The Agricultural District: A Conceptual Framework for Sustainable Development Issues

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Abstract: The problem of rural development may be considered a crucial aspect of the EU integration process, and an issue that raises important sustainability worries. In the present paper a new concept of Agricultural District is proposed for the analysis of the development of rural regions, having applied it to the Upper Douro region, a wine district in the interior of Portugal, and a typical problem of development. An agricultural district is a rural area or region centered on the production of goods from the primary sector and specialized mainly in a few agricultural products. This concept departs from the Marshallian Industrial District idea, adapting it to the specificities of rural agricultural dependent territories. It takes into consideration the particular features associated with rurality and the critiques that have been made to the new economic geography, regarding its lack of capacity to explain the development conditions and intrinsic capabilities of these regions that dully propelled, will allow them to face the challenges ahead.

Keywords: New Economic Geography; Agricultural District; Rural Development; Sustainability.

1- Introduction: Economics and rural/agricultural development

Rural regions represent around 91% of the territory of EU-27 and about 80% of the Portuguese territory. These regions contribute with around 43% of economic gross value added among all of EU economic activities. Moreover, about 50% of EU population lives in these territories, where it is rooted around 55% of overall employment of EU-27.

Paradigmatically, we assist to a general tendency to a decrease of the wealth and importance of these territories, either regarding income, population, gross value added, wellbeing, or development in general terms.

NEG, the new branch of spatial economics from the 1990’s of the 20th century broke with the static theoretical economic analysis of development to use the idea of a Europe of regions with different peripheral levels having, at the same time, Brussels’ region as Europe great centre.

The NEG “centers” are the wealthier regions that show the more important industries and have a major share of population thus allowing the exploitation of the “home market effect” reinforcing forward and backward linkages and influencing decisively the decisions of companies to locate there.

By contrast, peripheral regions are backward regions, where the majority of companies present a constant returns to scale production pattern, not having the due potential to generate externalities, hindering their capacity for development and hence, the capacity for the region to develop.

This body of knowledge abandoned the scenario of perfect competition and considered the inter-action between increasing returns to scale and transportation costs, and its effects in terms of the emergence of a determined geographical production structure in a specific region [4]. This appears as the result of a region’s economic agents’ decisions, modeled on the basis of their microeconomic behavior.

NEG models allow us to work out the dynamics usually presented by countries that made them to become endogenously organized in an industrialized developed “core” and peripheral, usually “agricultural” dependent, territories, as a result of the location decisions of its companies, and their correspondent actions to explore scale economies and minimize transport/transaction costs[5].

NEG is the last development in economics concerning territorial development. This body of knowledge paints a black or white vision about European development, relegating agricultural dependent regions to the position of backward, as if agriculture was an inevitable enough condition of underdevelopment.
NEG claims to use the so-called second nature items of Geography – related with the interaction between different economic agents – that occur mainly in a given territory [2 and 7]. However, its models consider that the essential strategic decision to be taken by companies is about location of its activities, which, at the end, represents a huge simplification concerning the essence of corporate strategy.

“The geographical scale of economic activity and the geographical allocation of economic activity are increasingly open questions of corporate strategy” [1]

Besides the identified pitfalls in NEG [5 and 9] taking strategy effectively into consideration, may allow rural regions to present a different path of development compared to the immediate conclusions of New Economic Geography.

The supposed collapse of rural/agricultural regions in EU will pose several important problems for the EU as a whole, both in demographic as well as in economic terms, and also in strategic terms, having in mind the possible problems of energy and food dependence that may result from this apparent inevitability and at the same time the incredible population pressure that we will assist in the urban areas.

Policies may induce development as changes in the pattern of regional development. However, to be supportive, policies need to be conceived and implemented in an adequate theoretical framework.

