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Territorial Cohesion and the CAP: EU Conflicts and Evidence

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Abstract

This paper considers the EU's Common Agricultural Policy (CAP) with respect to a number of general EU policy objectives, in particular economic and social cohesion, and the European Spatial Development Perspective (ESDP). The nature and recent history of the cohesion objective is first outlined, followed by a review of the relationship of the CAP to cohesion, and a brief account of the progress of the ESDP. Then, farm-level and other data at NUTS 3 level are described and analysed to assess the relationship between CAP instruments and cohesion indicators. A number of "incidence" maps show the spatial pattern of agricultural policy expenditures and support across the EU-15 and neighbouring countries. Correlation and regression results indicate that the market/income support Pillar 1 of the CAP does not promote the cohesion objective, and indeed acts against it. The "rural development" Pillar 2 measures have been adopted differently in different EU-15 member states, generally with northern countries implementing agri-environmental measures and southern member states focussed on agricultural development. Again, as currently implemented, this aspect of the CAP does not appear to be promoting the objectives of the ESDP. A final section of the paper discusses the implications of this analysis.

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1. Introduction

"*In order to promote its overall harmonious development, the Community shall develop and pursue its actions leading to the strengthening of its economic and social cohesion. In particular, the Community shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions or islands, including rural areas.*"

> Consolidated Version of the Treaty establishing the European Community**,** Article 158; http://europa.eu.int/eur-lex/en/treaties.

The above paragraph expresses one of the overall strategic objectives of the European Union (EU), alongside others such as democratic values, domestic and international competitiveness and environmental sustainability. The main pro-cohesion vehicle of regional policy is justified in terms of cohesion: *"because there are positive benefits for all in narrowing the gaps of income and wealth between the poorer countries and regions and those which are better off*" (Commission, 2004a). These "benefits" are not explicitly defined, but, in terms of economic efficiency, such "narrowing" may facilitate resource mobility and reduce the need for tax-funding of hard-to-target social welfare programmes. Equity, a notoriously difficult concept, is perhaps best regarded simply as a political goal, though arguably one which assists economic development as well.

Consistent with these strategic objectives, a number of attempts have been made to target the expenditure of EU structural funds – including the "Guidance Section" of the Agricultural Fund alongside the Regional and Social Funds - within territorial areas, recently by means of so-called Objective 1 and 2 regions. A special Cohesion Fund was set up in 1993 to channel expenditure for the environment and transport to the poorest member states – currently Greece, Portugal, Spain and Ireland.

The Commission has reported progress in a number of relevant areas in a series of formal Cohesion Reports (Commission, 1996, 2001, 2004b) and Cohesion Progress Reports (e.g. Commission 2001). The Second Cohesion Report reported that: "*In the EU today, disparities in income (GDP) per head between Member States and, more particularly, between regions, remain considerable. The average income per head of the 10% of population living in the most prosperous regions is, for example, 2.6 times greater than the bottom 10%. The disparities, however, have narrowed over time. In the three least prosperous Member States (Greece, Spain and Portugal), average income per head has risen from 68% of the EU average in 1988 to 79% in 1999, a reduction of a third in the initial gap. Disparities between regions have narrowed by less, partly because the gaps have widened between regions within certain Member States*".

The Third Cohesion Report shows that "*disparities have narrowed over the past decade, especially since the mid-1990s. But there are still important deficits to make up between the least well-off and the rest which will require a long-term effort.*" It points out that national governments still retain the major responsibilities for basic services and income support in the poorer regions, but that Community policies, including agriculture, have the potential to increase cohesion, particularly if more effective design and delivery mechanisms can be devised.

2. Cohesion and the CAP

The Common Agricultural Policy (CAP) was not set up with territorial cohesion in mind, and has never had cohesion as one of its aims, except in terms of a "fair standard of living for the agricultural community" in the famous Article 39 of the Treaty of Rome. Rather, as part of a political agreement between France, Germany and other members of the original Six to establish a Common (now Single) Market, the CAP's fundamental justification was (and remains) the more effective exploitation of comparative advantage. To the extent that environmental and socio-cultural considerations have been taken on board in recent years, as in "multifunctionality" and the "European Model of Agriculture", cohesion between EU regions is still not a CAP objective.

Nevertheless, the basic rationale for agricultural policies in developed countries inevitably generates territorial and regional issues within a sector with pronounced geographical variation in production techniques and ease of market access. Until 1972, the CAP had no explicit location-specific features, other than national quotas for sugar, cotton and tobacco. In that year, and after the entry of the United Kingdom with its long-running hill farming policies, a number of Directives introduced the instrument of Less Favoured Areas (LFAs). Within these regions, additional capital and production subsidies could be made available, with the objective "*to ensure the continuation of farming, thereby maintaining a minimum population level or conserving the countryside*". This was a first recognition that social and environmental objectives could not be adequately pursued by means of flat-rate commodity price support and investment aids. However, in terms of spatial targeting, LFAs have remained a crude instrument, having been extended to 33 million hectares (ha) of the EU's total agricultural area and with little internal differentiation (in the UK, to Disadvantaged and Severely Disadvantaged Areas).

