

THE CONCEPT OF AGRICULTURAL DISTRICT AND THE QUESTION OF RURAL DEVELOPMENT

O CONCEITO DE DISTRITO AGRÍCOLA E A QUESTÃO DO DESENVOLVIMENTO RURAL

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ABSTRACT

The issue of rural development may be considered a crucial theme regarding the development of European Union economy. Rural regions account for the big majority of European Union territory having an unquestionable importance in terms of employment, population as well as regarding their contribution to gross economic value added. Apparently there is a lack of an effective theoretical framework concerning the issue of development for rural regions. Our opinion is based on the fact that all empirical analysis regarding rural regions development seems to put these regions in a secondary peripheral way in terms of development.

Based on a broad view of determinant factors for development, using different bodies of knowledge in economics and management theory (like corporate strategy, entrepreneurship, regional and innovation development theories, economics of territory and network theory and partnerships), and inspired in the industrial district theory, this paper attempts to present the concept of agricultural district applied to a specific Portuguese rural region: the Douro. On our view, this new concept will help development politicians to conceive better policies for the taking off of rural regions and so, to oppose to what appears to be a bad destiny fatality for rural and agricultural regions.

Keywords: New Economic Geography; Agricultural District; Innovation Policies; Regional Development; Networks and Partnerships.

RESUMO

O desenvolvimento rural pode ser considerado como um tema crucial para o desenvolvimento da economia da União Europeia. As regiões rurais constituem a maioria do território europeu tendo uma importância inquestionável em termos de emprego, população assim como ao nível da sua contribuição para a riqueza gerada. Constata-se a falta de um quadro teórico inerente à questão do desenvolvimento das regiões rurais. A nossa opinião é baseada no facto da análise empírica do desenvolvimento rural colocar estas regiões num papel secundário e periférico em termos de desenvolvimento. Este discussion-paper pretende apresentar o conceito de distrito agrícola aplicado a uma região rural específica em Portugal: o Douro. Este trabalho é baseado numa visão alargada dos factores determinantes do desenvolvimento, tira partido de diferentes áreas do conhecimento na ciência económica e na gestão (tais como gestão estratégica, empreendedorismo, teorias do desenvolvimento regional e da inovação, teoria das redes e abordagem das parcerias) e inspira-se na teoria do distrito industrial. Na nossa perspectiva, este novo conceito de distrito agrícola permite apoiar os decisores políticos na concepção de melhores políticas de desenvolvimento para o arranque das regiões rurais, como o objectivo de contrariar o que parece ser uma fatalidade para este tipo de regiões.

Palavras-chave: Nova Geografia Económica; Distrito Agrícola; Políticas de Inovação; Desenvolvimento Regional; Redes e Parcerias.

JEL Classification: O12

1. THE AGRICULTURAL DISTRICT CONCEPT

1.1 The Need for a New Economic Framework of Analysis for Regional Rural Development

Rural regions represent around 91% of the territory of EU-27 and about 80% of the Portuguese territory, contributing with around 43% of economic gross value added among all of EU economic activities. In these regions lives about 50% of EU population an aspect that makes these territories crucial in terms of employment generated. Moreover, about 55% of overall employment of EU-27 is based in rural regions.

Paradigmatically, however, one may see a general tendency to a decrease in terms of weight of these territories, either regarding income, population, gross value added, wellbeing, or development in general terms.

Having this in mind we may ask if – as it seems to be for example, the immediate conclusions of New Economic Geography theory – rural regions or, at least, the more agricultural dependent regions, are condemned inevitably to be backward in terms of development. The problem underlying this assumption is that, if this kind of vicious spiral of underdevelopment is still to maintain in these regions, one may expect a kind of “extinction” of the rural and agricultural world in EU, taking into consideration the action arising from the appliance of the principle of rational expectations to the people who are living there.

From our point of view this will pose several very important problems for the EU region as a all, 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.

Most of the economic theories are built upon the observed reality. So, we may say that they are dependent from the reality that their authors can observe. At the same time, since economic theories are crucial for the setup of economic policies, they will contribute to shape the observed reality. In this sense they could be considered (at least partially) responsible for the observed pathway of economic development. This type of circular causation may produce some theoretical traps that economists should avoid.