Taking into consideration the trend of development of rural regions and the so-called “New Rural Paradigm” [6], it seems clear that besides any possible lack of resources, there is also incapacity both from the Industrial Districts theory and the NEG theory, in providing the adequate framework for this policy conception. Moreover, the conception of such an adequate framework could help those convinced in the capacity of the rural world to affirm its importance, thus breaking with such an apparent critical destiny reserved to these territories.

This question is even more important since the failure regarding the convergence of EU regions (including the agricultural ones) not just questions the EU integration process but also raises severe problems of sustainability, giving the importance of less developed rural regions in terms of the sustainability of EU territories and its impact for future generations.

2- The Agricultural District Concept

By agricultural district it should be understood a rural area or region centered on the production of goods from the primary sector and specialized mainly in a few agricultural products. The agricultural district may be characterized by the following main aspects:

1- A territory mainly dependent from the primary sector’s activity, usually agrarian dependent, which develops one main industry in this sector of activity. To illustrate this concept for the case of the Upper Douro Region, there is a prominence of the wine industry within the region, in spite of we may also observe a very important weight of other agricultural industries like, for example, the olive oil or even the emergence of a service sector related with the agricultural sector like, for instance, the tourism (being it rural tourism, wine tourism or tourism that explores mainly the characteristics of the landscape shaped by cultural traditions or the proper rural activities).

2- The agricultural district is characterized not just by the dominance of the agricultural production, but also by the small scale of the majority of the agents operating in this sector of activity. In this sense, an agricultural district is a territory characterized by the existence of a big number of small to medium sized companies, mainly working without any formal links between them, and where tradition and trust are sometimes more important than any formal links;

3- Moreover, the agricultural district is a territory where it is possible to observe a specialization of economic agents in different stages of the value chain process, a situation that originates a clear division of labour. This division of labour is, sometimes, the result of a determined process of development in time within the region, and not something that was formally decided or encountered. In this sense, the division of labour in agricultural districts’ territories is based on tradition and culture more than on market demand;

4- In agricultural districts is usual to observe some kind of barriers to entry, mainly originated from the scarcity of productive land and the consequent dependence that this situation originates from the capacity of production. These barriers may increased by punctual situations – like, for instance, droughts, heavy rains, floods, or plagues – associated with the traditional risk operation of the primary sector’s activities. One way to diminish these risks used by many agricultural producers is through the acquisition of productive land. Commercialization companies usually try to diminish these risks through multi-annual contractualization of production.

5- In agricultural districts it is usually to observe the existence of institutions closely related, but not directly involved, in agricultural activities, and whose
The enterprises act in a social and economic context that favors proximity to benefit from external, information and transaction economies. It is also important to consider that enterprise networks, which benefit from these types of economies, are different according to historic origin, geographic base or connection type. It is these different type of networks that produce different organizational forms of relations between actors which, due to its different duration and openness (know-how diversity, plural specialization), will develop individual and collective learning processes that results in a synergetic creative set. This kind of networks will also generate a non-linear and complex connection of specific competencies and of knowledge enrichment.

Regarding rural regions development, we support that a new economic concept like the Agriculture District idea [10] could be better suitable for the conception and implementation of rural development policies. This new concept should help a better understanding of the dynamics that it is possible to observe among enterprises and the socio-economic environment that they face and where they work, in the primary sector. If it is the case, the Agricultural District concept will also help on a better conception of rural development policies and so, to a better perspective for the future of the rural world. By doing this in a certain scale and within a certain timeframe, it is possible to go against a certain pre-determined economic tendency for a vicious cycle of underdevelopment of these territories and we will be able to promote the resurgence of new centres, mainly based on the primary sector.