With the growth of structural policies in the EU during the 1980s and 1990s, and after some pilot Integrated Development Programmes, the Agricultural Fund's Guidance Section was in principle considered alongside the Regional and Social Funds as part of regional and national Operational Programmes in Objective areas (1 and 5b during the 1989-93 and 1994-99 periods). However, in practice, the need to continue long-established agricultural schemes, both 'horizontal' and in the LFAs, and the separate Funds, militated against either an "integrated" or "territorial" treatment of these significant rural support flows. Agri-environmental policy support, introduced as an "accompanying measure" in the MacSharry reforms, had some geographical targeting (e.g. in the UK's Environmentally Sensitive Areas) but this was based on environmental considerations rather than social or economic ones. Neither the switching of market support to direct payments, nor the recently agreed introduction of Single Farmer Payments (on either the historical or area basis), involve spatial

considerations as such; the various payment rates merely represent rather blunt attempts at continuing to provide farm income support in ways more or less compatible with past practice.

In the Second Cohesion Report's "Assessment" of the CAP, "*Rural areas vary greatly from one Member State to another in size, geographical characteristics, population, development levels, etc. Disregarding Portugal, the share of the population living in rural areas is growing (albeit at different rates in each country) and employment growth in these areas from 1995 to 1999 (+1%) outstripped the EU average (+0.8%). This has proved that rural areas are not inherently inimical to job creation. Nevertheless, development in many rural areas is still greatly impeded by the natural disadvantages these areas present*."

Ab initio consideration of CAP-type support from the viewpoint of economic and social cohesion would suggest that rather little positive correlation is to be expected. From an economic point of view, historical commodity market support "coupled" to output levels would be hypothesised to go more to high-productivity farming areas which tend to lie close to urbanised (and usually richer) areas (Kilkenny, 2004). This was likely to continue even with more recent moves to an input (area and livestock) basis. Various modifications and exceptions to a 'flat-rate' CAP may offset this effect, such as: LFA instruments, higher support to commodities such as sheep produced in remoter areas, and lesser support to more peri-urban sectors such as horticulture. However, these could only be crude, and are vulnerable to considerations of 'fairness' and 'stabilisation' (related to past support patterns rather than cohesion).

From a social point of view, it is well known that take-up of support schemes tends to be higher amongst the better-off, the better-educated and the better-connected. CAP schemes such as those in Pillar 2 require co-financing (from private or public sources), initiative (e.g. from applicant volunteering, or via producer groups) and skills (e.g. in formulating a successful application). Such characteristics are likely to favour the already advantaged and hence to leave the disadvantaged behind. Again, various offsetting steps might be taken, such as upper payment limits per applicant, preference for or against various commodities, or LFA supplements, but are unlikely to promote cohesion very effectively.

3. The European Spatial Development Perspective

According to its historians (Faludi and Waterhouf, 2002), the European Spatial Development Perspective (ESDP) "*towards balanced and sustainable development of the territory of the European Union*" is the culmination of "*years of dedicated work*" by spatial planners in Europe since the 1970s and 1980s. Initiated by the French and Dutch with their centralist heritage, the Germans and others were brought in for a succession of annual meetings starting with those at Nantes and Turin in 1989 and 1990. At Leipzig in 1994, the "Principles" of the ESDP were agreed, establishing spatial development as a key to economic and social cohesion. "*Spheres of activity*" included "*a more balanced and polycentric urban system*", "*parity of access to infrastructure and knowledge*" and "*wise management ... of Europe's natural and cultural heritage*". The British, who had hitherto been lukewarm or hostile to the ESDP concept, began to play a more positive role after 1997, through the Office of the Deputy Prime Minister. And the ESDP itself was finally agreed by an informal Council of Ministers meeting at Potsdam as "*a suitable policy framework for the*

sectoral policies of the Community and the Member States that have spatial impacts, as well as for regional and local authorities" (Commission, 1999).

The note of caution which is apparent in this brief outline derives from a number of sources. One is straightforwardly political: there have been frequent disputes over the competencies of EU institutions to embrace the planning of land use, transport, housing and other elements of spatial planning. The principle of subsidiarity forces ESDP proponents to argue the case for extending EU powers (i.e. national and regional government constraints) into these areas. So far, the ESDP has not been formally embedded into an EU Treaty; hence the "informal" nature of the Potsdam meeting, and the lack of specific ESDP Directives, let alone a dedicated Directorate-General in the Commission.

A second reason for the hesitant and patchy acceptance of the ESDP is its "very ambiguous geographical imagination" and "contradictory discourses" (Zonneveld, 2000; Jensen and Richardson, 2000; cited in Healey, 2004). There appear to be major problems of vocabulary and language translation (and so perhaps understanding) surrounding terms such as "spatial planning", "strategic", and "city", let alone more complex concepts such as "polycentricity" and "territory". Some of these problems may arise from dissonance between the concepts of traditional (or "essentialist") geography of place and those of the newer relational geography that focusses on links and networks of flows (Healey, 2004). Others derive from the ongoing discussion within geographical economics as regards location, agriculture, and rural development (Kilkenny, 2004).

A third constraint on effective action on spatial planning at EU level derives from lack of adequate data to cover the multi-dimensional concerns of planners. Depending on the context, and perhaps viewpoint, planners are both developers in the indirect sense of helping to determine the delivery of state-funded infrastructure, and state-empowered regulators of private-sector development, trying to ensure the provision of public goods and services (or to avoid public bads and disservices). The EU-wide NUTS (Nomenclature des Unités Territoiriales Statistiques) system still has only a limited and inconsistent relationship to national and regional systems of data collection, e.g. administrative, political, agricultural, and environmental. At a simpler level, even if DG Agri and Eurostat have developed over many years some harmonised statistical systems of agricultural census data, commodity market supply-demand balances and farm business accounts, this has not yet extended to all other sectors. Thus, for example, there is no EU-wide database of Natura 2000 sites, and many alternative definitions of "distance" (accessibility, remoteness).

