Regional models and peripherality: modeling development in the remote region of the European Union

Paper prepared for the Conference on the Outermost Regions of the EU Brussels

December 2006

Diane Perrons London School of Economics d.perrons@lse.ac.uk

Regional models and peripherality: modeling development in the remote region of the European Union

Introduction

The purpose of this paper is to explore the applicability of some existing models of regional development to the particular circumstances of the ultra-peripheral regions of the EU, specifically the Portuguese autonomous regions of the Azores and Madeira; the Spanish autonomous community of the Canary Islands; and the four French overseas departments: Réunion, Guadeloupe, Martinique and French Guyana. The reason for so doing is to identify new possibilities for scientific research in order to better understand the specific realities faced by the European ultra-periphery and to outline some potential possibilities for enhancing economic growth and development in these regions in the context of globalization and EU integration and enlargement. The ultimate objective is to provide a foundation of understanding that would enable the EU to identify and formulate appropriate specific measures to assist the socio-economic development in these regions in ways that encourage convergence and integration and conform to the Treaty of Amsterdam (Article 299(2).[i]

With globalization there has been an increase in the connections between regions in terms of the flows of people, goods, and ideas. Simultaneously, in terms of economic development, there has been an increasing differentiation at the regional level within Europe. The paper begins by briefly outlining the contemporary context with respect to the ultra-peripheral regions. It then identifies some broad modeling approaches to

regional economic development, focusing on models of largely private sector growth within different strands of Economic Geography and Development Studies; specifically clusters and value chains. Some problems of value chain analysis are then identified: arising from the focus on firms; the use of conventional measures of economic well being expressed in terms of GDP and from the possible non correspondence between measures relating to the growth of the firm and the growth of the region on the one hand and between regional growth measures and the well being of people within the region on the other. The paper concludes by making some tentative suggestions regarding future research with respect to developing a broader conceptualization of regional well being, by drawing on wider debates on uneven economic development and inequality especially within the UNDP with respect to measures of well-being and feminist economics with respect to engendering macro economic analysis (Elson 1998; Elson and Cagatay 2000). This broader perspective may help to identify more inclusive models of economic development which may be of relevance to the European Union's ultra-periphery.

The Ultra-peripheral regions and the global economy

Globalisation and the new economy are terms that encapsulate the transformation of economic and social relations across the globe. People and places are increasingly interlinked through the organization of work, the flows of goods and services and the exchange of ideas. Even so the contemporary world is characterized by difference rather than uniformity. Economic, social and gender divisions are widening and inequality on a global scale is stark and largely undisputed (Milanovic 2005) despite the enormous advances in human ingenuity that have created unparalleled wealth (Sen 2000) and

despite the vast array of policies to redress inequality and promote cohesion at national and supra-national levels.

The geographical pattern of development is increasingly complex. No longer is there a simple one third – two thirds worlds of 'haves and have nots' corresponding geographically with a north south divide but rather development is characterized by a complex mosaic of fast growing 'superstar' regions found in the north and south, that are highly innovative on the one hand, and a slower growing periphery on the other. The connections between these fast growing regions are often more intense than between these regions and their peripheries within the same nation states even when geographically contiguous. For the European ultra-periphery these connections are likely to be even less intense.

Nonetheless in contemporary times nearly all regions are drawn into the global economy but in a variety of different ways. The ultra-peripheral regions are drawn in to the global markets owing to their natural resources and because they provide attractive tourist destinations, sometimes because of the very geographical remoteness and difference, with the geographical distance being transcended to some degree through modern transport and digital technologies. In the past it was simply the lack of integration between the less developed regions and the centre that was considered problematic, now however it is increasingly recognized that what is also important is the form of the connections that do exist as these profoundly influence development possibilities (Kaplinsky 2000). Thus it is crucial to evaluate the economics of these connections and in this respect value chain

analysis provides a good beginning as its point of departure presupposes connectivity and the key focus of analysis is concerned with tracing the flow of value and proportion of value added retained in each location.

The ultra–peripheral regions share a number of common features but also differences (Eurisles 2002). In most cases the commonalities include: relatively lower levels of GDP per capita, higher unemployment rates compared to the EU as a whole, small populations leading to a limited internal market and geographical remoteness especially from more affluent consumers which constrains the development of an external market. Clearly the significance of transport and communication costs is a key issue for the ultra-peripheral regions but as the models discussed illustrate it is not the only one and in some respects remoteness can also be construed as something that potentially contributes to a more endogenously based clustering of economic activity by providing a degree of protection from imports (see also Fortuna et al 2001). In addition the remote regions experience difficult topographical and climatic conditions and are dependent on a small range of sectors linked to agriculture and /or tourism - sectors characterized by cyclical fluctuations. The differences relate to the existing levels of well being, the different degrees of remoteness from central Europe and the particular economic activities present. In contrast to other remote and or less developed regions however these areas are all part of the European Union and so stand to gain from appropriately targeted cohesion policies. At the same time given that the public sector often plays a major role in peripheral economies the regions are also exposed to changes in both European policies and more

generally with respect to changes in policies regarding the scale of public expenditure (Euroisles 2002).