Considering that economics is a social rather than an exact science, by principle one must reject any dogmatic position coming up from any theory within this field of knowledge, especially considering this need to avoid the referred theoretical trap. Moreover, it will be wise to expect that economic agents living in rural and agricultural regions, more than just leaving those regions in search of better conditions for living, will try to battle against the above mentioned tendency for the decline of their world.

However one may say that, today, the existent economic framework will not be favorable to such type of actions, especially if they are directed to the maintenance of the rural and agricultural activities of territories.

To solve this difficult puzzle, we understand that there is room to search for the adequate economic theoretical framework that may help politicians to conceive adequate policies, ones that could break with this path of underdevelopment for rural and agricultural regions.

Paradigmatically however, accompanying the trend of the development of society, we may observe that the rural world is being positioned in the last place of priorities, and this is diminishing the demand by politicians for the issue of rural (and agricultural) policies, making these themes less fashionable to the eyes of researchers. As a consequence we are assisting to less theoretical production regarding these themes, in spite of the apparent dilemma involved – and the inherent challenge involved on it – thus reinforcing the process of decline of the rural world through the incapacity to conceive adequate economic policies to be applied on those regions.

In this sense we may affirm that the problem of the rural world is due more to the inexistence of an adequate economic framework rather than the availability of resources to be applied on those territories.

In summary, notwithstanding the apparent challenge for economic researchers posed by the development of the rural and agricultural world, we see that the “power of demand” is making that the big majority of main economic theories that are available in the literature and that are present in international conferences is dedicated much more to the problems associated with the manufacturing or the services sector, than to agriculture or primary sector activities. For this we may conclude that there is a clear need to develop an adequate theoretical framework that could help the believers in the rural world to produce efficient policies that could be able to break with such an apparent destiny reserved to these territories.

1.2 The Characteristics of an Agricultural District

There is no doubt that there are intrinsic characteristic of the sectors and industries that potentiate or hinder the development of regions. However, to assume that the underlying conditions of economic sectors or industries are paramount in terms of development is to consider that the conditions associated with the capacities of economic actors, the role of institutions, or the importance of the economic policy for development are minor aspects in this sense.

Putting sectors’ characteristics above actors’ actions as drivers of regional development, from our point of view, could be a critical mistake.

We understand that the capacity to understand reality of territories, to conceive and implement adequate regional policies that promote long term growth are crucial themes for development of less favored regions, and it can represent a kind of “accidental change” that can oppose to some tendencies for path dependence that otherwise will hinder the development of agricultural regions.

Moreover, in our analysis we assume the principle that long term growth is something that goes ahead the ordinary business (Rodrik, 2003) as it seems to be the case about the principles associated with present economic theories regarding rural regions’ development.

We believe that the development of the social capital level, comprising the qualification of economic agents and institutions, as well as their capacity to interact, are the crucial themes in terms of the development of regions, regardless of the underlying economic sector of activity that could be dominant in any territory. The human resources capabilities as well as the synergies that they are able to produce as a result of their interactions within the region are the most essential aspects regarding the development of rural regions.

Besides households, most of the times the human resources of the territory are organized within corporate structures – more or less developed – that show a significant importance for

the development of those territories. So, it is essential to understand the role of enterprises and the impact of their strategies for development.

As it is the case for regional innovation, generally speaking we believe that rural and agricultural development is the result of the interaction between the regional and local development conditions, the technological learning and the entrepreneurial strategy of firms within a region, and the institutional proximity (Vaz and Cesário, 2008).

In this sense, it is also important to have in mind that the impact of each individual firm strategy for the development and growth of the region where it is located is dependent from the capacity of the region to promote regional synergies. This in turn is dependent from the capacity of firms to establish strong local networks as well as the capacity for local governments to put in place politics that enhance individual efforts of firms and bring resources available at a supra-regional level to the region, and to leverage regional efforts for development.

An adequate framework to help the conception of policies and the effective development of the rural and agricultural world, more than just translating and formulating concepts, should show the capacity to contribute to a better comprehension of the rural development factors. At the same time, such concept must try to integrate the knowledge already created in different fields of economics, and specially regarding development economics, within a theoretical framework that could help the setup and implementation of rural development policies.

Institutions are considered another important factor for development. So, we must consider the role played by institutions, comprising both the quality of formal and informal socio-political arrangements, and ranging from the legal system to the broader political institutions. For some authors institutions represent even the most critical determinant of economic performance playing “*a major role in promoting or hindering economic performance*” (Rodrik, 2003: 5) and contributing for the form and evolution of economic landscape (Martin, 2003).