Many of these problems will of course worsen considerably with the entry of the ten Accession Countries (ACs) in May 2004, and more thereafter. Even if data exists, there is so far only limited progress in collecting these into a common database usable at either the "macro" or EU scale, or, for comparative purposes, at lower "meso" (national/regional) or "micro" (regional/local) scales.

In an effort to rectify this last omission, a "European Spatial Planning Observation Network" (ESPON) emerged during the late 1990s as a ESDP-based research initiative with a Coordination Unit in the Government of Luxembourg (the ESDP being still outside EU competency) but with Commission involvement through DG Regio. The objective of the programme (www.espon.lu) is to investigate the "territorial" aspects of cohesion throughout Europe, including Norway, Switzerland and 12 Applicant Countries, as well as the EU-15 Member States. The common basic

unit of analysis is intended to be the NUTS3 regions, of which there are about 1100 in the EU-15 and a further 200 in the ACs, though with a widely different areas, populations and of course economies. Individual countries provide the funding for ESPON, and are represented at governmental level on a Management Unit. Since 2002, ESPON has generated about 8 "transnational project groups" on research "themes" such as energy, transport and urban-rural relations, and about 10 "policy impact" TPGs including one (TPG 2.1.3) on the CAP and Rural Development Policy (RDP), as well as a co-ordinating TPG. The rest of this paper focusses on some of the initial work carried out in ESPON TPG 2.1.3.

4. Data and Preliminary Analysis

As implied by its CAP/RDP title, the fdocus of TPG 2.1.3 is the effects of the EU's Common Agricultural Policy including its "rural development" Pillar 2. In budgetary terms, the "market price support" Pillar 1 is now dominated by direct payments to farmers, with lesser spending on exports subsidies etc. However, in overall economic terms, despite the MacSharry and Agenda 2000 reforms, "indirect" CAP support via border measures (import taxes and quotas), export subsidies, intervention purchases and other measures (e.g. marketing quotas, consumption subsidies) remains high, and in fact exceeds the value of direct payments (OECD, 2002). Pillar 2 comprises a wide range of expenditure measures. co-funded from national sources (so that EU spending represents only a proportion of total public support). These measures include LFA expenditure, agri-environmental schemes, aids for farm modernisation and development, grants or loans for food marketing and processing investments, early retirement and young farmer schemes, and "Article 33" schemes for farm-related tourism and craft investments, and for rural infrastructure works such as water and sewerage improvements. There are also some so-called Community Initiatives such as LEADER and INTERREG which can be classified as mainly rural development.

Given budgetary complexities (e.g. that structural budget appropriations are allocated for multi-year periods, and may not be actually spent) and other complications (especially the fact that indirect market support involves substantial non-budgetary measures), the total support costs of these various components of the CAP/RDP are not easy to identify. In the ESPON project, a variety of sources have been used for the EU-15 and the other 14 countries involved. Market price support was derived as described below from the OECD Producer Support Estimate (PSE) figures (about half of total EU PSE of about €100 billion). Other sources included DG Agri budget figures, the EU's Farm Accountancy Data Network (FADN), and the CORINE (Coordination of Information on the Environment) land cover database. Other data is being supplied by fellow-TPGs, particularly as regards urban centres ("functional urban areas") and accessibility (or peripherality) indices.

For territorial analysis, it was necessary to provide estimates of the CAP/RDP measures at NUTS3 level. In principle, some of these should be directly observable either by the paying authorities or from farmer receipts. However, others, such as EU-wide market price support, are inherently non-spatial in application (for example, market support exercised by quotas and export subsidies). Other data are only gathered and/or reported at a higher than NUTS3 level such as by country or by NUTS2 areas (e.g. FADN data on farmer receipts, available on a sample basis). Thus, further estimation procedures were necessary. Primarily, this took the form of allocating EU (or national) expenditure or market price support by commodity to

NUTS3 level by using a simple agricultural indicator available from EUROFARM or national sources, e.g. arable area, livestock numbers, or the numbers of agricultural holdings or workers.

By these means, "incidence" data representing the level of CAP support of various types for each NUTS3 region in the EU-15 (plus some other countries) were calculated. Maps 1 and 2 show Pillar 1 support per agricultural work unit (AWU) and per hectare of agricultural area (UAA) in 1999. Maps 3 and 4 show estimated total Pillar 2 support based on rural development budget data and FADN-reported farmer receipts, respectively. Due to differences in the land and labour intensities of agricultural production systems, the two denominators (UAA and AWU) are not closely correlated, and so these maps provide different perspectives on the distribution of support. Map 1 (Pillar 1 support per AWU) shows a concentration in northern NUTS3 areas, while Map 2 (Pillar 1 support per ha UAA) shows a more dispersed distribution, with areas in northern Spain, parts of Italy and Greece amongst the highest beneficiaries.

