. Cross-Tabulating the Types

One of the most informative uses of the three "dimensions" of the EDORA analysis framework is through cross-tabulation, which reveals relationships between rurality, structure and performance. In the following section cross-tabulation will first be carried out between the Dijkstra-Poelman and the EDORA Structural Types. Subsequently the relationships between rurality/structure and performance (Accumulation-Depletion) will be explored.

3.3.1 Dijkstra-Poelman and EDORA Structural Types

The first cross-tabulation presented (Table 3) simply shows the number of regions in each combination of the Dijkstra-Poelman and EDORA Structural types. By far the largest number of regions is in the Intermediate Accessible/Consumption Countryside combination. There is also a large number of regions in the Intermediate Accessible/Diversified (Market Services) combination. PR accessible regions are also commonly in the Consumption Countryside type, although a significant proportion are Agrarian. Of the Predominantly Rural Remote regions a large number are in the Agrarian structural category, and almost as many in the Consumption Countryside group. At the other extreme very few regions combine the Remote categories in the Dijkstra-Poelman typology with the two Diversified structural types.

Table 3: Cross Tabulation of D-P and Structural Types:- Number of Regions

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (private services)	All Structural Types
Intermediate Accessible	49	227	59	112	**447**
Intermediate Remote	9	11	2	1	**23**
Predominantly Rural Accessible	71	145	17	31	**264**
Predominantly Rural Remote	76	64	2	5	**147**
All Intermediate and Rural	**205**	**447**	**80**	**149**	**881**

Perhaps more informative that the simple cross-tabulation of counts of regions are the patterns of population and GDP illustrated by Table 4 and Table 5. A simple way to combine and compare these patterns is by calculating "location quotients" (Table 6). The interpretation of these quotients is simple: A quotient of 1 indicates that the Type's share of GDP matches its share of population. A quotient less than 1 indicates a smaller share of than population, and vice versa.

Table 4: Cross Tabulation of D-P and Structural Types:- Percentage of Population

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (market services)	All Structural Types
Intermediate Accessible	7.77	28.07	7.90	19.56	**63.30**
Intermediate Remote	1.00	0.73	0.24	0.10	**2.07**
Predominantly Rural Accessible	10.07	10.23	2.25	2.81	**25.36**
Predominantly Rural Remote	5.04	3.21	0.41	0.61	**9.27**
All Intermediate and Rural	**23.88**	**42.25**	**10.79**	**23.08**	**100.00**

Table 5: Cross Tabulation of D-P and Structural Types:- Percentage of GDP

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (market services)	All Structural Types
Intermediate Accessible	4.26	32.15	8.39	23.12	**67.92**
Intermediate Remote	0.64	0.78	0.11	0.09	**1.62**
Predominantly Rural Accessible	5.32	11.70	2.34	2.91	**22.27**
Predominantly Rural Remote	3.43	3.79	0.31	0.67	**8.19**
All Intermediate and Rural	**13.65**	**48.42**	**11.15**	**26.78**	**100.00**

Perhaps the most striking features of Table 6 are the very low quotients for the Agrarian regions (regardless of D-P type). These underline the fact that the regions of Europe where the primary sector continues to play an important role in the economy (many of these are in the NMS12) are characterised by a low level of GDP. Similarly, Diversified (Secondary) regions which are remote show GDP location quotients of less than 1.

Table 6: Cross Tabulation of D-P and Structural Types:- Location Quotients (GDP/Population)

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (market services)	All Structural Types
Intermediate Accessible	0.55	1.15	1.06	1.18	**1.07**
Intermediate Remote	0.64	1.07	0.46	0.86	**0.78**
Predominantly Rural Accessible	0.53	1.14	1.04	1.03	**0.88**
Predominantly Rural Remote	0.68	1.18	0.75	1.10	**0.88**
All Intermediate and Rural	**0.57**	**1.15**	**1.03**	**1.16**	**1.00**

At the other extreme all the Consumption Countryside combinations generate between 7% and 18% more GDP than the average for all non-urban regions. Intermediate Accessible regions which are in the Diversified (Market services) structural type are another exceptionally productive combination.

3.3.2D-P and Structural Types Cross-Tabulated with A-D Types

Table 7 is a slightly different cross tabulation compared with the preceding ones. The rows represent the D-P "rurality types, and the columns the four "performance categories". The figure in each cell of the table shows the percentage of the total population in that D-P type which is in regions with that level of (A-D) performance. The final column sums the percentage population across the two positive A-D types, providing an overall indicator of performance for that D-P category.

Table 7: Cross Tabulation of D-P and A-D Types:- Percentage of Population

A-D Types → / Dijkstra-Poelman ↓	Depleting	Below Average	Above Average	Acumulating	% in Positive Types
Intermediate Accessible	13.03	26.60	33.22	27.16	**60.37**
Intermediate Remote	30.23	45.31	12.45	12.00	**24.46**
Predominantly Rural Accessible	32.24	28.53	25.56	13.67	**39.22**
Predominantly Rural Remote	22.12	34.73	31.82	11.33	**43.15**
All Intermediate and Rural	**19.10**	**28.23**	**30.71**	**21.95**	**52.67**

Thus in the Intermediate Accessible group of regions the largest share of population was in Above average regions, and overall 60% of the population was in "above average" or "Accumulating" regions. It is noticeable that this is the only D-P type in which a majority of the population was in regions in the positive performance types. In the Intermediate Remote category three-quarters of the population lived in Depleting or Below Average regions. However, as we have seen, relatively few regions are in this category. In both the PR region types roughly 60% of the population lived in the two negative performance types.