Models of regional economic development

Formal 'scientific' modeling is lauded in some perspectives, denigrated in others. By recognizing the need for locally sensitized generic insights this paper takes a middle ground. Models provide an 'ideal representation of reality in order to demonstrate some of its properties' (Haggett 1965:19). Successful models differentiate what is general from what is particular and identify the enduring in the ephemeral (Whitehead 1932) and so provide aids to understanding general processes that have resonance beyond the specific. Indeed some models claim universal applicability in time and over space. These universal models tend to be highly abstract, and identify very generic processes – often conforming to the so called 'Greek letter writing' type (Barnes and Hayter 2005). What is gained in terms of universality can however be lost when translating predictions into to policy making in specific contexts. A further problem is that models may be sound theoretically but lack the necessary data for effective estimation. At the other extreme other models can be so close to the specific that they become maps, rather than models; consisting of thick descriptions outlining the history of the existing situation within a particular region but provide little of value beyond this specific context. Moreover detailed explanations as to how a particular situation has come into being do not necessarily provide guidelines for the future and so may be of limited assistance to policy makers even in regions where they were developed. That is, while it is possible to map path dependency it would not have been possible to predict the present from the starting point (Krugman 2006).

This paper takes a middle ground by focusing on models which identify generic processes that are likely to operate in the ultra-peripheral regions in ways that can be related directly to their specific economic characteristics. In this way the analysis becomes 'scientific' in the sense that it is going beyond mapping or assembling inventories of regional characteristics yet at the same time is attentive to both the common and specific elements of these ultra peripheral regions and so potentially permits differentiated remedies but within a common policy framework. By combining some of the ideas from economic geography with the value chain perspective this paper seeks to achieve this end. In order to contextualize and see the specific advantages of this approach the different elements of this approach are briefly outlined and contextualized within the wider literature.

Regional economic theories can be divided broadly into three categories in terms of their predicted outcomes for regional development: those proposing that market processes lead to convergence; those arguing that capitalism is inherently uneven development; and those that are critical of existing understandings of 'development' considering it to be too focused on measures of (regional) economic output rather than (regional) well being.

Models of regional convergence

The essence of neo liberalism is that development and modernization are enhanced by open markets and free trade. Free markets are said to allow the factors of production; labour and capital, to flow to where they are most efficient eventually leading to an

equalization of factor returns and convergence between regions or to a balanced pattern of development. Labour and capital are predicted to move from areas of surplus to areas of deficit, stimulated by higher returns - resulting in an efficient pattern of development in which the returns to the factors of production are equalized across regions. Technology should also move from capital rich to capital poor regions as diminishing returns set in, allowing the less developed regions to catch up. Within this perspective the role of the state should be confined to providing a stable framework within which free markets and private capital can flourish; it should not therefore regulate prices or wages that would distort factor flows and neither should it be involved in productive activities, which should be privatized if not already in the private sector.

There are however, important differences between the assumptions underlying the pure market model and real world situations which limit their usefulness. Furthermore the wider implications of the market oriented neo-liberal perspective underlying these models are not promising for the ultra-peripheral regions, which are often dependent on one or two key products. Increased opening to world markets will increase exposure to external shocks such as changes in commodity prices, the emergence of new tourist destinations and any lifting of regulations regarding the use of natural resources and fishing is likely to increase the vulnerability of these regions by undermining local control. Paying attention to the forms of regional governance is important to ensure that the priorities and needs of the periphery are included in discussions and not neglected by adherence to priorities linked to a wider market oriented competitiveness agenda which may have little to offer these regions. In this respect the recommendations regarding establishing

something similar to the Regional Advisory Councils for the outermost regions even involving neighbouring non-member states (EC 2004) may be significant.

Empirically the evidence for convergence is rather mixed. With respect to the European Union there has been some narrowing between nations, in particular between the cohesion four and the rest of the EU 15 states however this has taken place in the context of strong cohesion policies with the countries receiving funds equivalent to between 2.5% and 3.0% of their GDP in the case of Greece, Ireland and Portugal and between 11%-15% of their gross fixed capital formation (EC 2005).[ii] At a regional scale disparities remain at a high level and increased with enlargement (EU 2005). Moreover while the EU's cohesion policy led to considerable inflows of funds to the Cohesion states in some cases, for example especially in Greece, a significant proportion (45%) of the funds are spent in other EU states or beyond the EU[iii] owing to the structure of the economy and its openness. With respect to the ultra periphery unless funds are carefully targeted and directed towards endogenously based activities this leakage is likely to be greater. Such leakage may contribute to growth elsewhere and economic integration within the European Union. The point is that it should not be assumed that the amount of funds allocated to the periphery remain in the periphery and so are not a pure centre to periphery transfer. To assess the full impact of the different measures an input output model capable of tracing the first and second order effects would be need to be developed to assess the costs, benefits and distributional impact of such expenditures (see Fortuna et al (2001) for an attempt at such an approach but the data requirements to fully assess the

impact of such expenditures are immense and have to be constantly recalibrated in order to allow for technical change and the dynamic nature of contemporary economies.