Initial correlation analysis was performed with these NUTS3 data between the main Pillar 1 and 2 support measures, measured on an area basis. Pillar 2 support was measured alternatively by public expenditures on rural development, and from FADN-recorded farmer receipts. These support variables were correlated against a number of socio-economic variables measuring cohesion, i.e. GDP per head (in levels and change), unemployment rates (levels and change) and population change (Table 2). The Pearson coefficients for Pillar 1 support show a low but significant positive relationship with GDP levels and population change, and a relatively high negative one with unemployment levels. When related to changes in GDP per head and in unemployment, Pillar 1 support shows a negative association with both, i.e. a 'bias' towards more static regional economies, and towards those with falling (or less fast-rising) unemployment rates.

When measured by farm receipts, Pillar 2 support shows similar relationships with GDP levels and unemployment rates, but a negative one with change in agricultural employment. This measure of Pillar 2 suggests a positive association with GDP change (higher GDP accompanying higher rates of agri-environmental and other rural development farm receipts per ha), and a negative one with change in unemployment rates (falling unemployment linked numerically to less Pillar 2 support). When measured by public expenditure, no statistically significant relationships between Pillar 2 and socio-economic variables emerge, except that higher rates of such expenditure appear linked to smaller drops in agricultural employment.

These preliminary results suggest that CAP Pillar 1 support is operated in a way unrelated to economic cohesion, and indeed acting against it, with higher levels of CAP expenditure being associated with more prosperous regions. The evidence on Pillar 2, with two alternative measures, is more mixed, but again appears only weakly linked to cohesion objectives.

Table 2: Pearson Correlation Coefficients between CAP Pillar 1 and 2 Support Measures and Socio-Economic Cohesion Indicators

	GDP per head, PPP, 1999	Change in GDP per head, 1995-2000, %	Unemployment rate, 2001, %	Change in unemployment rate, 1998-2001, % change in %	Population change, 1989-1999, %
Pillar 1 Support per ha UAA	0.088**	-0.064**	-0.305**	-0.133**	0.216**
Pillar 2 Support (public expenditure) per ha UAA	-0.026	0.051	-0.048	-0.041	0.032
Pillar 2 Support (farm receipts) per ha UAA	0.143**	0.125**	-0.244**	-0.096**	0.048
GDP per head, 1999	1.000		-0.322**		0.002
Population change, 1989-1999		-0.112**	-0.453**	-0.013	1.000
Change in unemployment rate, 1998-2001		-0.244**			
Change in GDP per head					

** indicates significant at the 5% level.

5. Regression Analysis

In order to assess more clearly the relationship of CAP/RDP support to measures of economic and social cohesion, multiple regression analyses using NUTS3 data were undertaken using a wider range of CAP support measures and a number of agricultural and accessibility variables. Six measures of CAP/RDP support, all per 100 ha UAA, were used:

- total Pillar 1 support (allocated market price support data plus direct payments)
- market price support (allocated market price support data)
- direct income payments (allocated budget data)
- total Pillar 2 support (EU and national public expenditure)
- total Pillar 2 support (FADN-recorded farmer receipts)
- agri-environmental subsidies (FADN-recorded farmer receipts of relevant payments)

Each of these support measures was regressed against the three above cohesion indicators (in levels), along with agricultural and other variables for each NUTS3 region. The agricultural variables were:

- average farm size (in ESUs) in 1999, and
- shares of UAA in each of: non-irrigated arable crops, irrigation, rice, viticulture, fruit, olives, permanent pasture, annual associated with permanent crops ("associated crops"), small-parcel cultivation, and natural vegetation (the category of non-irrigated arable land was omitted to avoid co-linearity. These data were taken from the CORINE database for 1991, the latest available at the time of analysis.

In addition, two variables measuring the "distance" of each NUTS3 area from more central locations were used:

- a "macro" or EU-level index of accessibility calculated by Copus *et al*. (1999) (and confusingly labelled a "peripherality" index! - in the results below, signs have been reversed to make this a measure of "EU peripherality"), and
- a "micro" or local/regional-level index of "connectivity [time] to transport terminals by car weighted by surface of all NUTS3 areas", i.e. "local accessibility".

Also, as explained below a country variable (GDP per head in 1999, relative to a European average) was used for Pillar 2 analyses.

Sign expectations for these variables in the estimated equations (which carry no causal implications) are as follows:

- *A relatively higher level of GDP per head in a NUTS3 region indicates general economic prosperity. On theoretical grounds, agriculture in such a region would be expected to require greater than average (EU-wide) returns in order to compete for local land and labour resources. Other things (unemployment rate, population growth rate, agricultural land use characteristics and accessibility) being equal, Pillar 1 support attracted by the traditional farm income CAP rationale might therefore be expected to be higher than elsewhere. A positive sign is therefore expected.*
- *The location of higher unemployment rates depends on the mobility of labour (mostly intra-national) and on the level (within the country) and perhaps accessibility (e.g. more in towns) of social welfare support. In some countries, job losses in rural areas results in rapid urban in-migration, leaving rural unemployment rates no higher or even lower than elsewhere. In others, with perhaps higher national unemployment rates, the rural jobless tend to stay put. Other things (GDP per head, population growth rate, agricultural land use characteristics and accessibility) being equal, a NUTS3 region with higher than average unemployment might be associated with either higher or lower Pillar 1 support: no particular sign is expected.*
- *A faster rate of population growth (or a lower rate of population fall) in a NIUTS3 region suggests an attractive residential location. Given equal levels of other variables (GDP per head, unemployment rate, agricultural land use characteristics and accessibility), this might suggest an area of less intensive farming, e.g. with relatively more non-agricultural areas of housing, forestry, water, etc. Insofar as Pillar 1 support is based on farm output levels (either*

directly, as traditional commodity market support, or partly decoupled direct payments), this suggests that a negative sign for this variable is to be expected in the model.