Table 8 shows a similar cross-tabulation, this time the rows show the structural types. 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 8: 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.

4. SOME TENTATIVE IMPLICATIONS FOR COHESION POLICY

The three typologies presented above are, as stated in section 1, intended as more appropriate generalisations to supersede the "stylised fallacies" which appear to play a continuing role in the design and priorities of rural development policy, both at the national and the EU level. This being the case it is appropriate to conclude this working paper with some tentative consideration of policy implications.

It is important to state by way of introduction, that the following tables, and the discussion based on them, are intended to illustrate an approach to rural cohesion policy design and prioritisation which is founded both upon "state of the art" concepts, and upon detailed empirical observation of regional conditions. As such are they are "impressionistic", rather than comprehensive or objective. They are based loosely upon the findings of the nine thematic reviews (WP1-9), the synthesis (WP10) the Exemplar Region reports (WP11-22) and the Country Profiles (WP25), together with the author's experience. Nevertheless they will, I hope, show what may be done within the context of an appropriately resourced EU policy framework, based upon such principles.

4.1 Basic Principles – Macro and micro scale patterns and supporting potential.

Rural cohesion policy should reflect the principle of supporting each region to attain its potential;

(i) within the context of the challenges presented by the three meta narratives of change described in WP10, and

(ii) taking account of specific constellations of local and regional assets (both tangible and intangible), which determine the capacity for development.

The first of these contextual factors, the three meta-narratives, show a degree of systematic macro-scale variation across Europe, and can therefore be described within the framework of the EDORA typologies. The second (assets and capacity) varies in a more unsystematic way across Europe. Its impact can therefore only be adequately assessed through some form of local or regional audit, as part of a neo-endogenous process for specifying intervention "mixes" at a region level. This is beyond the scope of this working paper, and the discussion which follows will focus primarily upon the role which the typologies might play in rural cohesion policy design and targeting.

4.2 Cohesion Implications of the Meta-Narratives in different types of region

Table 10 cross-tabulates the types of the D-P and Structural typologies[12] against the three meta-narratives of WP10. In the body of the table the key implications relating to rural territorial cohesion of each combination of region type and meta-narrative are briefly stated. In some cases the same implications apply to more than one type of rural region. The background colour reflects the author's overall assessment of whether the implications are mainly positive (blue), mainly negative (pink) or mixed and fairly balanced (yellow).

Table 10: Cohesion Implications of the EDORA Meta Narratives by D-P and Structural Type.

Type/ Meta-Narrative	Agri-Centric	Urban-Rural	Globalisation (Restructuring)
IA	Increased production efficiency (in agriculture), but reduced employment, and potential environmental issues	Increasing interaction with PU regions, counterurbanisation of both population and economic activity.	Increasing integration into the global economy brings new opportunities, and development of NRE.
IR			
PRA			
PRR	Marginalisation of small farms in remote areas, reduced employment. Shift from production to multifunctionality where access and landscape quality permits.	Continued out-migration and ageing of population leads to depletion of human and social capital. "Pump effect" of Transport infrastructural improvements	Remote areas struggle with global networking, restructuring lags behind, low rates of growth, and income, high unemployment. Success depends very much on human and social capital etc.
Agrarian	Increased efficiency and competitiveness in agriculture) of some areas, marginalisation of others. Reduced employment and environmental issues.	Increased urban demand for some products in accessible regions, but depletion of human and social capital by out-migration in remoter regions.	Globalisation of agricultural markets means smaller profit margins. Restructuring towards the NRE is slow due to human capital constraints and lack of entrepreneurial culture.
Consumption Countryside	Shift from production to multifunctionality – especially provision of rural amenities. Declining farm employment. Degree of success depends on quality of environment and accessibility.	Increasing demand for "rural amenities" from urban populations, but depletion of human and social capital by out-migration in remoter regions.	Global competition for agriculture offset by expansion of (international) demand for tourism and recreation.
Diversified (Secondary)	Increased efficiency and competitiveness, but reduced employment and environmental issues. Overall impact positive due to small role of agric. In the regional economy.	Commuting and counterurbanisation of economic activity means that the local economy of these regions increasingly difficult to differentiate from PU regions. Prospects for growth and prosperity are also shared. Potential for environmental issues and culture/community conflicts.	Most of these regions are in NMS12. They are characterised by slow restructuring, as a result of deficits in human capital, and various other "intangible assets".
Diversified (Market Services)			These regions are already benefitting from globalisation, they have already adapted their economic structure.

[12] The performance (A-D) typology has been excluded from this exercise, since its types imply nothing about the reasons for differential performance and cannot be meaningfully cross-tabulated with the three meta naratives.

4.2.1 The D-P Types

With regard to the D-P typology according to rurality, it is hard to distinguish between the first three types (**IA, IR, and PRA)**, in terms of the likely impacts of the three meta-narratives. This is in part a consequence of the fact that the IR category is very small (see section 3.2). The impact of the Agri-Centric narrative will be mixed, since increased production efficiency will be offset by negative employment impacts and (poptential) environmental impacts of intensive systems. The relative importance of the Agri-centric meta narrative will be relatively low here, since (with some exceptions in the PRA category) agriculture is a relatively small element of the regional economy.