At the same time it is known that local institutions creation and development must be seen as the result of the joint actions of different agents co-existing within a specific territory. The dynamics of these institutions is affected by the synergy effects that arise from the network effects. Institutions are also influenced by existing institutions in the surrounding regions.

When talking about regional (and consequently rural or agricultural) development, it is still important to consider the role of social (and civil) capital as well as the importance of regional/rural policies for development.

There is the notion that in the agricultural dependent territories it is usual to observe weaker levels of social capital, considered in terms of social relations and social networks (Fukuyama, 2001), which is something that may reduce the chance to capitalize the role played by institutions and policies, and diminishes any impact of economic agents' actions.

In order to aggregate all aspects referred above, and to consider a territorialized notion of development, in our analysis we adopt the idea of territory as a place of organization and arrangement of economic, social, cultural and political actors that, through the relationships that are established among them, are able to localize a certain type of competences which, by itself, will allow a certain durable growth in that territory (Quevit and Van Doren, 2000). This notion of territory is, in our view, complimented with Maillat's (1998) vision, highlighting a shift from the notion of territory as a medium of passive and static resources, to the notion of a territory that creates strategic and specific resources. The onus is then putted in regional policy that must adapt to these new dynamics. One of the impacts of this change in politics is that development will start to be a question that increasingly will move from a distribution to a resource-creation policy.

Geography should be considered as a part of the territory and, if we consider the territorialized perspective that is present in agriculture, we should also consider that, besides shaping (in part) the existent institutions, geography will play a major role in determining income, based on the existence of natural-resource endowments (specially regarding the availability of soil, sun/climate and water). However, in our vision we agree with Rodrik's idea that "*geography is not the destiny*" (Rodrik, 2003: 12).

In Industrial Districts' theory, development processes are a direct consequence of the systemic, multi-functional and inter-organizational component of territories. Regional development in this sense is not so dependent from the underlying economic sectors that operate in each territory.

In economics, the best systemic theory that, from our point of view, could approach to this broad vision of development is the theory of the Marshallian industrial districts (Marshall, 1920). However this is a concept that we consider to be very dependent form, and adapted to the characteristics underlying the functioning of the manufacture or even the services sector and that transpose the socio-economic characteristics of the territories where these type of activities take place. For this reason, we understand that it is not very adequate to deal with the specificities involved in the primary sector activities and the type of socio-economic conditions that we may observe in rural societies.

To answer to these differences, we have developed the concept of "agricultural district". By agricultural district we mean 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, if we take into consideration, for instance, the case of the Douro region, we can observe that 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 we may 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, we may say that division of labour in agricultural districts territory 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 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 we may observe the existence of institutions closely related but not directly involved in agricultural activities, whose main functions are to dynamize 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 governmental 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 the local assumes a very important weight in the process, especially when we talk about small scale productions. Within these suppliers we must consider labour force, which is mainly part-time or seasonally hired, but assume 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 summary in an agricultural district we will see 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, a situation that 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 (Porfirio, 2005) 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. 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 (Porfirio *et al*, 2008) could be better suitable for the conception and implementation of rural development policies. This new concept should help us to better understand the dynamics that we can 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 us 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, we are, at the end, going against a certain pre-determined economic tendency for a vicious cycle of underdevelopment and we will be able to promote the resurgence of new centres, mainly based on the primary sector.

1.3 Agricultural District *versus* Industrial District

The concept of agricultural district, from our point of view, may help us to better understand the peculiar dynamics that exist in rural/agricultural regions and so may contribute to the breakdown of an apparent determinism concerning rural development capabilities. As already referred, our concept departs from the traditional idea of Industrial District (Marshall, 1920) linking different other concepts like entrepreneurship; regional and innovation development theories; economics of the territory; networks and partnerships. Moreover, it puts a special emphasis on the issue of Corporate Strategy as a catalyser for the conversion of rural/agricultural regions and so, for the development of the rural world.

Our concept assumes the growing importance of territorial dimension in economics, following the principles generated by marshallian industrial district's researchers. After World War II, the Alfred Marshall's concept was recovered by Italian economists that focused on certain forms of territory production organization which showed autonomous development capacities (the so-called «Third Italy»).

