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Sensitising rural policy: Assessing spatial variation in rural development options for Europe

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ABSTRACT

Regional distinctiveness is supported by the European Union in rural development policy. However, there is little information about the spatial distribution of the potential for rural development across Europe. The concept of territorial capital is used to consider spatial characteristics in assessing the capacity for rural development. Expert-based descriptions of territorial capital are translated into mappable proxies to locate regions with development capacities in intensive agriculture, off-farm employment, rural tourism and conservation. Combining these potentials, the capacity for multiple functions within regions is assessed. A partial validation of the expert-based weighing of territorial capital is done by comparison with an empirical approach based on logistic regression. The results indicate strong variation between regions in rural development potentials. In Western Europe, regions with high rural tourism probability also share a high potential for conservation while opportunities for intensive agriculture and off-farm employment are generally low. In other parts of Europe these correlations are less pronounced. Several regions offer limited potential in all four considered functions while few regions have potential in all four functions. The assessment provides policymakers with assistance in identifying competitive rural development projects. Targeting rural development policies to high potential areas may increase policy efficiency.

Introduction

Increasing global competition in food markets, technological innovation, growing urban influence and reorientation of the Common Agriculture Policy (CAP) are drivers of changing European rural landscapes (Antrop, 2005; Lowe et al., 2002; MacDonald et al., 2000; Terluin, 2003). Significant policy challenges related to these changes are land abandonment and depopulation (FAO, 2006; MacDonald et al., 2000; Pinto-Correia and Breman, 2008), intensification of agricultural production in environmentally favourable areas (Vos and Meekes, 1999) and urban expansion at the expense of rural land (Brenner, 2004; Bryden and Bollman, 2000). These changes have been linked to environmental degradation, a loss of aesthetically pleasing landscapes and altered rural character (Meeus et al., 1990; Zimmermann, 2006). The diversity of local endogenous conditions across the European territory, including natural resources, rural amenities and human and social capital, has also resulted in a diversity of economic fortunes (Bryden and Bollman, 2000; Marsden, 1999).

The challenges of land abandonment and rural depopulation are proposed to be managed through a more competitive rural development policy as formulated in the European Agricultural Fund for Rural Development (EAFRD). These CAP reforms progressively decouple subsidies away from agricultural production levels towards land stewardship incentives (Lowe et al., 2002). The environmental and land management incentives are believed to promote new rural functionality through diversification of rural areas (EAFRD, 2005). Yet, with the exception of a few rural development programmes that are targeted to specific local needs (LEADER, LFA), rural subsidies (single farm payment) and land management incentives (Agri-environmental schemes) are applied uniformly throughout the EU territory (Von Haaren and Bills, 2010). This uniform application does not consider the diversity of rural development trajectories and endogenous conditions of rural Europe which require different policy interventions (Verburg et al., 2010). The lack of spatial specificity is one factor related to the ineffectiveness of rural development projects (Marsden, 1999; Ray, 2002).

Debates about how best to achieve rural development have concluded that diversification or multifunctionality is a sustainable option (Marsden and Sonnino, 2008). Multifunctionality can be described as the provision of a number of goods and services in one location (MEA, 2003). Multifunctionality, in relation to rural development, has most significantly been examined for the agricultural

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sector and related to the well-being of agriculturists (Knickel and Renting, 2000; Van der Ploeg et al., 2000). This literature, however, does not consider the specific spatial heterogeneity of local assets that determine the possibility for multifunctional development. Characteristics like economic structure and activity, peripherality, demographic and social composition all contribute to such differentiated capacities and are highly spatially variable (Jongeneel et al., 2008; Marsden, 1999; Ray, 2002; Wilson, 2009). The objective of this paper is to make an assessment of the capacity for the development of a number of rural options throughout Europe given the spatial variation of environmental and socio-economic characteristics. The assessment should assist policymakers to promote management options for different rural activities tailored to territorially distinct competitiveness. The identification of spatially diverse potentials for rural development will enable the targeting of policy interventions and incentives to actual rural capacities or needs.