The urban-rural meta-narrative seems likely to have a generally positive impact on these D-P types, as they are net gainers in terms of population and economic activity, due both to counter-urbanisation and in-migration from remoter regions. The Globalisation meta narrative (here interpreted mainly in terms of economic restructuring effects) is also likely to have predominantly positive impacts upon these types of non-urban region.

The **PRR** regions are assumed to experience the neta-narratives in a generally negative way, with marginalisation of small farms in the Agri-Centric narrative, continued "rural exodus" demographic ageing, and perverse impacts of transport infrastructure improvements under the Urban-Rural narrative, and general difficulty of participating in the benefits of globalisation, due to remoteness and infrerior IT connectivity.

4.2.2 The Structural Types

The **Agrarian** region type is assumed to have a mixed, but on balance, negative experience of the three meta-narratives. Thus the Agri-Centric narrative is obviously very important here, producing increased efficiency and competitiveness, but with reductions in employment, possible environmental impacts, and the marginalisation of some areas unable to keep up with para-productivist trends. The Urban-Rural narrative suggests possible increases in (urban and sub-urban) demand for some accessible Agrarian regions, but at the same time a risk of losses of human and social capital from less accessible regions as ex-farm labour migrates to other parts of Europe in search of work. Globalisation of agricultural markets will put pressure upon the Agrarian regions either to become more competitive, or to restructure towards secondary or tertiary activities. However these regions will not be well placed for the latter in terms of human and social capital, and progress is likely to be slow.

Table 11: Relative (cohesion) impact of the EDORA Meta Narratives across the D-P and Structural Typologies

Meta-Narrative Type	Agri-Centric	Urban-Rural	Globalisation
IA	X	XX	XX
IR	X	X	X
PRA	XX	X	XX
PRR	XX	**XXX**	**XXX**
Agrarian	**XXX**	XX	X
Consumption Countryside	XX	**XXX**	X
Diversified (Secondary)	X	XX	**XXX**
Diversified (Market Services)	X	XX	**XXX**

The **Consumption Countryside** seems likely to be affected in a mixed/balanced way by all three meta-narratives. The overall picture is one of a shift away from conventional productivist agriculture towards an emphasis upon multifunctionality, exploiting countryside amenities and public goods through leisure and tourism activities. The globalisation of

tourism and recreation industries will offer new opportunities, though the ability of each region to benefit will depend upon the quality and quantity of its environmental assets. On the negative side many such regions are likely to continue to experience net out-migration, associated with ageing, and the inevitable depletion of human and social capital.

The two types of **Diversified** regions seem likely to have similar and positive responses to the Agri-Centric and Urban-Rural meta narratives. The negative employment impacts of the Agri-Centric narrative may easily be absorbed by other parts of the economy, since agriculture's role is relatively small in these regions. As the Urban-Rural narrative progresses, the economies of diversified regions are increasingly difficult to distinguish from those of adjacent PU regions, and they will therefore follow similar development trajectories. The Globalisation narrative seems likely to affect the **Diversified (Secondary)** regions in a negative way. Most of these regions are in the NMS12, and having relatively low levels of human and social capital, they will adapt and adjust relatively slowly. The **Diversified (Market Services)** regions, on the other hand, are already enjoying the fruits of restructuring, and having already developed an "intangible assets" base for future global participation, seem to have a relatively bright future.

4.3 Some tentative suggestions for Cohesion Policy Responses

As noted earlier, a territorial cohesion policy for rural areas which enables each region to develop its potential needs to take account of two kinds of regional conditions (both assets and challenges), those which are broadly associated with the interaction of the meta narratives of change and the type of region (and are therefor to some extent systematic in their distribution), and those which are more localised and unique. Only the first of these is discussed here, the second requires some form of regional audit of development assets. This will be explored within the context of Activity 3.2 (Cohesion Policy Implications).

Table 10 can provide a starting point for an exercise in considering what form of intervention might be best suited to respond to the cohesion implications of the meta narratives within each type of non-urban region. This is summarised in Table 12. Whilst this is partial and subjective, it is nevertheless illustrative of the sort of "clean sheet" or "first principles" approach which would be helpful in the search for a more appropriate balance in EU rural policy.

The contents of each cell in Table 12 are simply (and only) a reflection of the contents of the equivalent cell in Table 10. Thus, for example, (re)training of former farm workers is a direct response to the reduction in agricultural employment associated with the Agri-centric narrative, and measures to strengthen entrepreneurship and IT aspects of human capital could be a response to the depletion issues caused by the Urban-Rural narrative in PRR regions.

Two summary points may be derived from Table 12. Firstly, the analysis suggests that the priority areas for rural cohesion policy should be PRR, Agrarian, and Diversified (Secondary) regions. Secondly, conventional rural development measures (such as those within CAP Pillar II, Axes 1 and 2, are generally less prominent than those addressing the wider rural economy (i.e. closer to Axis 3). This is of course not unexpected or new. However, Table 12 goes further, in that it suggests that a focus on sectoral measures may be more appropriate in the Agrarian, Consumption Countryside and PRR regions, whilst in other types of region a more "territorial" approach would be a better response to the issues raised in Table 10.