Models of divergence

Uneven development is something of a paradox in the global economy, where the development of ICT and dematerialized products might suggest that geographical distance no longer matters. Yet at every spatial scale, the globe, the nation, the region, the city or locality, economic activity is clustered.

One reason for continuing disequilibrium between regions is the cumulative and dynamic mechanisms associated with growth processes. These processes have now been recognized by endogenous growth theorists working within an otherwise neo classical framework, by the new economic geography/spatial economics associated with Paul Krugman (1998), the business economist Michael Porter (2003) and the new economic geography following the cultural or institutional turn.[iv] The idea of cumulative and divergent growth in the absence of any counter measures from the state or from the pressures of congestion within developed regions has a much longer history within a Keynesian perspective. Some of these theories see unevenness or clustering as a necessary first step that may even out later; others see unevenness and inequality as inherent within capitalism itself unless redressed by policies for economic and social cohesion.[v]

The stimulation of clusters has become a key tool of regional development policies (Porter 2003). Porter's clusters represent concentrations of inter connected companies buying and selling from each other and developing links with supportive institutions, such as universities, state agencies and trade associations. Porter strongly emphasises the way that proximity enhances trust, access to information, stimulus to innovation which in turn generates productivity increases, innovation and the development of new firms. All of these factors potentially stimulate cumulative growth. Porter's own concept of cluster however is rather abstract in terms of geographical space. The cluster is defined by the connections between firms and institutions rather than precise territorial boundaries and consequently the spatial dimensions of clusters can vary from being localized within a small region of a country to stretching across a continent (see Martin and Sunley 2003 for a critical review). This 'conceptual elasticity' provides boundless potential policy applications but to translate into more specific policy recommendations it is helpful to have a more detailed analysis of the nature of the connections between firms with respect to different kinds of economic activities in order to relate the more general ideas to specific policy contexts. Correspondingly in this paper greater reference has been made to the work of Krugman (1998) which is more analytical and Scott (1998) which is more explicitly spatial but in both cases still sufficiently analytical/generic to allow broad application.

The formal spatial economics approach is characterized by sophisticated spatial modeling and seeks to explain uneven development and the emergence of industrial clusters by exploring the relationship between centripetal and centrifugal forces, especially

economies of scale and transport costs. This approach is associated with the work of Paul Krugman (1998) (see also Fujita, Krugman, and Venables 1999). The second less formal more cultural/institutional perspective also seeks to explain the apparently paradoxical emergence of industrial clusters in the contemporary context but emphasizes relational, social, and contextual aspects of economic behavior, particularly the importance of knowledge (especially tacit knowledge) and learning which takes place most effectively through personal contacts at the local-regional level (Storper 1995). This second more institutional approach emphasizes aspects of economic behavior that are considered intangible by the more formal perspective and therefore are left outside of the models. Both of these approaches have some significance for the ultra-peripheral regions that both account for the comparatively lower levels of existing development and to varying degrees provide some suggestions as to what economic activities might be encouraged in order to stimulate some sustainable development.

Krugman's (1998) approach is highly abstract and analytical and focuses on the balance between centripetal and centrifugal forces, the outcome of which will determine the size and distribution of spatial concentrations. Centripetal forces, which tend towards geographical concentrations include; market size: - the larger the market the more powerful its attraction to firms; functional linkages between firms: - the higher the number the greater the clustering; thick labour markets: - that is the presence of a pool of labour with diverse skills; and finally pure external economies, including knowledge spillovers, similar to Alfred Marshall's ideas about the advantages that 'people following the same skilled trade get from near neighbourhood to one another'(Marshall 1961:271).

The centripetal forces are however opposed by centrifugal forces, which tend towards the dispersion of activities and include; immobile factors such as labour- which may be unwilling to move; land rents: - which may be lower outside the existing concentrations, and pure external diseconomies such as congestion.

Much of this analysis explains the comparative lack of development in the ultra-periphery as the pull of centripetal forces draws resources away and the strength of the centrifugal forces is unlikely to extend to the ultra-periphery. More specifically the relative balance between concentration and dispersion will depend on the relative significance of economies of scale and transport costs. Thus, the greater the economies of scale and the lower the transport costs the greater will be the tendency for spatial clusters. As transport costs or geographical distance has become less important with contemporary transport and communications technologies geographical concentration will tend to increase as firms can supply a wide range of markets from a single location. The limited internal markets in the ultra-periphery together with the distances from external markets clearly limit their development potential in these respects. Thus this simple model accounts in many ways for the uneven regional development and the lower levels of development in the ultra-periphery – but so far perhaps does not tell policy makers something they did not already know.