The industrial district can be defined by a social-territory entity characterized by the active presence of a community of individuals and a large number of small- and medium-sized firms in a certain historic and geographic space. District firms produce goods in the same sector both for internal consumption and mainly for exportation which benefit from localized accumulation of skills inherent to local resident workers.

District firms assure products and services necessary to specific product realization. Enterprises are specialized in different production stages and coordinated by entrepreneurs who create products of the same gamma. In this system financial support is provided either by local banks or/and local firms. Individual links are also important. They share the same value system, know-how and social norms perpetuated by families and local institutions. Marshall refers to «industrial atmosphere» to characterize this social-economic context on the basis of confidence.

Through exchanges of information and the use of particular schooling systems, workers develop collective processes of learning-by-doing which permit to improve their productivity. Workers interact together through several social processes (e.g. informal discussion within the firm; inter-firm mobility of skilled workers) encouraging a frequent inter-communication of ideas (Soubeyran and Thisse 1999).

In this way, at the basis of early economic development of industrial districts one can find a set of specific social-cultural craftsmanship and knowledge. But *“afterwards the firm industrialization and specialization generate the development of learning processes based on the knowledge codification and on a stronger inter-relation among the district forms, so that a social-cultural and craftsmanship knowledge is replaced by a more relational one”* (Albino 1999: 57).

One may question the need for the development of such a new concept like the agricultural district, since we already have the “older” industrial district concept.

The reasons for this need may be found in two interrelated issues: a) the intrinsic characteristics of rural/agricultural regions; and b) the intrinsic differentiation characteristics of agriculture compared to other sectors of activity. All these are aspects that must be integrated in the so-called “new paradigm of the rural world” (OECD, 2006).

According to OECD, the new rural paradigm is centered in the search for the competitiveness of the rural areas, based on the valuation of local assets and the sustainable exploitation of unused resources. This should be made through investments in various sectors of rural economy (like rural tourism or secondary and tertiary activities linked with, but not exclusively in, the primary sector) and may involve actors in different levels of the territory (local, regional, national, and even supranational).

This is in close contrast with the old rural paradigm where the main objective was the equalization of farm income and the competitiveness of farms, based mainly in agriculture and through subsidies exploitation used by national governments and farmers.

This new vision for rural development brings to the analysis the differences of agricultural activities compared with other sectors of activity, like the manufacturing sector that is in the essence of industrial districts. However, in spite of the inherent differences between these two paradigms, from our point of view there is something that seems to maintain between the old and the new: the idea that for an agricultural dependent region to develop, there is no need that it enters definitely in any international market's food value chain to obtain success. The path of development still is a choice of the region since the territorialized principles associated with agriculture surmount any characteristic related with mere localization or location of economic activity (Storper, 1997).

First of all, agriculture may not be an activity so dependent from external markets and trade when compared to manufacture or the services sector. In general one may observe an important weight of domestic and local market sales regarding agricultural productions, when compared to what happens in other sectors of activity. This was especially true in the "old paradigm" of rural development. Within the ideas of the new rural paradigm, one may observe a growing importance of agriculture integrated in agribusiness value chains as a result of the integration backward, to primary product handling, of food processing firms. This is a very important issue regarding the idea of agriculture for development, since it presents direct reflexes in terms of growth rates of activity, income and innovation capabilities for economic agents and territories dependent from the primary sector activities.

Considering the growth rates usually associated with agriculture productivity and market sales, it is possible to see that usually, agricultural activities grow at lower levels when compared to manufacturing or services sector. Productivity in agriculture is always very dependent from variables that are not very easy to control, which means that agricultural activities usually involve more risk than the other sectors of activity in general. Moreover, in spite of the important developments in the field of biotechnology, we are aware that agriculture will always be an activity very dependent from the availability of very limited resources like soil or water or, as Marx defended: "*agriculture is a unique branch of industry in that it is constrained by natural processes which act to limit the productivity of labor and restrict capital investment*" (Page, 2003: 245). It is also important to consider that the land-based character of farm production naturally will pose several constraints to industrialization.

Moreover, there is the question of innovation. In agriculture districts innovation is based almost exclusively in the production process and usually appears as small incremental improvements in products and services arising from local production systems and not as a result of any formal dynamic system of innovation based on R&D institutions or labs dedicated to the regional productions. In the innovation field, it is also important to refer that, taking into consideration the small size of production units it is very difficult also to assist to innovations coming up from any individual R&D activities from any particular company or farmhouse (Santos, 2005: 288) or even disruptive innovations.