Table 12: Linking Meta Narratives, Intervention Priorities and the Typologies

Type/ Meta-Narrative	Agri-Centric	Urban-Rural	Globalisation (Restructuring)
IA **IR** **PRA**	o Agri-environmental measures. o (Re)training of former farm workers.	o Land use planning. o Environmental policy. o Housing policy for "traditional" rural low income groups.	o Support for "traditional" rural population which is left behind by the NRE (education and training, community development).
PRR	o Farm structures policy o Local and quality products marketing o LFA support? o Training o Diversification schemes	o **Broadband provision.** o **Human capital development (entrepreneurship, IT)** o **Business network support for SMEs** o **Support for diversification.**	o **Broadband provision.** o **Human capital development (entrepreneurship, IT)** o **Business network support for SMEs** o **Support for diversification.**
Agrarian	o **Farm structures policy** o **Local and quality products marketing** o **Training** o **Diversification schemes**	o Local and quality products marketing. o Human capital development (entrepreneurship, IT)	o Support for diversification o Human capital development (entrepreneurship, skills for new activities). o Inward investment of NRE activities.
Consumption Countryside	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing o LFA support?	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing.
Diversified (Secondary)	o Agri-environmental measures. o (Re)training of former farm workers.	o Agri-environmental measures. o (Re)training of former farm workers. o Housing policy for "traditional" rural low income groups.	o **Diversification schemes.** o **Human capital development (entrepreneurship, IT)**
Diversified (Market Services)			o **Measures to preserve local cultures, strengthen communities etc**

4. SOME CONCLUDING OBSERVATIONS

As stated earlier in this working paper, the underlying objectives of Activity 2.22 included:

(a) The development of some broad generalisations about rural Europe which could supersede the "stylised fallacies" which have all too often, in the past, influenced the design and implementation of European policies for non-urban areas.
(b) To provide a simple but appropriate framework for analysis for the Future Perspectives (Activity 2.26) and Policy Activities (2.31 and 2.32).

With respect to (a), it has been shown that:

(i) Regions in which the primary sector plays a major role in the local economy are mainly concentrated in the NMS12, the Baltic States and parts of Finland, Greece, Italy, and Spain. There appears to be some correspondence between the incidence of "Agrarian" regions and peripherality.
(ii) The rest of the European space is characterised by a patchwork of three types of rural area, Consumption Countryside, Diversified (Secondary) and Diversified (Market services). Of these the last seems to be to some extent associated with the most accessible areas.
(iii) Broadly speaking there is a tendency for the Agrarian regions to be relatively low performers, showing many of the characteristics of the process of socio-economic "Depletion". The Diversified (Secondary) regions also tend to be relatively poor performers, perhaps because they are dependent upon declining manufacturing industries.
(iv) The Consumption Countryside regions and the Diversified (Market Services) group are both high performers, and likely to continue to "accumulate" in the immediate future.

These are very simple, broad-brush generalisations. They cannot, of course "do justice" to the wealth of local variation in rural areas across the ESPON space, or to the infinite number of possible combinations of drivers, opportunities and constraints identified in the earlier conceptual phase of EDORA research. Nevertheless within the context of the debate about the future of European (cohesion) policy for rural areas, it would seem that the four Structural Types may be more useful as stereotypes than the prevalent, but outdated association of rural exclusively with Agrarian rural economies, or even with the Consumption Countryside. The rather different needs and potentials associated with Diversified rural economies (whether strong in secondary activities or market services) would seem to deserve far more attention in the context of the policy debate than they have heretofore received.

As a first step, the use of the structural typology as a framework for the Future Perspectives analysis and subsequent Policy tasks will allow the validity of these broad generalisations to be further assessed.

The final section of the report provides a tentative discussion of the way in which a combination of the Typologies and the Meta Narratives might serve as the basis for a rationale for differential intervention which better reflects the diversity of rural Europe. Such differentiation would work best as part of a neo-endogenous place-based rural policy, in which the combination of "measures" in any individual region would ideally be a matter for decision at a regional level, within the context of support from the national and EU levels.

REFERENCES

Bryden J, Copus A, Mitchell M and Loughrey Y (2004) *Rural Development Indicators,* Section 3 of the (unpublished) final report of the PAIS II project for Eurostat

Copus A K, Psaltopoulos D, Terluin I, Weingarten P (2008) *Common Feature of Diverse European Rural Areas: Review of Approaches to Rural Typology* (J05/33/2006), Institute for Prospective Technological Studies, EC Joint Research Centre Seville. http://ftp.jrc.es/EURdoc/JRC48464.pdf

Dijkstra L and Poelman H, (2008) *Remote Rural Regions, How proximity to a city influences the performance of rural regions,* Regional Focus No1, DG Regio, European Commission http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

European Commission (EC) DG Regio (2008) Green Paper on Territorial Cohesion Turning territorial diversity into strength, COM(2008) 616 final.

Gade O (1991) Dealing with Disparities in Regional Development – The Intermediate Socioeconomic Region, Chapter 3 in Gade O, Miller V P, Sommers L M, *Planning Issues in Marginal Areas,* Occasional Papers in Geography and Planning, Vol 3 Spring 1991, Department of Geography and Planning, Appalachian State University, Boone, N. Carolina.