Statistically significant results in Table 3 show that total Pillar 1 support is strongly and positively associated with average farm business size, with area shares of irrigation, permanent pasture, associated crops, small-parcel cultivation and on-farm natural vegetation, and with local accessibility. It is significantly and negatively related to unemployment rates, viniculture, fruit cultivation and EU-level peripherality. No statistically significant relationships can be observed with GDP per head, or with the other agricultural variables.

Equivalent regressions separately with market price support show similar relationships to those of the total Pillar 1 measure. With direct payments, the significance of the farm size variable reverses in sign (smaller farms attract more payments per ha, *ceteris paribus*), as do the coefficients of some other variables, i.e. irrigation, olive trees, permanent pasture, small parcels and natural vegetation. *Ceteris paribus*, EU-level peripherality attracts higher direct payments, while the positive significance of local accessibility remains.

These results suggest that Pillar 1 support per ha, and both its components, i.e. market price support and direct payments, are strongly linked to farm size measured in business units and farm type as reflected by the land cover variables. After allowing for this, Pillar 1 is roughly neutral as regards the level of economic prosperity in NUTS3 regions. The peripherality/accessibility coefficients suggest that shorter travel times to the central areas of the EU is linked to higher Pillar 1 market support but not direct payments, even after allowing for at least some agricultural diversity, but that "local" remoteness is associated with levels of Pillar 1 support. The opposing signs of some coefficients between market support and direct payments may reflect the "compensatory" nature of the latter, which affected only certain commodity regimes, primarily combinable crops and grazing livestock.

As anticipated, Pillar 2 regression results (Table 4) suggest that these rural development CAP measures are rather more strongly linked with indicators of economic cohesion (GDP per head and unemployment rates) than Pillar 1 support, even after country-specific effects are to some extent removed by the inclusion of the relevant country's GDP level. However, contrary to expectations, higher levels of all three Pillar 2 measures (public expenditures in this category, FADN-recorded farmer receipts, and specific agri-environmental receipts) are all associated with higher levels of GDP per head in NUTS3 regions, and with lower unemployment rates. The significance of the relative country-level GDP variable arguably reflects the importance of the co-financing requirements of Pillar 2 measures: Pillar 2 measures are used most by richer member states. Average farm business size is negatively related to Pillar 2 incidence and with permanent pasture area shares. Other agricultural area shares show mixed influences, though the stronger and more common associations are with the expenditure measure, and are generally positive, i.e. disfavouring the 'missing' component of cereals, oilseeds, etc.

Except in one case, all Pillar 2 measures show negative associations with distance measures, suggesting that Pillar 2 support is higher, *ceteris paribus*, in NUTS3 areas

in more central EU regions but lower in more locally accessible areas. This suggests that Pillar 2 support is higher in the EU "core" (i.e. generally richer countries) but within countries tends to go to remoter regions, either because economic problems of peripherality are greater there, or because higher-quality natural areas attract agri-environmental support.

Taken together, these results suggest that the market/income support Pillar 1 of the CAP does not promote the cohesion objective. The effects of Agenda 2000 and probably the June 2003 reforms will not significantly alter the geographical and economic pattern of support from that observed in 1999. Moreover, the "rural development" Pillar 2 measures have been adopted differently in different EU-15 member states, generally with northern countries implementing agri-environmental measures and southern member states focussed on agricultural development. Again, it is difficult to see this aspect of the CAP as promoting the objectives of the ESDP.

Table 3: Pillar 1 Support Measures (€'000 per 100 ha UAA) regressed on cohesion, agricultural and other variables			
Variable	*Total Pillar 1 Support*	*Market Price Support*	*Direct Payments*
Constant	**92.031	**37.891	**37.603
GDP per head	*0.000	-0.296	-0.056
Unemployment	**-2.630	**-2.612	**0.305
Average farm size (ESUs)	**0.345	**0.406	**-0.027
% irrigated	**1.270	**1.371	**-0.436
% rice	0.075	0.030	0.089
% viniculture	**-0.912	**-0.586	-**0.293
% fruit	**-1.252	**-1.070	*-0.190
% olives	0.390	*0.418	*-0.128
% permanent pasture	**0.194	**0.308	**-0.167
% associated crops	*0.994	0.715	0.118
% small parcels	**0.932	**0.971	**-0.165
% natural vegetation	0.257	**0.579	**-0.303
Peripherality (EU)	**-0.101	**-0.162	**0.033
Accessibility (local)	**0.513	**0.355	**0.083
Adjusted R^2	0.366	0.419	0.337

Source: Authors' calculations.

Note: Statistically significant coefficients are indicated by * (10 per cent level) or ** (1 per cent level).