That is to say that the characteristics of innovation, in agricultural districts, are mostly due to "learning by doing", "learning by using" or even imitation processes, than due to formal institutional processes, which is something easier to understand if we take into

consideration that market pressures to innovate in farming production systems is coming more from legislation concerning safety and quality rules (many times imposed by agri-business customers or food consumers) than from consumer markets' demand.

In summary, the capacity to develop in agricultural districts is strongly dependent from the externality effects that arise from proximity, and that is mostly concerned with resource capabilities evidenced by each particular territory.

Regarding the characteristics that differentiate rural from industrial, service-based or urban territories, it is also important to consider the quest for tradition and culture.

Farming can be seen as a critical intersection between nature and society (Page, 2003: 245). This turns agriculture an activity much more dependent on tradition and culture than any other sector of activity. Rural societies are usually more closed and less dependent from international dynamics than any other type of societies of the developed world. This is a feature that tends to create stronger links between people within the region and increases the effects of their relationships promoting or hindering synergies in the region. Moreover, relationships between economic agents in agricultural districts are more based in culture, tradition, and historical evolution and not so much in formal processes or originated by market pressures.

This scenario might be changing nowadays mostly due to the influence of big companies operating in agro-food business and also due to the growing feeling that farmers must be more keen to market demand if they want to be competitive and obtain success in their business life. However this is a characteristic that still needs to be considered a very important aspect regarding the development capacity of these territories.

Finally, we must consider that the capacities for reconversion of territorial production, as well as development patterns, are very different when we compare agriculture to the other sectors of activity.

Considering that soil is a limited and fixed resource, and that land markets are very dependent from localized social conditions, it will be prudent to admit that farmers cannot easily and quickly adjust their investments in land (Page, 2003: 245) in order to adapt supply to demand. However, one may observe a consistent "refashioning of nature", with the use of new technologies that represent an important leap forward in the capacity to manipulate nature for commercial gain in agriculture.

These movements contributed to surmount some locational constraints in agriculture overcoming, at the same time, some limitations posed by nature (like soil availability or climate conditions) thus making possible the creation of new agricultural systems. Notwithstanding, it is important to notice that any development process implies changes over resources, over labor as well as over technological practices, and this represent a process that takes its time, since it involves changing culturally constructed meanings and identities (ibidem). And we must be aware that, like geography and institutions, all these are aspects that change slowly or hardly over time (Rodrik, 2003) which mean that any policies adopted in any new theoretical framework for the development of the rural world, should take its time to produce the desired effects.

2. THE CONCEPTION AND IMPLEMENTATION OF REGIONAL AND INNOVATION POLICIES

Following this succinct exposition of the Agricultural District framework and what could be called the "new rural paradigm" in the first section, it is necessary to clarify the issues related to regional policy and innovation policy. We will first review the literature on some

fundamental issues and sum up the basic dimensions that are relevant to regional policy before analysing this policy proper.

In order to grasp better the complexities of regional development of today, some time has to be dedicated to rethinking concepts, theories, policies and results (achievements, failures and impacts) as we have done so in the introduction and previous part and will continue in the present one and the next and last section on the Upper Douro. It is important to avoid conceptual fads and trendy labels and stick to the explanatory power of concepts and theories and the evidence from data.

If we take a moment to look back at the regional policies from the 1960s and the present decade, we notice, among other aspects, the prominent role taken by innovation and not just the transfer of technology and big projects as the driving forces behind regional policies and development (Janne 1968, Perroux 1950, Perroux 1964, 1983) but also much related with knowledge and tacit knowledge, social networks, partnerships and local cultures (Fuchs and Shapira 2005). As we will show, our reflection has tried to integrate concepts such as innovation, regional systems of innovation, knowledge, learning regions and heterogeneous agents, to name just a few we make use of.

Before getting into the prominent matter of regional policy, it is necessary to summarize a number of interrelated issues in order to discuss coherently the policy formulation and implementation and, afterwards, some concrete development measures.