Gade O (1992) Functional and Spatial Problems of Rural Development: General Considerations of an Explanatory Model, Chapter 4 in Ó Cinnéide M and Cuddy M, *Perspectives on Rural Development in Advanced Economies*, Centre for Development Studies, Social Sciences Research Centre, University College Galway.

Hodge I (2004) The economic diversity of rural England: stylised fallacies and uncertain evidence, Editorial, *Journal of Rural Studies* 20 (2004) 263–272.

Massey D (1984) *Spatial Divisions of Labour, Social structures and the geography of production*, Macmillan Press, Basingstoke.

Peet J R (1969) The Spatial Expansion of Commercial Agriculture in the Nineteenth Century: A Von Thunen Interpretation, *Economic Geography*, 45, p283.

Peet J R (1970) Von Thunen Theory and the Dynamics of Agricultural Expansion, *Explorations in Economic History*, 8, p181.

Peet J R (1972) Influences of the British Market on Agriculture and Related Economic Development in Europe, *Transactions of the Institute of British Geographers*, 56, p1.

Saraceno E (1994) Alternative readings of spatial differentiation: The rural versus the local economy approach in Italy, *European Review of Agricultural Economics,* 21 Number 3-4 pp451-474.

Wallerstein I, (1976) *The Modern World-System: Capitalist Agriculture and the Origins*

of the European World-Economy in the Sixteenth Century. New York: Academic Press.

APPENDIX 1: ADDITIONAL RESULTS FOR THE STATISTICAL ANALYSIS (SECTION 2.7)

1. Results of t-tests to assess the difference between the OECD and Structural types: Individual Performance Indicators.

NETMIG

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								21
	CC	0.00	1.00							22
	DS	0.00	0.13	1.00						23
	DpS	0.00	0.70	0.04	1.00					24
Rural	Ag	0.18	0.00	0.00	0.00	1.00				31
	CC	0.00	0.16	0.54	0.09	0.34	1.00			32
	DS	0.00	0.81	0.55	0.60	0.01	0.76	1.00		33
	DpS	0.00	0.39	0.74	0.16	0.00	0.86	0.70	1.00	34
		21	22	23	24	31	32	33	34	

GDPCAP

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.00	1.00							212
	DS	0.00	0.81	1.00						213
	DpS	0.00	0.84	0.92	1.00					214
Rural	Ag	0.12	0.00	0.00	0.00	1.00				311
	CC	0.00	0.98	0.76	0.79	0.00	1.00			312
	DS	0.00	0.18	0.26	0.10	0.00	0.09	1.00		313
	DpS	0.00	0.06	0.10	0.02	0.00	0.01	0.92	1.00	314
		211	212	213	214	311	312	313	314	

GDPCH

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.01	1.00							212
	DS	0.19	0.55	1.00						213
	DpS	0.00	0.13	0.13	1.00					214
Rural	Ag	0.09	0.05	0.94	0.08	1.00				311
	CC	0.01	0.45	0.30	0.40	0.00	1.00			312
	DS	0.50	0.00	0.04	0.00	0.04	0.00	1.00		313
	DpS	0.00	0.03	0.02	0.29	0.03	0.17	0.00	1.00	314
		211	212	213	214	311	312	313	314	