Table 4: Pillar 2 Support Measures (€'000 per 100 ha UAA) regressed on cohesion, agricultural and other variables			
Variable	*Pillar 2 Rural Development Expenditures*	*Pillar 2 Support (FADN receipts)*	*Agri-Environmental Subsidies (FADN receipts)*
Constant	-0.103	**-31.514	**-198.712
GDP per head	**0.099	*0.046	**0.504
Unemployment	**-0.244	**-0.138	**-1.125
Average farm size (ESUs)	*-0.012	**-0.038	**-0.250
% irrigated	**-0.232	-0.059	**-0.964
% rice	-0.031	*0.075	*0.650
% viniculture	*0.079	*-0.037	*-0.345
% fruit	**0.186	0.010	-0.031
% olives	**0.131	*0.062	*0.348
% pasture	**-0.023	*-0.013	**-0.157
% associated crops	**0.244	-0.020	-0.315
% small parcels	**0.064	0.005	0.022
% natural vegetation	**0.055	*-0.037	*-0.272
Peripherality (EU)	0.000	*-0.001	**-0.012
Accessibility (local)	**-0.089	**-0.092	**-0.672
Relative country GDP/head	0.014	0.313	**1.940
Adjusted R^2	0.212	0.359	0.363

Source: Authors' calculations.

Note: Statistically significant coefficients and levels are indicated by * (10 per cent) or ** (1 per cent).

6. Conclusions

This paper has explored the EU-focussed development of concepts of economic and social cohesion from the point of view of agriculture and agricultural policy in Europe. Despite high-level endorsement, these concepts have still to achieve general acceptability, both politically and academically (let alone amongst the practising policy and planning professions). Certainly, the CAP has so far been little touched by the cohesion objective, except insofar as some of the Guidance measures have been partially incorporated into structural policy-making via the Objective 1 (and earlier 5b) framework. The recent reforms of the CAP into Pillar 1 comprised of market support (mostly non-budgetary) and direct payments, and Pillar 2 (agri-environmental and other 'rural development' expenditures) have not been based on criteria of territorial cohesion.

Initial empirical analysis has been conducted at NUTS3 level using data from a variety of sources, some directly recorded at this level but most requiring derivation from sample and/or higher-level values. Simple two-variable correlation analysis suggests that CAP Pillar 1 support is operated in a way unrelated to cohesion, and indeed acting against it, with higher levels of CAP expenditure being associated with more prosperous regions. The correlation evidence on Pillar 2 is more mixed, but appears only weakly linked to cohesion objectives.

Multiple regression analysis using a variety of Pillar 1 and Pillar 2 measures, total and by component, shows that total Pillar 1 support is strongly linked to average farm business size, with some agricultural indicators, and negatively with an EU-level peripherality index. No statistically significant relationships are observed with GDP per head in NUTS3 regions. Direct payments may reverse the sign of the farm size and EU-peripherality relationships (*ceteris paribus*) and those of some other variables, possibly due to the commodity pattern of this instrument. All three Pillar 1 measures show positive links to local accessibility.

From the numerical analysis, it appears that the CAP has uneven effects across the EU-15, and runs counter to cohesion objectives, particularly in terms of its Pillar 1. The "rural development" Pillar 2 may be more closely linked to cohesion once country effects are allowed for, but runs counter to EU-wide cohesion.

At the present time, member states (old and new) and the Commission are considering how to pursue rural development policy within a number of frameworks. These include the financial guidelines determined in 2002 for the CAP, the June 2003 CAP reforms with their arrangements for Single Farmer Payments and "modulation", EU enlargement after May 2004, and the new budgeting and structural policy framework to be agreed by the EU-25 for 2007 and afterwards. The recent Salzburg conference on rural development, though recognising the need to reinforce assistance to lagging rural areas, focussed less on "integrated" and "territorial" support than on better methods of designing and delivering programmes. A single Rural Fund has been proposed, bringing together all rural development funding under closer and simpler DG Agri control.

However, if the CAP is to be truly shifted from a pro-efficiency (though still protectionist) vehicle towards one with cohesion and environmental objectives, more radical steps need to be taken. One such move would be to adopt a wider range of "objective" indicators than the present concentration on territorial GDP per head, agricultural employment and agricultural area, to include more social and

environmental indicators (Mantino, 2003). It will also be necessary – but politically difficult - to move away from the historical basis of overall national allocations of structural funds.

Within ESPON TPG 2.1.3, it is proposed to develop further the econometric work presented in this paper, alongside case study analysis of a number of CAP rural development regimes (e.g. LFAs, early retirement, agri-environmental schemes) and farm household adjustment strategies. In this work, consideration will be given to its application in Central Europe, where cohesion at all levels – EU-wide, national and local – is of major concern, and where the CAP, in one guise or another, will have a major role to play.