First, in the present paper, the regional system of innovation has to be considered in its broad sense, as highlighted by Freeman (1982, 1987, 2002), rather than its narrow one (institutions directly involved in the fostering of innovation activities, such as public labs and universities) because the former allows us to take into account the diversity of regional and local actors, their interrelations and the difficulties related to the implementation of policies throughout heterogeneous geographical areas. This broad conception of innovation dynamics permits the identification of networks and structures that shape local life and regional economic activities (MacKinnon, Cumbers and Chapman 2002). It is related to the literature on regional systems of innovation and their focus on the knowledge dynamics (Cooke 2001, Cooke, Uranga and Etxebarria 1998, Cooke, Uranga and Etxebarria 1997, Freeman 2002, Moulaert and Sekia 2003).

Second, as a corollary to the broad definition of regional systems of innovation, a central element is the interaction between social and economic actors in these regions; this is the network aspect of the regional dynamics. According to Chris Freeman, a (regional, we would add) system of innovation can be considered as a “*network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies*” (Freeman 1987: 1). Evidently, the word technology has to be broadly construed in order to include the artifacts and the tacit knowledge of using techniques, including the immaterial techniques.

Third, at this point, it is crucial for designing successful innovation and development policies to note that regional and local actors are highly heterogeneous in terms of size (see the next section), knowledge base, history (path dependence of capabilities) and activities (economic sector, social activities). The heterogeneity is ontological in the sense of defining the being and becoming of social actors in a specific territory. Social and economic interactions are in fact occurring between individuals essentially different one from another and this difference is at the center of the mechanisms of exchange and interaction. This is where we find notions such as knowledge economy, skills and competences that enter the picture.

Anyone consulting recent issues of journals in regional science or technological change and innovation studies (e.g., *Regional Studies*, *Industrial and Corporate Change*, *Cambridge Journal of Economics*) can see that the arguments on the various strands of economic policy, namely

regional policy and innovation policy, have shifted towards the notions of the knowledge economy, different types of innovations and a more dynamic view of the process of policy-making (Amin and Wilkinson 1999, Antonelli 1999, Cohendet, *et al.* 1999, Lawson 1999, Maskell and Malmberg 1999, Moulaert and Nussbaumer 2005, Moulaert and Sekia 2003, Tödting and Trippel 2005). This change is substantial, not only at the level of the theories and conceptual framework as highlighted in the previous section, but also for the very design of specific policies. That last point is the subject of this section, but before getting straight to that matter, we will wrap up the critical theoretical elements that are needed for a correct appraisal of the challenges of economic policies.

There is a vast literature on learning regions and regional innovation systems and a much wider literature on regional economic development that has gained momentum in recent years and have renewed the theoretical concepts used for economic analysis and policy formulation (Cooke 2001, Cooke, Roper and Wylie 2003, Cooke, Uranga and Etxebarria 1998, Cooke, Uranga and Etxebarria 1997, Fritsch and Stephan 2005, Leydesdorff and Fritsch 2006, Leydesdorff and Meyer 2006). However, there is still a tremendous effort to be made for creating more coherent or integrated theoretical constructs of regional development (Moulaert and Sekia 2003). Moreover, the analysis of regional policies and the evaluation of their implementation is lacking in terms of the integration of new theoretical development, namely: learning, innovation systems, entrepreneurship, management and strategic capabilities of people and organizations, globalization, territorial dynamics, evolutionary economic policies and trust and social interaction (Morgan 1997, Moulaert and Sekia 2003).

Our task here is not to offer a survey of these developments. In the previous section, we have given an overview of some of the main theoretical concepts that are needed for studying a wide array of regions and in particular those regions that aggregate numerous obstacles to development, usually, but not exclusively, based on agricultural production. In the present section, we will reintegrate the theoretical concepts for two reasons: first, for criticizing the existing policy practices and policy justifications and formulations and, second, for designing the building blocks of a more successful regional policy, especially with regard to problematic regions such as the Upper Douro, characterized by dependence on a sole product as main export (wine), the lack of dynamic medium sized towns and proactive connections toward outside markets, regions and cities.

Two of the main issues with economic policy (either regional or national actions) are its practical relevance (impact) and its dynamic character (i.e., the socio-economic reality is changing so does the policy-making and the administration that implement it). In the latter case, more often than not, there are maladjustments between the issues at hand (the concrete problems to solve) and the capacity of the administration and formal institutions that are taking or implementing measures. This is clearly the case in the Upper Douro region.