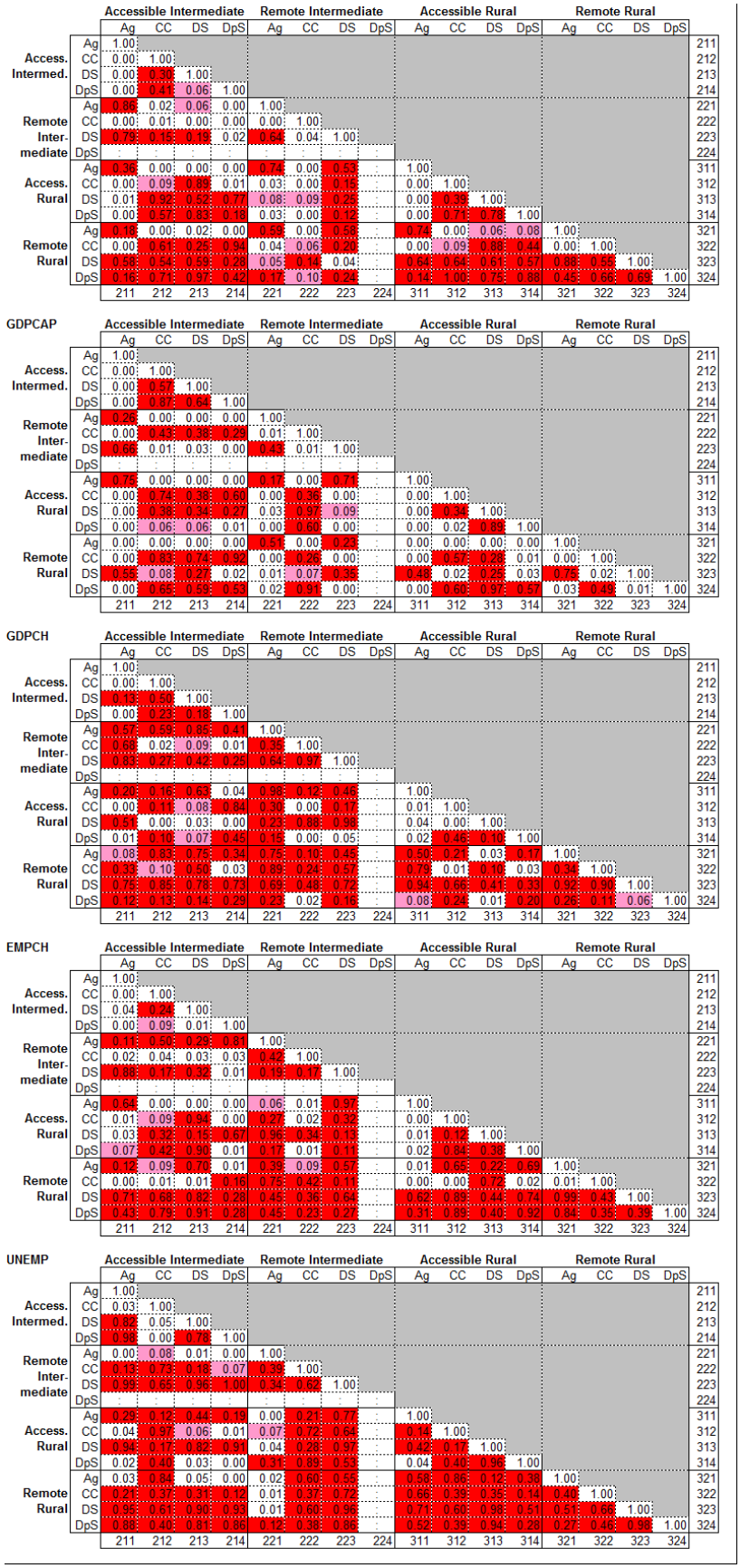
EMPCH

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.00	1.00							212
	DS	0.12	0.12	1.00						213
	DpS	0.00	0.17	0.00	1.00					214
Rural	Ag	0.92	0.00	0.11	0.00	1.00				311
	CC	0.00	0.63	0.27	0.10	0.01	1.00			312
	DS	0.06	0.50	0.16	0.90	0.06	0.43	1.00		313
	DpS	0.12	0.32	0.78	0.01	0.13	0.47	0.08	1.00	314
		211	212	213	214	311	312	313	314	