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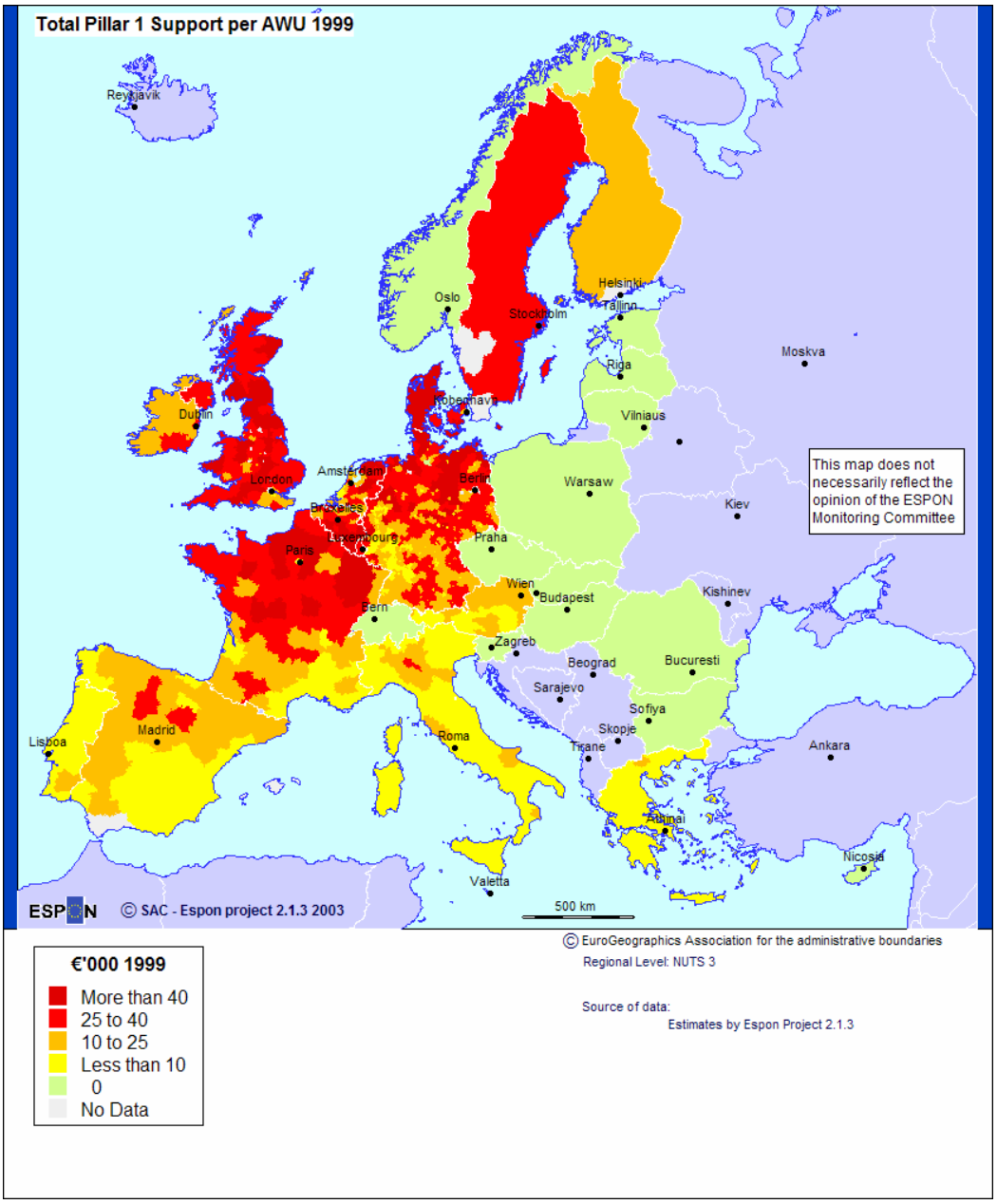
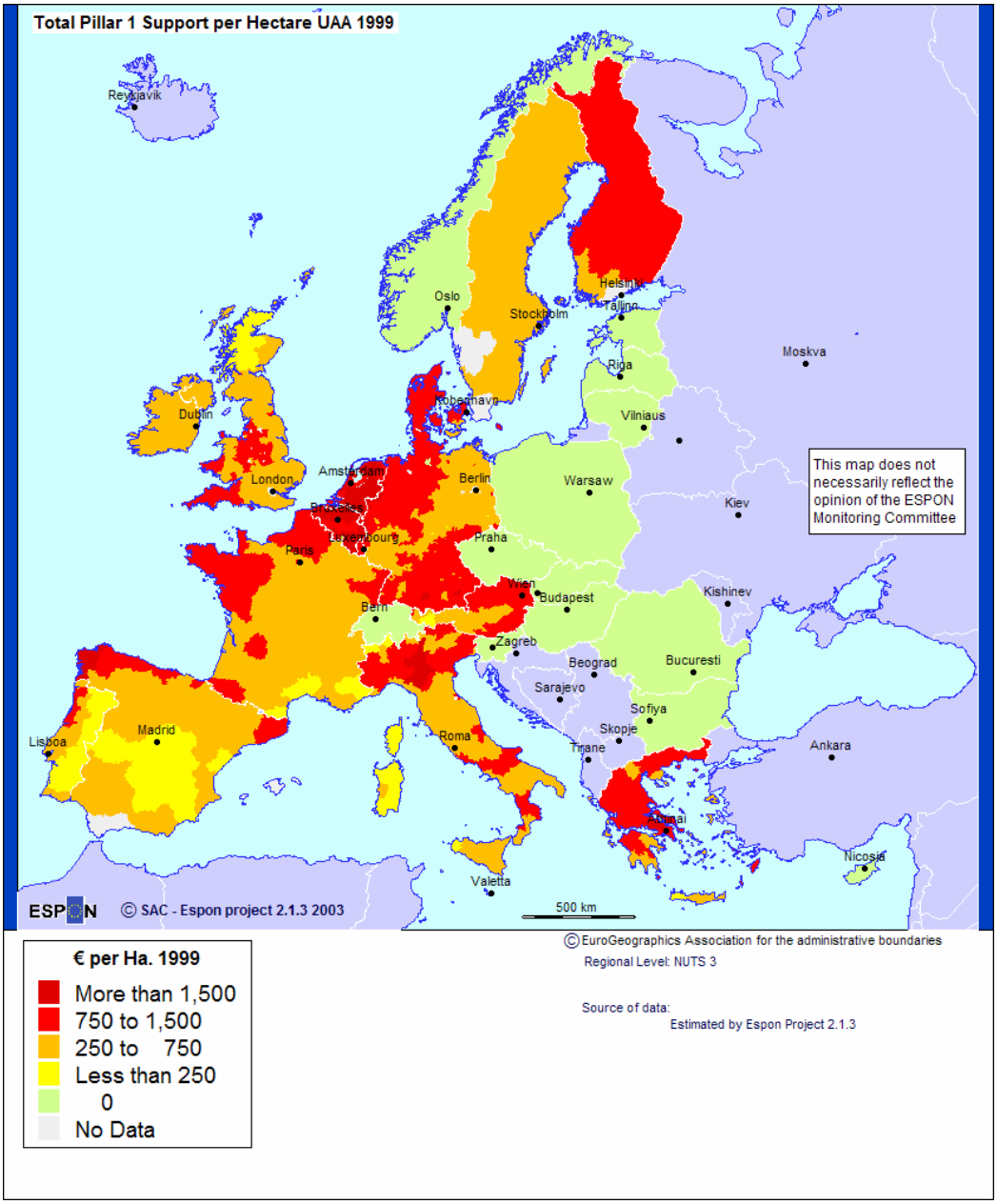
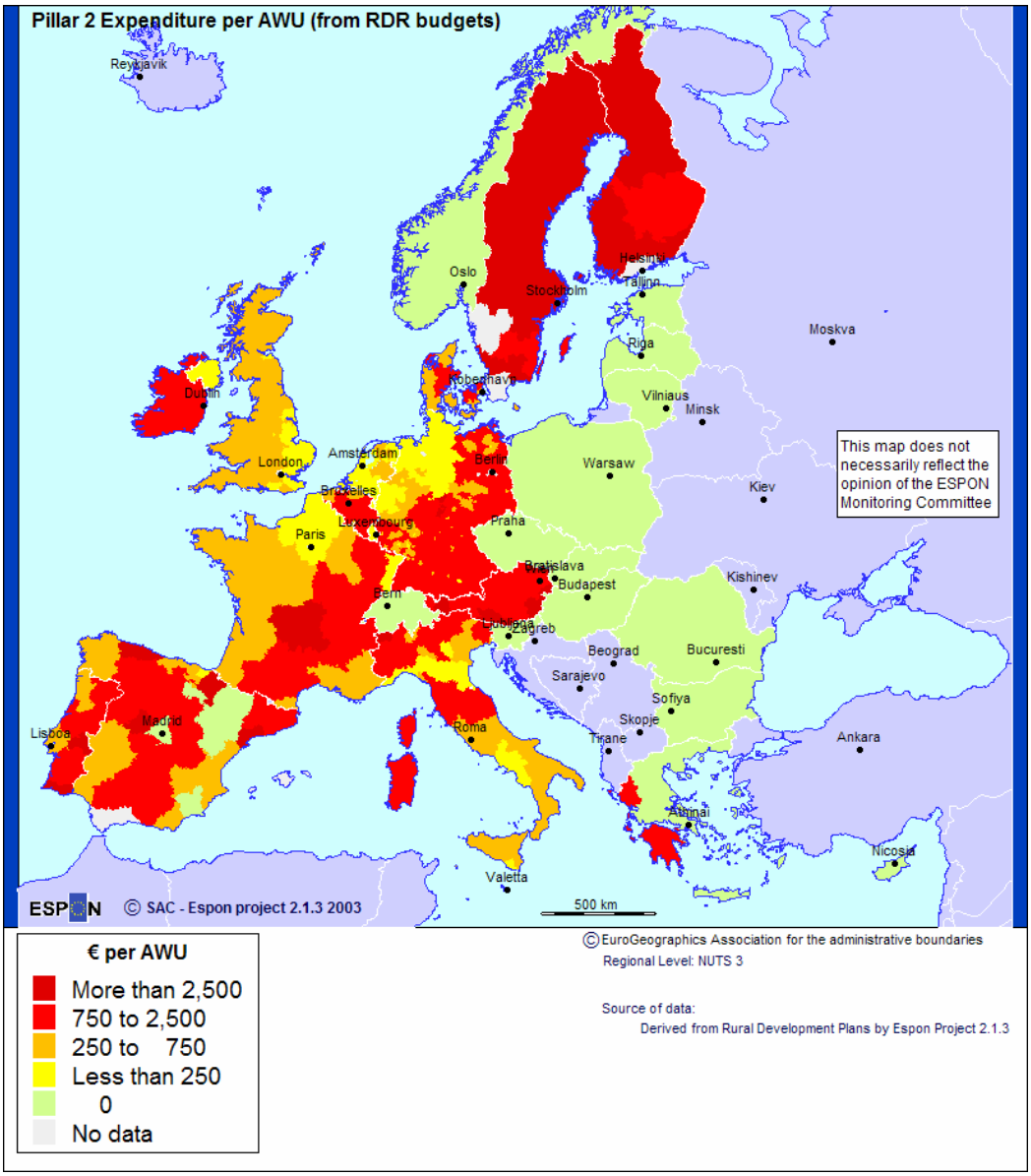
Map 1: Total Pillar 1 support (market support + direct payments) per AWU, 1999



Map 2: Total Pillar 1 Support (market support + direct payments) per hectare UAA, 1999



Map 3: Total Pillar 2 Support per AWU (based on rural devt. expenditure), 1999



Map 4: Total Pillar 2 Support per AWU (based on FADN farmer receipts data), 1999