It is important to have a regional policy that focuses practical problems and advances concrete measures (proposed solutions) that can be appraised in one way or another. Too often, policies, unfortunately, are definitely not regional policies; they are formulated at the national level (or even the regional level) but are too vague and do not answer properly concrete regional problems whose solution could contribute to the emergence of new dynamics in the region under consideration.

The criticism made by Simões Lopes in the late 1970s and reiterated all along the 1980s and 1990s is still valid today: there is no true regional policy in Portugal (Lopes 2001). For the Upper Douro the conclusion is even worse, as we will get back to it in the next section.

Again, coming back to old debates on economic development, not just within the national border but in the wider European context, regional policy is lacking a *long-term view* and an integration of various sectoral policies into some coherent whole with more

efficient effects at the local level. And no matter how different regional economic policies can be designed today, as characterized by some authors quite recently (Morgan 1997), the long-term perspective and the integration are problems that remain. Accordingly, this point is shared by some authors in the case of Portugal (Lopes 2001).

A key factor explaining the lethargy of regional development policy in Portugal and in the Douro, in particular, is the path dependent character of their design and implementation. We will focus now on the *path dependence* of policy design. The notion of path dependence in policy design and policy making is not different from the one found in the economic literature on innovation and technological change (Arthur 1989, 1994, David 1985, David 1986, 1989, 1992, 1994, 2001) or the study of economic theory and the economic profession (Garrouste and Ioannides 2001, Hodgson 1997b, Hodgson 1999, Hodgson 2004).

Concretely, policy formulation is conditioned by past decisions and new ideas such as evolutionary processes enter slowly in the set of ideas that are dominating the references and justifications traditionally used in the design of policy measure. Very often, the rhetoric is integrating the new concepts, but too often on a very superficial scale, while the old dominating ideas are still there. This is exactly the case with the absence of regional policy in Portugal. In economic terms, changing policy guidelines has high costs, not just for the regional constituencies but also at the national level.

Maillat (1998: 3) highlighted “*a shift from the notion of territory as a medium of passive and static resources to that of a territory that creates strategic and specific resources. The onus was now on regional policy to adapt. [...] they increasingly moved from a distribution to a resource-creation policy.*” This point can be extended to recognize that regional policy in Portugal has to back up the creation of incentives for investments, foster inter-institutional cooperation and decentralization, and it is “*precisely in these areas that Portugal lacks the necessary tools*” (Noronha Vaz 2004: 223).

If we look at the successive types of regional policies, using the typology by Maillat, we can identify in the Portuguese regional policy a dominance of distributive policies rather than those that require participations of local actors (Maillat 1998, Morgan 1997). But what is more preoccupying is the static conception of policymaking and its vagueness, its lack of integration and its lack of regional focus. We will pass now to the consideration of the regional development policy for the Upper Douro region as a way of illustrating the issues hitherto highlighted.

3. SOCIAL AND ECONOMIC CHARACTERIZATION AND IMPLEMENTATION OF REGIONAL POLICY: THE CASE OF THE UPPER DOURO REGION

The wine district of the Upper Douro, now celebrating just over 250 years of turbulent existence since its creation in September 1756 under the rule of the Marquis of Pombal, is 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 regions 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. In addition to the quasi-monoculture of wine and grapes derivatives, the land property is fragmented into many small producers and very few big producers, the latter generally associated with the Port wine trade and working with higher value added products. The problem is not new, but the relative position of the Upper Douro in Northern Portugal today is worse than it was in say 1740, 1800 or 1910, especially if we compare this region with the Porto city area which benefited greatly through

the history from the wine trade, namely the exports to the United Kingdom and Northern Europe.

The historical legacy for the region is very important. All through the generations from 1756 to now, the central state has played a critical role in the region, mainly through the regulation of the wine production and the implementations of agricultural policies. The attempts to reconvert 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, especially if we look into the wine industry, starting from the beginning of the twentieth century, with the creation of the so-called Experimental Agricultural Stations by 1908.

In the Upper Douro, the dominant production sector is winemaking and vine culture. Therefore, as a first approximation, the sectoral and local systems overlap. However, this cannot be interpreted as a neglect of the importance of spatial configuration. Quite the contrary, this double identity of the Upper Douro turns it a difficult problem to solve but at the same time shows that economic policies did not consider regional policy perspective seriously. One might say that the only true sectoral policy for the region is the agricultural policy.