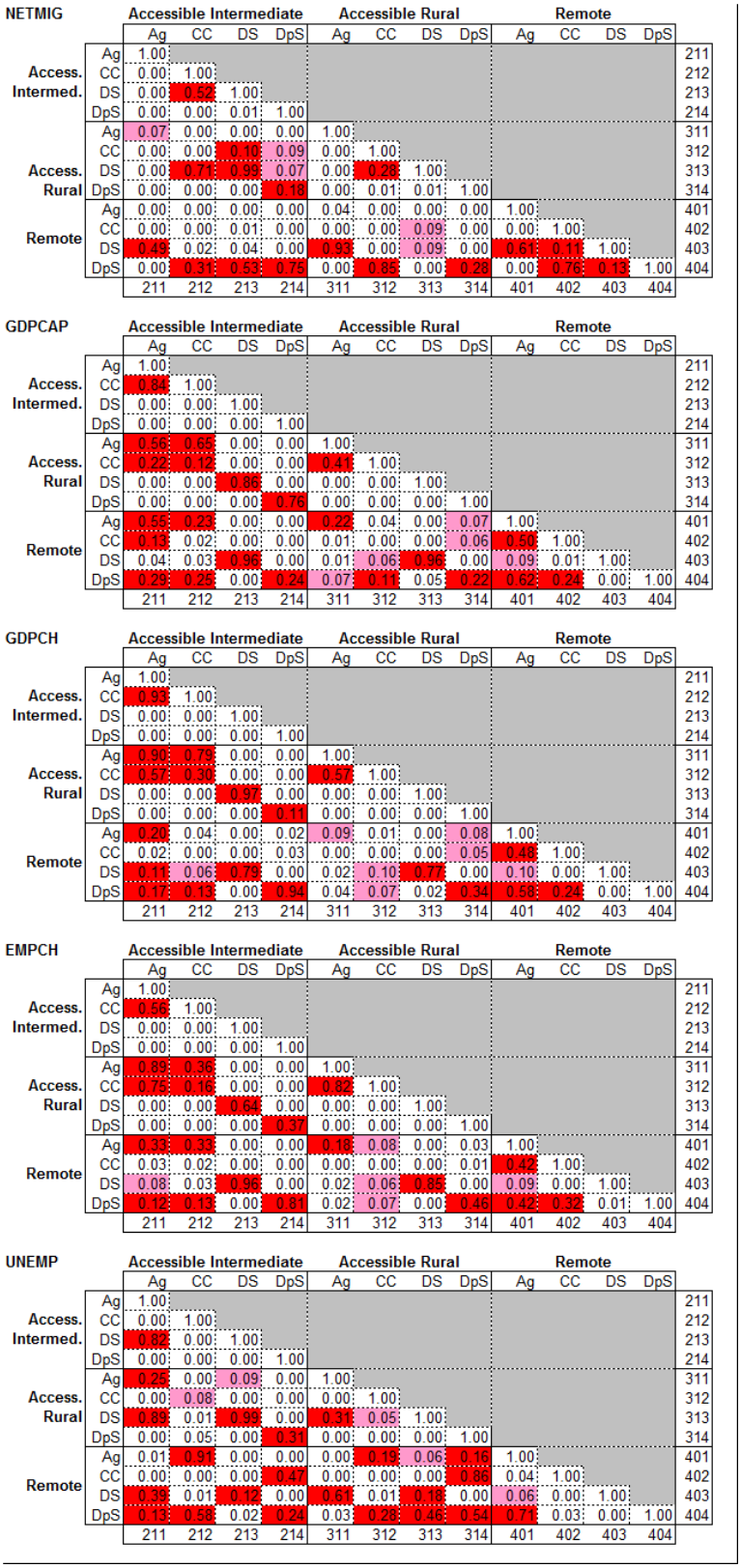
UNEMP

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.19	1.00							212
	DS	0.50	0.04	1.00						213
	DpS	0.29	0.00	0.83	1.00					214
Rural	Ag	0.52	0.87	0.10	0.02	1.00				311
	CC	0.31	0.62	0.07	0.01	0.03	1.00			312
	DS	0.50	0.14	0.80	0.87	0.17	0.17	1.00		313
	DpS	0.18	0.65	0.05	0.01	0.16	0.43	0.12	1.00	314
		211	212	213	214	311	312	313	314	

2. Results of t-tests to assess the difference between all possible combinations of D-P and Structural types: Individual Performance Indicators.



3. Results of t-tests to assess the difference between the Simplified D-P types and Structural types: Individual Performance Indicators.



NETMIG

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.00	1.00											212
	DS	0.00	0.52	1.00										213
	DpS	0.00	0.00	0.01	1.00									214
Access. Rural	Ag	0.07	0.00	0.00	0.00	1.00								311
	CC	0.00	0.00	0.10	0.09	0.00	1.00							312
	DS	0.00	0.71	0.93	0.07	0.00	0.28	1.00						313
	DpS	0.00	0.00	0.00	0.18	0.00	0.01	0.01	1.00					314
Remote	Ag	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	1.00				401
	CC	0.00	0.00	0.01	0.00	0.00	0.00	0.09	0.00	0.00	1.00			402
	DS	0.49	0.02	0.04	0.00	0.93	0.00	0.09	0.00	0.61	0.11	1.00		403
	DpS	0.00	0.31	0.53	0.75	0.00	0.85	0.00	0.28	0.00	0.76	0.13	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

GDPCAP

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.84	1.00											212
	DS	0.00	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.56	0.65	0.00	0.00	1.00								311
	CC	0.22	0.12	0.00	0.00	0.41	1.00							312
	DS	0.00	0.00	0.86	0.00	0.00	0.00	1.00						313
	DpS	0.00	0.00	0.00	0.76	0.00	0.00	0.00	1.00					314
Remote	Ag	0.55	0.23	0.00	0.00	0.22	0.04	0.00	0.07	1.00				401
	CC	0.13	0.02	0.00	0.00	0.01	0.00	0.00	0.06	0.50	1.00			402
	DS	0.04	0.03	0.96	0.00	0.01	0.06	0.96	0.00	0.09	0.01	1.00		403
	DpS	0.29	0.25	0.00	0.24	0.07	0.11	0.05	0.22	0.62	0.24	0.00	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

GDPCH

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.93	1.00											212
	DS	0.00	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.90	0.79	0.00	0.00	1.00								311
	CC	0.57	0.30	0.00	0.00	0.57	1.00							312
	DS	0.00	0.00	0.97	0.00	0.00	0.00	1.00						313
	DpS	0.00	0.00	0.00	0.11	0.00	0.00	0.00	1.00					314
Remote	Ag	0.20	0.04	0.00	0.02	0.09	0.01	0.00	0.08	1.00				401
	CC	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.05	0.48	1.00			402
	DS	0.11	0.06	0.79	0.00	0.02	0.10	0.77	0.00	0.10	0.00	1.00		403
	DpS	0.17	0.13	0.00	0.94	0.04	0.07	0.02	0.34	0.58	0.24	0.00	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

EMPCH

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.56	1.00											212
	DS	0.00	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.89	0.36	0.00	0.00	1.00								311
	CC	0.75	0.16	0.00	0.00	0.82	1.00							312
	DS	0.00	0.00	0.64	0.00	0.00	0.00	1.00						313
	DpS	0.00	0.00	0.00	0.37	0.00	0.00	0.00	1.00					314
Remote	Ag	0.33	0.33	0.00	0.00	0.18	0.08	0.00	0.03	1.00				401
	CC	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.42	1.00			402
	DS	0.08	0.03	0.96	0.00	0.02	0.06	0.85	0.00	0.09	0.00	1.00		403
	DpS	0.12	0.13	0.00	0.81	0.02	0.07	0.00	0.46	0.42	0.32	0.01	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