The more positive aspect of Krugman's analysis for the ultra-peripheral regions is the recognition that clusters can evolve accidentally but having done so economies of scale and external economies[vi] can potentially lead to cumulative growth as a consequence of

'lock in', or path dependency. For Krugman specialization itself can lead to increased efficiency, comparative advantage and cumulative growth within clusters because firms within the cluster experience cost savings as a consequence of mutual interaction within the locality. [vii] Thus the competitive advantage can arise from past humanly located economic activity rather than natural resources and is therefore potentially capable of being replicated through appropriate policies. In practical terms what this means is that once located, perhaps with state support, the encouragement of venture capitalists to the region and/or greater investment in human resources and training, economic activities could emerge into a growing cluster on the basis of competitiveness through external economies of scale. Krugman does not dwell on policy implications and clearly the extent of the external economies will also be limited by the scale of the activities present. In this respect the analysis by Scott (1998) which combines the issues addressed by Krugman with some insights from the more cultural approach within economic geography is more useful because it distinguishes more clearly between different types of clusters on the basis of the characteristics of the economic activities present and the differential transport and communications requirements.

Scott (1998) combines elements of the two new economic geographies by arguing that 'a strictly economic logic of production will take us only so far in understanding industrial organizational processes…. Transactional systems are always and of necessity embedded in historically determinate social conditions' (Scott, 1998: 78). Scott (1998) combines the measurable aspects of transport costs with spatially dependent transaction costs which include the costs associated with communications between buyers and sellers including

intangibles such as trust and reliability in order to develop a schematic model of different kinds of clusters, with different potentialities for expansion see Figure 1. Regional motors, city-regions, that is large and dynamic clusters, or drawing upon an analogy with Quah's (1996) work on social divisions; superstar regions (5) emerge and consist of activities where spatially dependent transaction costs are heterogeneous, i.e. where direct transport costs may be low but which involve costly face to face contacts, and where the externalities are high. Similar to Krugman's perspective as geographical distance has become less important geographical concentration will tend to increase as firms can supply a wide range of markets from a single location. This is especially important for some of the knowledge related sectors where face to face contacts continue to be important (Scott 2001; Sassen 2001) leading to the development of a small number of global city regions or super star regions distributed across the globe.

Figure 1 Formation of different types of clusters (Adapted from Scott 1998)

Externalities	Spatially dependent transaction costs		
	Uniformly low	heterogeneous	Uniformly high
Low	1. spatial entropy	2.random dispersal and emerging hierarchical landscapes	**3. hierarchical landscape - small market centres – dispersed activity**

High	4.small interconnected clusters	5. super clusters	**6. small disconnected clusters**

With respect to the ultra-peripheral regions with their high transport costs this model predicts the existing situation point (3) in Figure 1. When there are high spatially dependent transaction costs (largely determined by the high transport costs) and low external economies of scale – characteristics that mark the resource based industries - the emerging landscape will be one of small market centres nested into a hierarchical pattern. More specifically these regions may have one of two centres with a limited range of goods and services nested into the wider European landscape or other more central regions for higher level goods and activities. This limited range of locally available goods and services clearly limits social development and regional well-being (Euroisles 2002). However the model also indicates an alternative possibility. When both spatially dependent transport costs and external economies of scale are high the model predicts the development of small disconnected clusters (6). The existence of external economies of scale would promote the clustering. Combining these findings with Krugman's this model suggests that if activities with high external economies of scale could be identified and supported then there is some scope for local clustering. In time, the cost efficiencies could generate a comparative advantage leading to cumulative development. The small populations of these regions may contribute to the development of dense linkages but at the same would always constrain the overall growth owing to the limited labour and consumer markets. In addition the size of both the internal and external markets would

limit the economies of scale in both private production and public service provision and together with the high transport costs would constrain competitiveness, thus limiting the scale of any cumulative growth processes arising from external economies of scale deriving from close association in the clusters. These are likely to be permanent features of these regions unless offset by some form of subsidy or regional incentives (EC 2004).[viii] To reduce the significance of the transport costs, economic activities with high value added, a high value to weight ratio, for example entirely digitized goods and services, would be one possibility. In these respects the proposals (EC 2004) to assist the provision of broad band and ensure that the remote regions do not suffer from discriminatory policies or practices as well as to try and offset the costs of high transport are potentially useful.[ix]

One of the problems with these models is that they focus very much on connections between firms within the cluster or region and pay insufficient attention to the wider global context within which this clustering takes place. The way that clusters or firms within clusters are integrated into the global economy also has profound implications for the development possibilities within the firms and by implication for the forms of employment and regions where they are located (Humphrey and Schmitz 2002). Combining the industrial district/clusters perspectives with the value chain analysis offers a way forward in terms of analyzing regional development within the contemporary global context. The section below briefly outlines a value chain approach before indicating how these approaches can be linked.

Global value chain analysis and clusters

Value chain analysis is another model which would assist policy makers identify appropriate strategies to raise the level of development. So far the approach has mainly been used to analyse the distribution of value in commodity flows between low and high income countries at the national level with respect to particular sectors or commodities.