A number of earlier studies have added to the understanding of spatially differentiated capacities through mapping the provision of ecosystem services (Egoh et al., 2008; Nelson et al., 2009) and landscape functions (Kienast et al., 2009; Willemen et al., 2010). However, none have taken the rural development perspective. Kienast et al. (2009) mapped the capacity of the landscape to provide a number of different goods and services at the EU scale using land cover data. The study employed an expert-based approach for classifying different spatial features as either positive or neutral for ecosystem service delivery. Differently to the Kienast study, we focus on rural development potentials instead of the actual delivery of specific ecosystem services. We also use a higher spatial resolution (1 km^2 grid rather than the NUTS-X administrative level) for the assessment to capture relevant spatial nuance important for rural development. Other studies (Egoh et al., 2008; Nelson et al., 2009; Willemen et al., 2010) have focussed on relatively small regions for which detailed data were available assisting in the mapping process.

In the assessment presented in this paper we account for regional assets of different developments options. This is similarly addressed as 'capital' in rural development literature (Coleman, 1990; Fukuyama et al., 2001; Putnam, 1995). We specifically use the concept of territorial capital, which was first introduced by the OECD (2001) and later taken up by the European Union in their territorial agenda (Faludi, 2006). The term territory is used here in light of the increasing interest in the spatial aspects of sector policies and territorial cohesion (Brenner, 2004). The term capital indicates the capacity of a territory to produce profit and to reproduce itself in expanded forms (Bourdieu, 1986). A number of different assets and constraints determine this ability to produce profit, including tangible factors like environmental, natural and financial capital, and less tangible factors like social, human and cultural capital (Bryden and Bollman, 2000).

The following sections present the overall method used to identify the determinants of rural development options in the EU. In the results section the identified factors are translated into maps to visualise the spatial variation in development options across the EU. In the discussion the approach and its policy relevance are evaluated.

Methodology

Selection of development options

In this paper the capacity for the development of intensive agriculture, off-farm employment, rural tourism, nature conservation and multiple functions is assessed. These development options are selected based on their fit with EU policy objectives and have been identified in scenarios related to future societal needs and demands (MEA, 2003; Vos and Meekes, 1999; Westhoek et al., 2006). Agricultural intensification is included as global integration of food markets has increased competition for producers making the prices of local inputs increasingly important, while global demand for agriculture products continues to increase (Vos and Meekes, 1999). Off-farm employment is considered in the assessment given the decline of agricultural livelihoods in many regions (Terluin, 2003). The growth of rural manufacturing and industry has created job opportunities in rural areas, which indicates an option for rural vitality (Bryden and Bollman, 2000). Rural tourism is selected given the demand for leisure and recreation activities from urban populations (Bryden and Bollman, 2000; Vos and Meekes, 1999). Rural regions with aesthetic beauty, cultural amenities and 'competitive conditions' can possibly develop tourism for increased rural employment. Nature conservation is chosen given environmental concerns and current under-competitiveness of some areas. By allowing some regions to re-wild, the provision of habitat and regulation of broader societal benefits (e.g., water purification, gas exchange) may be enhanced (Vos and Meekes, 1999). Multifunctionality is assessed given the fact that diversification enjoys wide academic and policy support as a development option that can sustain rural areas (Marsden and Sonnino, 2008; Van der Ploeg et al., 2000; Wiggering et al., 2006).

Workshop

The literature on rural development does not provide a general list of development assets and constraints with the exception of a few studies (Ilbery, 1991; Jongeneel et al., 2008; Lobley and Potter, 2004; Wilson et al., 2001). Therefore it was decided to collect data at an expert workshop regarding the assets and constraints of the different development options examined. Expert workshops are widely used in modelling exercises when different contextual knowledge must be synthesised for greater system understanding (Kok et al., 2006; Rotmans et al., 2000; Shearer, 2005; Soliva et al., 2008; Xiang and Clarke, 2003).

Twelve experts representing a number of European countries were invited to a 1 day workshop. This included scientists, policy advisors and policymakers all working in rural development and rural typology domains. The workshop addressed the different determinants of the development options individually through an interactive discussion. This resulted in a list of assets and constraints for each option. There was relatively wide agreement between participants that the list of development assets and constraint gathered had captured the relevant development capital. After the workshop, initial maps were developed with each territorial capital weighted as per author criteria (as described in more detail in Section *Workshop results*). These maps were presented to different regional experts in project workshops and by mail. In this phase of evaluation, some disagreement was encountered pertaining to spatial configuration of produced development capacities, weighting and factors used for the assessment. Workable feedback was applied to new weights and in some cases new factors where added. This consultation was conducted on three occasions with a number of regional experts.

Data collection

The assets and constraints mentioned during the workshop were categorised according to territorial capital and translated into spatial characteristics that could be mapped. Most factors could be approximated by spatial characteristics. Some factors had to be discarded due to an absence of representative spa-