UNEMP

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.00	1.00											212
	DS	0.82	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.25	0.00	0.09	0.00	1.00								311
	CC	0.00	0.08	0.00	0.00	0.00	1.00							312
	DS	0.89	0.01	0.99	0.00	0.31	0.05	1.00						313
	DpS	0.00	0.05	0.00	0.31	0.00	0.00	0.00	1.00					314
Remote	Ag	0.01	0.91	0.00	0.00	0.00	0.19	0.06	0.16	1.00				401
	CC	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.86	0.04	1.00			402
	DS	0.39	0.01	0.12	0.00	0.61	0.01	0.18	0.00	0.06	0.00	1.00		403
	DpS	0.13	0.58	0.02	0.24	0.03	0.28	0.46	0.54	0.71	0.03	0.00	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

APPENDIX 2: OLE GADE ON THE ISEZ

Extract from personal communication August 2009:

"I suppose I began wondering about the problems of government policy vis a vis peripheral/marginal region development (in otherwise developed economies) when I was working in the field in Norway on my dissertation project in 1968-69. My focus was on the causes, character and impacts of selective out-migration from North Norway. As you know this region, since World War II, had seen extensive central government aid for the purpose of stabilizing its economy and bringing its infrastructure more in line with Norwegian norms (and thus, presumably, stemming the outflow of people who were overwhelming Oslo, in particular). Gradually I sensed that there seemed to be a direct relationship between government encroachment and degree of out-migration for individual kommuner. A stage-wise migration process was clearly evident, with intermediate sized places becoming the initial stopover of folks seeking to broaden their opportunity structure. I began to think that had the central government correctly diagnosed the increasing differentiation in quality of life and opportunity that was regionally emerging with improvement in the national economy following the war, it might have concluded that investments could be better focused on intermediate growth poles/regions/zones, stabilizing them, and improving their future prospects to where they, and not Bergen, Trondheim, and Oslo would be an ultimate objective of the migrant. Ideally this might result in a decentralization of the regional development effort, i.e. let investment probes into the periphery issue from selected ISER nodes, should they have acquired the sufficient diversified economic base. Simultaneously, of course, this line of thinking is a complete rejection of the then traditional bi-polar model of regional economic development. The decentralizing approach in the US, begun in the 1970s, of having federal resources sent through the state governments to regional councils failed largely because the latter, where in developing regions, had their decisionmaking dominated by municipalities, many of whom were themselves failing.

Erik Bylund had earlier conceived of a stage-wise migration model explaining the settlement process of frontier regions in Northern Sweden. With industrialization, modernization and other changes in life, livelihood and popular perspectives, the frontier regions were in decline, and it was Bylund who harped against excessive government expenditures purported to stabilize/energize marginal regions. I began to model a migration process acting in the reverse, noting that people of very similar characteristics to the earlier frontier migrants – young, dynamic, perhaps better educated, and opportunistic – were moving from their lesser desirable peripheral environments, in a stage-wise manner. What they were leaving behind was an increasingly aging, tradition bound population; one more reluctant to respond to the expectations of the government that came with the aid packages. As an aside, I remember clearly the anguish expressed by young teachers, from Oslo, etc. on a two-year plan following their teaching certification, in rural schools in Nordland Province, literally pushing the migration envelope by constantly informing their students how truly nice it was in the cities of the south.

Persistent concerns about the apparent insufficient impacts of the governmental sums being proffered their peripheral regions caused a welter of ideas, theories of impacts and change, etc. to emerge in Sweden in the 1970s and thereafter. The Marginal Region Study Group coming out of Karlstad University (initially DIMA, then PIMA) was one result (as certainly was the founding of Nordregio). Here at the initial meeting of PIMA, in 1989, I met up with Lars Olof Persson and Ulf Wiberg, who had collaborated with Bengt Johansson, on Urbaniserad Glesbygd: Verklighet och Vision, published that same year. Lars Oluf and Ulf saw my work on the Intermediate Socio-Economic Development Region to provide the potential for a theoretical superstructure with clear policy implications, and we began collaborating on its essential characteristics focusing especially on research that compared national economies with distinctively different approaches to the regional development problem, specifically, Sweden, and the USA state of North Carolina. Supported by minor research grants from the United States and a substantial grant from the Swedish Research Council (in several

portions over the following two or three years) we proceeded with Lars Olof, Ulf, and myself as principal investigators, and with the additional support of graduate students from Umeå University and Appalachian State University. The initial offerings were presented in three papers at the annual meeting of the Association of American Geographers in Toronto, April, 1990, and were presented in their original form in a CERUM Working Paper, CWP-1990:8, edited by Ulf Wiberg, and entitled: Characteristics of the Intermediate Socioeconomic Zones in Sweden and USA.

Over the ensuing two years, additional reports were published in the annual PIMA meeting papers, and two Master Theses were produced at the Department of Geography and Planning at Appalachian State University (Jane Chang and Jeff Jones). I was subsequently invited to give the plenary presentation, you have referred to, in Galway. This was not an audience receptive to the idea that an empirically supported theory existed that might realign central governments' foci on peripheral region subsidization and infrastructure investment. …

…In my own research I have had opportunity to periodically utilize the ISER Model, as exemplified in a chapter where I sought to expand the explanatory regional development model to all of Europe, in the context of the prevalent research environment in the late 1990s (Gade, 1998). I have also used the conceptual framework in my textbooks on North Carolina, most recently in the 2002 volume. In both instances the model did not advance, since it was used only illustratively. Still I remain sold on this as being a continuously valid approach to looking at the spatial dimensions of economic development and change, in a context of regional differentiation and governmental investment policy.