Global value chain analysis traces the amount of value added produced in the different stages of a commodity's life from direct production through to final sale.[x] By focusing on a specific chain it analyzes a significant, but still manageable slice of the world economy (Sturgeon 2001). Moreover, by monitoring where value is produced and appropriated it highlights the uneven distribution of the gains from economic activities and the differential potential contributions to the development of the region where they are located. Value chains also identify the territorial map of input output relations and the governance structure between firms in the chain. These factors influence the amount of value that is retained in any particular location and so the model helps to identify possibilities for upgrading to higher value activities.

One of the main advantages of the value chain approach over the previously identified models is that it explicitly takes cognisance of the links between the region and the wider global economy. Given the openness of the economies in the ultra-periphery this is clearly important. One limitation is that value chain analysis focuses on particular sectors. The limited range of sectors found in the ultra-periphery however means that the analysis

can be relatively readily adapted to the regional level. Thus by analysing one or two sectors a regional profile could be quickly established.

Value chain analysis has been widely applied in development policy to identify opportunities for upgrading economic activities based on the production of primary commodities and low value added manufacturing. The practical possibilities for upgrading depend on a variety of factors relating to the governance structure of the value chain, the specific economic role of the firms within it as well as to the broader context of the global market. In relation to governance and these have been neatly categorized by Humphrey and Schmitz (2002) see Table 1

Table 1 Governance structure and capacity for upgrading (Adapted from Schmitz and Humphrey 2004)

Governance structure	**Capacity for Upgrading**
Arm's length market relations	Many potential suppliers have the capacity to produce the desired products to the required standards. Upgrading depends on the firms own capacity /local/regional assistance
Networks – firms linked by complementary competences	Horizontal or reciprocal relations between firms who coordinate their requirements through sharing information. Upgrading most likely as local firms already sophisticated.
Quasi hierarchy – asymmetry of power in favour of lead firm	Lead firm exercises control through the supply chain in order to ensure product standards and delivery performance. Local firm may be given assistance by lead firm to meet targets but lead firm may also impede functional upgrading
Hierarchy – vertical integration	Lead firm owns of some operations in the chain. Upgrading largely determined by preferences of lead firm

Other writers have pointed out that a variety of strategies may be followed by a firm simultaneously in order to retain profitability of which upgrading of products and processes may only be one. Some firms for example produce both low and high priced products in order to maximize profit (Meyer Stamer et al 2004). The potential for upgrading depends on the precise situation but does not necessarily undermine the overall usefulness of the analysis. One crucial factor is that detailed analysis and information is needed relating to the existing activities and how the flows of value are organized within them. An information gathering exercise would therefore be a first step. In the Euroisles (2002) the absence of information of this kind was noted. [xi]

Nonetheless with respect to agriculture and tourism, the main activities in the UPRs two forms of upgrading seem possible. In the case of agriculture one strategy would be to move into high priced markets for specialist products. These markets are expanding and these processed commodities have experienced a relative increase in the terms of trade in contrast to labour intensive manufactures which have experienced a relative decline with the expansion of Chinese overseas trade (Kaplinsky 2006). In the case of tourism higher priced eco-tourism could be a way forward in terms of raising the value created within the regions. These forms of upgrading with respect to agriculture and tourism represent a way of reducing some of the vulnerability to fluctuating prices as the degree of external competition is reduced. Nonetheless moving into niche markets – for example by specialising in organic or fair traded goods, which respect labour and environmental codes, and in terms of respecting local cultures for which higher prices will be paid can

be a slow process and one associated with considerable bureaucracy in terms of acquiring the appropriate certification. Yet these remote regions have to adhere to existing EU regulations and practices and so in this respect some of these procedures may have already been followed. Given the comparatively small size of the remote regions it may be relatively easy to trace the provenance of locally produced products. These recommendations are very much in line with the 'Stronger partnership for the outermost regions (EC 2004).[xii]

One problem with value chain analysis is that there is an implicit assumption that upgrading within firms will lead to wider range of employment opportunities and that the increase in value added will be retained within the region and so increase economic and social well-being. But in practice whether upgrading of products and processes takes place and if it does whether the benefits are realised in the region is highly contingent and depends very much on the governance structure within the value chain and the geographical location of the dominant firm. In other words firms have their own growth and profit seeking agendas and there is no automatic correspondence with those of the region, even when defined in narrowly economic terms. When broader conceptions of regional well being are introduced then this association is even less assured.