3- The case of the Upper Douro region: an atypical Agricultural District

The wine district of the Upper Douro presents a typical problem of development in the interior of Portugal. The population is stagnating; the local production is almost exclusively based on wine production and derivatives (liquors, brandy, etc.), a sector considered in crisis in Europe; the region is distant from the main urban area of Northern Portugal, Porto, and without any administrative and political unity that could channel both economic policies for the regions and voice changes in national policies focusing measures adequate for the region. The historical legacy for the region is very prominent with the central state playing a critical role in the region, mainly through the regulation of the wine production and the implementations of

main functions are to stimulate the main productive, commercialization and innovation activities related with main agriculture productions. Within these actors there are regional institutions (like universities, R&D centres, regional corporate associations composed by companies within different stages of production, cooperatives, regional govermental departments), as well as nation-based institutions (like central agencies for external trade and investment promotion, national universities and their research centres, chambers of commerce, etc.)

6- Agricultural activities developed in agricultural districts are usually supported by a myriad of suppliers either of regional, national or international origin, but where local assumes a very important weight in the process, especially when we think about small scale productions. Within these suppliers it must be considered labour force, usually part-time or seasonally hired, that assumes a very important role in terms of knowledge transmission over companies and over time. Labour force is essential in terms of productive know how as well as culture and tradition transmission over time, in these regions.

In an agricultural district there will be an agglomeration of small and medium sized organizations (both corporate and farmhouses), working in the same industry within the primary sector, in spite they might be, and usually are, involved in different stages of the value chain. This situation represents a determined specialization pattern that characterizes the productive system of an agricultural territory.

It is arguable to say that an agricultural district may be considered as a representation of an entrepreneurial model of development for a specific region, whose main activities are dependent from the agricultural sector. In this regard, management capacity represents a crucial issue for regional catching up, since it is through the capacity to absorb ideas coming from the R&D system, to exchange them between companies, to transform them into real innovative products and services and to take advantage of these processes through the implementation of effective corporate strategies that render money to companies, that the innovation system promote regional development and aid the catching up of the backward regions, especially those peripheral [8] like it usually happens with rural regions.

As an entrepreneurial model, and besides the crucial importance of people and institutions that characterize any region in analysis, it will be crucial to understand and model enterprise networks representing the links of co-operation and partnership between firms.
agricultural policies. The attempts to reconver the excessive or outdated wine production into wheat, tobacco or olive oil failed in the last two centuries in spite of few localized situations of success in these domains. In terms of innovation, initiatives are also very dependent from the State initiative.

In the Upper Douro, the dominant production sector is winemaking and vine culture. Agricultural policy serves around 39,000 vine growers, wine makers and merchants dedicated to the wine business. Around 30,000 vine growers are small producers, with less than 1 ha of land each. Of these, around 78% have less than 0.5 ha. On the other side, there are around 600 vine growers with more than 10 ha each. Of these we can count around 40 big groups which account for around 10% of total area of production. Besides these, there are about 60/70 big bottlers and producers of wine, with around 4% of total area, and a few big families that own around 5 or 6 ha of land each and that normally sell their grapes to the big groups. In terms of small producers, about 3,000 just produce grapes and sell them to the big groups, and the rest, responsible for about 50% of the wine production, sell it to the cooperative sector present in the region or has its own little farm (quinta) producing their own wine.

The production filière in the case of the Upper Douro is articulated around three activities: the first one is the work in the vineyards and the treatment of the vine and its grapes; the second one is the winemaker process proper, from vintage time (grape harvest) to the fermentation of the must; and, finally, the conservation, ageing and selling of the wine. The first activity is historically typical of the Upper Douro production system. The vineyards are, however, dispersed among many small-scale producers that are technologically and commercially lagging behind, while the big producers are well connected to the wine merchants established in Vila Nova de Gaia. The second activity, traditionally a typical activity of winemaking in the region, has been dominated by the trading firms, the Port shippers that influenced greatly the evolution of the local wines, namely the Port wine. The third activity, today, with about 98 percent of the Port wine, is located in Vila Nova de Gaia and Porto.