The European Commission also argues that the " reforms begun must enable these regions remote from the mainland to improve their economic performance, participate in *stimulating growth, create jobs and avoid the risks of exclusion* " (EC 2004:10 my emphasis). However these three goals are not always mutually consistent or achievable

through the same sets of measures. For the forms of economic activity specified above with respect to upgrading of agriculture and tourism to lead to socio-economic development a significant proportion of the increased value added would have to remain within the region but whether this happens or not depends on the governance structure of the chain. In practice in this respect there may be a conflict between policies that promote regional development and the liberalization competitiveness agenda where few controls would exist relating to ownership structures or the flow of value.[xiii] These issues are addressed in the next section which is more speculative suggesting an agenda for regional research that moves beyond regional growth to addresses the questions of regional well-being, employment and inclusion

Models of regional well being

The models discussed so far relate largely to the growth of the private sector, the expansion of which increases regional GDP and potentially to narrowing the gap between the UPRs and the rest of the European Union (depending on the relative growth rates). It is important to recognise that there can be a difference between the GDP produced in the region and the GDP retained in the region. This if the object is to increase social well being it might be appropriate to look at alternative measures. In this respect the work of Amartya Sen (2000) and the capabilities approach may be useful and is to some extent utilized at the international level in the work of the UNDP (various) has not been given much attention at the regional level. Clearly moving to the capabilities perspective and even calculating the HDI at a regional level depends on available data.

An alternative way of approximating a greater sense of regional well being from existing data is to disaggregate the regional GDP per capita measure into its components (see Equation 1 taken from Dunford 1996).

Using conventional and available GDP measures it is possible to obtain a between indication of well being by breaking GDP per capita into its components. Looking at equation (1) GDP per capita can be broken down into a productivity measure and an employment rate measure. Ideally a region would like to score high on both measures but if not then would a region prefer high productivity and a lower employment rate or vice versa ?– which would offer a fuller sense of well being ? Whatever is decided might influence the policies applied.

Equation 1

$$\frac{GDP}{\mathrm{Re}sPop} = \frac{GDP}{EmployPop} * \frac{EmployPop}{\mathrm{Re}sPop}$$

In addition to well being as measured through employment, a broader model might also pay attention to be given to the existence of value derived from the cultural or spatial identity of the region which in some respects derives from the characteristics that are assumed to be problematic from the perspective of growth alone. In their analysis Fortuna et al (2001:26) ask – "What would become of the Canaries without tourism and sun? Of the Azores without milk and green fields? Of Guadeloupe without sugar cane and white sand beaches? Clearly this is an issue for the people of the remote regions and there are likely to be different views. Ireland is also renowned for its tranquility and beauty

(though with Irish 'mist' rather the sun) and a degree of peripherally though of a much lower order has nonetheless moved from 63% of the EU (15) GDP per capita average in 1987 to 120% in 2000 (131% of the EU 25 in 2003) and yet in many respects the Irish culture and landscape remains. [Indeed those critical of the 'Irish' miracle point to the gap between GDP and GNP as some of the value associated with the inward investment in Ireland flows away from the country].So this need not be an either or issue but recognizing the possibility that a sense of well being may require more than growth in currently measurable indices is important. In this respect feminist economists have begun to identify a broader conception of the economy that encompasses reproductive as well as productive activities that has yet to be applied at the regional level despite the requirement that all EU policies be gender mainstreamed.[xiv] "Gender mainstreaming is the integration of the gender perspective into every stage of policy processes – design, implementation, monitoring and evaluation with a view to promoting equality between women and men."

While gender issues are incorporate into some regional programmes in order to qualify for EU funding less attention has to be paid to how gender issues might be incorporated into models of regional analysis. With respect to macro economics Diane Elson (1998) has proposed amending the conventional circular flow of income model to recognise the productive contribution of the household/domestic sector in terms of contributing human capital, trust and social values, qualities that are necessary to sustain the economy. Her model -the circular flow of output model - likewise consists of three sectors the private sector focused on cost recovery and profit; the public sector concerned with developing

and implementing the regulatory framework (infrastructure/social rights and regulations) necessary to sustain the private sector; and the domestic sector which is concerned with the dynamic provisioning of values/provision of labour and people with ethics/communicative/caring skills. Elson argues that all three sectors are necessary for sustainable development. Recognising the productive contribution of the household sector helps to foreground the significance of activities which do contribute to economic and social well being and to social as well as economic development. At present these issues are currently sidelined in discussions of regional modeling and development.

Conclusions

The common feature between the regions of the ultra-periphery is their geographical distance from the main European markets and from the capital cities of their own nation states. These characteristics mean that endogenous forms of development and building interconnections between local producers, buyers and suppliers is likely to create a more integrated and sustainable model of development. With respect to traded commodities – often considered central to regional performance (Porter 2003) then emphasis will need to be placed on high value added and low transport cost products – which may form the basis for a local cluster and have the potential to be exported. Work in ICT as in the Finnish periphery may be one possibility. Given the geographical attractiveness of these regions tourism is clearly another.

Models of spatial clustering linked into a value chains perspective have been identified in order to provide an understanding of regional economic potential with respect to the basic

private sector. Applying this analysis to the UPRs suggests that an endogenously based growth strategy focused on clusters of interrelated activities through upgrading within the value chain is likely to reduce greater vulnerability to forces over which the populations have no control. By so doing it should in principle be possible to create a wider range of activities within the regions and so enable those who wish find work within the region.

Linking the cluster approach with value chain analysis helps to identify how much of the value of this activity remains within the region and how much accrues to external travel companies. Such an approach would take cognisance of the available natural and human resources, the character of the local market and the kind of connections between the region and other economies. To raise regional well being and for local people to benefit from the attractiveness of their environment to others clearly it is important to identify policies and strategies which lead to the value remaining within the region. The paper also suggests that some research also be devoted to developing broader models of economic and social well being by adapting some of the measures used by the UNDP in its work on the human development index and by feminist economists with respect to a more holistic understanding of the economy to the regional level.

References

Amin A and Thrift N (1994) *Globalisation, institutions and regional development in Europe.* Oxford: Oxford University Press

Bagnasco, A (1977) *Tre Italia : la problematica territoriale dello sviluppo italian*o, Bologna : Il Mulino

Barnes, T and Hayter, R (2005) No "Greek –Letter Writing": Local models of resource economies, *Growth and Change* 36 (4): 453-470

Christerson, B and Lever-Tracy, C (1997) 'The Third China? Emerging industrial districts in rural China' *International Journal of Urban and Regional Research* 21 (4): 569-590

Dunford M (1996) Disparities in employment, productivity and output in the EU: The roles of labour market governance and welfare regimes, *Regional Studies* 30 (4): 339-357

Elson, D (1998) The Economic, the Political and the Domestic: Business, States and Households in the Organisation of Production, *New Political Economy* 3, (2):189-208

Elson Diane, Cagatay Nilufer (2000) The social content of macroeconomic policies, *World Development*, 28 (7): 1347-1364

European Commission (2006) Fourth progress report on cohesion (Interim report) COM (2006) 281 http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/interim4/4inter_en.pdf accessed November 2006

European Commission (2005) Towards a new partnership for jobs growth and cohesion. Third progress report on cohesion

European Commission (2005) Cohesion policy in support of growth and jobs. Community strategic guidelines, 2007-2013 Brussels 05.07.2005 COM (2005)0299 http://ec.europa.eu/regional_policy/sources/docoffic/2007/osc/050706osc_en.pdf accessed November 2006.

European Commission (2004) A stronger partnership for the outermost regions, COM (2004) 343 final http://eurlex.europa.eu/LexUriServ/site/en/com/2004/com2004_0343en01.pdf accessed November 2006.

Fujita, M. Krugman, P Venables, A. (1999) *The spatial economy: cities, regions and international trade* Cambridge, Mass: MIT Press

Gereffi, G and Kurzeniewicz, M (1994) Commodity chains and global capitalism, Westport, CT: Praeger

Humphrey, J and Schmitz, H (2002) How does insertion in global value chains affect upgrading in industrial clusters? *Regional studies* 36 (9):1017-1027

Kaplinsky, R. (2000) Globalisation and unequalisation: what can be learned from value chain analysis? *Journal of development studies*, (37) 2:117- 146

Kaplinsky, R. (2006) Revisiting the revisited terms of trade: Will China make a difference? *World Development* 34 (6): 981-996

Krugman, P (2006) Some chaotic thoughts on regional dynamics, accessed November 2006 http://web.mit.edu/krugman/www/temin.html

Haggett P (1965) *Locational analysis in human geography*, London: Arnold

Marshall, A. (1961) *Principles of Economics* 9th edn London: Macmillan

Martin, R. and Sunley, P. (2003) Deconstructing clusters: chaotic concept or policy panacea? *Journal of Economic Geography* 3:5-35

Meyer-Stamer, J., Maggi C. and Seibel, S (2004) Upgrading in the tile industry of Italy, Spain and Brazil: insights from cluster and value chain analysis. In Local *enterprises in the global economy: issues of governance and upgrading* Cheltenham: Edward Elgar

Milanovic, B. (2005) *World's apart*, Princeton and Oxford: Princeton University Press

Perrons, D. (2004) Understanding social and spatial divisions in the new economy: new media clusters and the digital divide. *Economic Geography*, 80 (1): 45-62,

Piore, M and Sabel, F (1984) *The second industrial divide: possibilities for prosperity*, New York: Basic Books

Porter, M (2003) The economic performance of regions, *Regional studies*, 37 (6 and 7): 549-579.

Porter, M (1998) Clusters and the new economics of competition, *Harvard Business Review,* November-December

Porter M (1985) *Competitive advantage: creating and sustaining superior performance*, New York, NY: The Free Press.