While in France, Champagne, the institutional interaction are old, in the Upper Douro, the model of intervention is dominated by the role of the central state, namely the ministry of agriculture, that regulated the production and trade in the 18th and 20th centuries and did not favored the emergence of local dynamics such as “true” associations of producers. Once more, the historical legacy is very relevant. The cooperative wineries (adegas cooperativas), with the exception of one that was created in 1993, were all established in the 1960s in the period of dictatorship and with a regulation of the sector that was controlled by the central government and the shipping firms.

Apparently this lack of association dynamics is still pervasive today. The public policies have not build new and sustainable practices of cooperation, association and exchange of information, techniques and knowledge. This lack of association terms is also related with a weak entrepreneurship, a poor management capacity, a lack of market orientation and a weak level of training of the human resources of the region - is also the cause for the inexistence or dispersion of innovation institutions, especially those related with the wine industry. In terms of the formal education and research system, the region has one University (Universidade de Trás-os-Montes) and one Polytechnic Institute (the Instituto Superior Politécnico de Bragança).

From a conceptual point of view, Regional policy for the Upper Douro region is mostly inexist in spite of the millions Euro spent in the last years in the region, mainly coming from Agricultural Programs. And, when this Policy exists, we might say that it is usually outdated, based on an old view of social interaction and territories as passive landscape. It is also possible to see the relative success of the initiatives in tourism for developing the region with new activities, but, here again it seems that a true and integrated regional policy is absent.

In the Upper Douro region, recent policies with a regional incidence, namely, the agricultural policy in rural areas, have done little beyond the infrastructure and the reinforcement of some local institutions (like the IVDP, the Port wine institute). In terms of the main Agricultural Programs that can be applied to the Douro Region (Agro, Agris, Ruris, Vitis and some Special Zone Plans), only the Agro Program considers two measures dedicated to innovation. Essentially these programs work as income transfer and distribution to/into the region to support losses from special conditions of production. These programs are the direct result of the application of Common Agricultural Policy measures, being all of them, with the exception of Agris, regionalized policies defined on a national basis. In the special case of Agris - the only Portuguese’ Agricultural Program conceived exclusively for each region, from the Third Community Support Framework - it is a Program divided by NUTSII regions that
includes measures specially dedicated to the North of Portugal. This Program contemplates measures dedicated to some special cases of Douro. We may also find two other measures coming from Ruris’ Program, dedicated exclusively to the Douro Region in this philosophy of income support and transfer (e.g., the Special Plan for the Upper Douro wine District and the income support for the vineries in Douro mountains).

4- Conclusions
The issue of rural development is critical for the future and sustainability of territories and the EU project. However, there seems to be a lack within economics regarding the framework of analysis of rural, especially agricultural regions.

In this paper the concept of Agricultural District was presented, as a development of the known Industrial District concept. The Agricultural District concept should create the conditions for the development of a practical and eclectic framework of analysis applied to agricultural dependent regions. Based on economics, the presented concept aggregates also basic principles of corporate management – with a particular emphasis on corporate strategy – and the network analysis, not forgetting important development aspects like the socio-political and institutional features of territories and specific of agriculture.

The present investigation was illustrated by an attempt to apply the new concept to the Portuguese rural Upper Douro Region, viewed as an atypical territory in economic development terms, since it is a development problem that challenges the traditional canons of economic theory, usually more centered in urban or industrial regions. Agricultural District concept should be able to revive the idea of the importance of rural regions for the sustainability (in all senses) of the EU project. This concept will help the conception of better, more adequate and straight through policies for the development of these territories.

Finally, one should be aware that the Agricultural District concept must be understood as a dynamic adaptable concept, taken into consideration the diversities of agricultural territories – regarding main crops, different production systems and dominant culture – as well as the different type of economic agents involved in the socio-economic structure of rural territories. By using the Agricultural District concept, it will be possible to have a better knowledge of the dynamics that characterize rural and agricultural regions. This may represent a step forward, not just in helping a better conception of rural development policies but also, to a better future for these regions proving that rural should not necessary means less developed.

References