Quah, D (1996) The Invisible hand and the weightless economy Centre for Economic Performance Occasional paper No. 12 London: LSE

Rabellotti, R (2004) How globalisation affects Italian industrial districts: the case of Brenta in H Schmitz (ed) *Local enterprises in the global economy: issues of governance and upgrading* Cheltenham: Edward Elgar

Rabellotti, R. and Schmitz, H. (1999) The internal heterogeneity of industrial districts in Italy, Brazil and Mexico *Regional Studies 33 (2): 97-108*

Sassen S (2001b) Global cities and global city-regions: A comparison, in A. Scott (ed) *Global city-regions,* Oxford: Oxford University Press

H Schmitz (ed) (2004) *Local enterprises in the global economy: issues of governance and upgrading* Cheltenham: Edward Elgar

Scott A (1998) *Regions and the world economy* Oxford: Blackwell

Scott, A (2001) (ed) *Global City-Regions* Oxford: Oxford University Press

Sen, A (2000) *Development as freedom* New York: Anchor Books

Smith A, Rainnie A, Dunford M, Hardy J, Hudson R, Sadler D (2002) Networks of value, commodities and regions: reworking divisions of labour in macro-regional economies, *Progress in Human Geography* 26 (1): 41-63

Storper, M. (1995) The resurgence of regional economies, ten years later: the region as a nexus of un-traded interdependencies *European Urban and Regional Studies* 2 (3): 191–222.

Sturgeon, T (2001) How do we define Value Chains and Production Networks? In G Gereffi and R Kaplinsky (eds) Value of Value Chains, University of Sussex *IDS Bulletin* 32 (3)

Whitehead, A.N. (1932) Science and the modern world, Harmondsworth: Penguin

[i] Special status (Article 299(2) is based on the "principles of equality and proportionality which allow differing treatment to take account of the distinct situation of those regions". (EC 2004:3). Since 1989 these regions benefit from the Structural Funds and in the case of the Spanish and Portuguese regions from the Cohesion fund since 1993. In the report on the stronger partnership for the outermost regions – the Commission outline three key areas for attention: measures concerning growth and competitiveness, action on the constraints on the outermost regions and those concerning access.

[ii] Specifically with respect to GDP 2.6% Greece, 2.5% Ireland, 3.0% Portugal and with respect to Gross Capital Formation, 11.8, 15% and 12.4 % respectively. (EC 2003:6).

[iii] See the Third Cohesion report

[iv] The cultural turn in economic geography is associated with Amin and Thrift 1994; Storper 1995) which in turn built upon the work of Italian scholars on industrial districts and the Third Italy (Bagnasco 1977; Piore and Sabel 1984). Elsewhere I refer to these distinctions as new economic geography ((NEG) 1-(NEG 1) and NEG 2 (Perrons 2004)

[v] The cluster/ local innovation approach has been most strongly used in relation to western Europe and the United states where the 'ideal types' are found – Emilia Romagna, Baden Württemberg and Silicon Valley, but writers have also used this approach in Mexico and Brazil (Rabellotti and Schmitz 1999) and China (Christerson and Lever-Tracy 1997).

[vi] Economies of scale exist where unit costs fall as output increases. External economies are savings that can accrue to an individual firm from the activities or location of other firms or services.

[vii] This contrasts with the neo classical perspective which sees comparative advantage arising from natural resources leading to specialization, whereas Krugman sees external

economies as the foundation of costs savings and further specialization, i.e. the advantages are created by human economic activity rather than naturally given.

[viii] The European Commission (EC 2004) has recommended compensation for extra costs occurred in transporting goods from the outermost regions to the shores of the EU mainland.

[ix] The European Commission (2004) also suggests that the remote regions increase their participation in research and technological development RTD such as the ERA-NET scheme – European Research Area.

[x] The provenance of value chain analysis lies principally in the identification of commodity chains as identified by Gary Gereffi in the mid 1990s (Gereffi and Kurzeniewicz 1994), though the term was referred to by Michael Porter earlier with respect to the links between different stages in a firms production (1985). Subsequently this approach has been followed by a number of writers mainly with respect to analyzing the distribution of value in commodity flows between low and high income countries at the national level and (Kaplinsky 2000; Barrientos and Perrons 1999; Schmitz and Humphrey 2003). Within Europe Smith et al (2002) used this approach with respect to the clothing industry.

[xi] "Very often, information as vital as the importance of the tourist industry or public sector or the number of companies whose head office is located outside the island regions had to be dropped". (Euroisles 2002 3.1)

[xii] "Firms in the outermost regions must overcome their isolation and cope better with the pressures exercised on the markets by adopting a policy of successful innovation in the form of inventions in the broadest sense, incorporating into their production processes ideas from other sectors of activity and redesigning their existing products and services so as to adapt supply to demand from new and hitherto unexploited markets" (EC 2004:10-11)

[xiii] The European Commission recognises that 'market forces alone are not enough to guarantee an optimal distribution of resources in these territories for the benefit of society as a whole' (EC 2004:10)

[xiv] 'Gender mainstreaming is the integration of the gender perspective into every stage of policy processes – design, implementation, monitoring and evaluation – with a view to promoting equality between women and men. It means assessing how policies impact on the life and position of both women and men – and taking responsibility to re-address them if necessary. This is the way to make gender equality a concrete reality in the lives of women and men creating space for everyone within the organisations as well as in communities - to contribute to the process of articulating a shared vision of sustainable human development and translating it into reality' (EC 2005) Employment and Social Affairs and Gender Equality , (2005) Gender Mainstreaming