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 (like Symmington, Sogrape, GranCruz, Taylors and others), 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 some shipping firms invested heavily in the Douro (such as the group Symmington) the local impact is limited to some big properties and to the strengthening of the relationship between those *quintas* of the merchants and the small and medium-sized producers.

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. In the 1920s and early 1930s, an important regional movement, the *paladinos do Douro*, tried to orientate the agricultural policy and the state policies in favor of the Upper Douro winemakers, but did not succeed to create dynamics that survived (Jacquinet 2006, Sequeira 2000). Part of their action was defensive, against the import of wine spirit from the South of Portugal (the area just North of Lisbon) or the adulterated wines from Spain or the spirit coming not from grapes but from cereals. Their legacy is too thin today, partly because of the social renewal that occurs as time goes by, but also because of the impediments related to the dictatorship.

Apparently this lack of association dynamics is still pervasive today. In the public policies for the Upper Douro have not build new and sustainable practices of cooperation, association and exchange of information, techniques and knowledge. Even the project for the Upper Douro as patrimony of Humanity has been base mostly on building and material elements, while the social and immaterial elements, including the social interactions, have been neglected.

This lack of association in general terms - 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, specially 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 the sector itself, we may find the CEVD – *Centro de Experimentação de Vinhos do Douro* and some institutions hired by the IVDP – *Instituto dos Vinhos do Douro e Porto* (both belonging to the research system of the Portuguese Ministry of Agriculture). There is also a private institution, named ADVID – *Associação para o Desenvolvimento da Vitivinicultura Duriense*. Apparently there is a weak research association coming from the sector itself and there is a lack of long term and sustainable links and respective results between main actors from the wine sector and these research institutions that mainly work on their own, without a true market orientation.

From a conceptual point of view, we can also state that Regional policy for the Upper Douro region is mostly inexistent 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. We can also observe the relative success of the initiatives in tourism for developing the region with new activities, but, here again, a true and integrated regional policy is absent. The actions taken support mainly infrastructure while the issue of the flow of tourists in Portugal – mainly between Lisbon, on the one hand, and Porto–Coimbra and Évora and Algarve, on the other hand – is neglected. The neglect of social interaction in the development of tourism is also important and there is no regional policy measure that seems convincing, with the exception maybe of the wine routes (*Rota do vinho*).

In the Upper Douro region, recent policies with a regional incidence, namely, the agricultural policy in rural areas, have done little beyond the infrastructure policy 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

We depart from the principle that there is a lack within economic theory regarding the comprehension of the mechanisms of development of rural regions. Paradigmatically, we understand that there is no question regarding the importance of rural regions for the EU economy, both in terms of income and strategically. So, it is clear for us that the issue of rural development may be considered a crucial theme regarding the development of EU and it is also a very important subject for economic theory in general and particularly, for regional development theory.

The basis for our analysis, regarding the issue of development for the rural regions should be the main theoretical body of regional development theory which is a topic closely related with two intertwined issues: i) the key variables related with change; and ii) the capacity of governments and local authorities to conceive and implement more effective regional development policies.

Concerning the key variables related with change, one should consider that the actions of economic agents of a certain region will produce results in terms of economic development that could be limited, or otherwise enhanced, by the regional environment where they are taken and that is also a result of regional development policies directed towards each specific territory.

Besides policy issues, if we want to study the real conditions that affect regional development, we must also analyze regional dynamics, which is also that should take into consideration the endogenous characteristics of local actors, the diversity of problems that characterize each region, as well as some determinism that could arise from the phenomenon of culture and historical path dependence. All these are aspects that reflect the real essence of regions.

However these variables usually can only be analyzed integrated within an aggregated and generic set of measures, and they often do not find the adequate economic theoretical framework to be fully applied and tested by regional policies.

Our investigation was illustrated by an attempt to apply a new concept to the Portuguese rural 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.

To be effective, regional development and innovation policies, applied to this as well as any other similar rural regions, must take into consideration the diversity of cases and to adapt themselves to the specific conditions of the territories where they will be applied.

By making an analogy with the traditional economic concept of industrial districts, and adapting this concept to the peculiar conditions of agriculture activities as well as the region in study, our paper develops the eclectics concept of Agricultural District, trying to characterize theoretically the Douro Region within this framework of analysis. By doing this we are searching for the necessary theoretical framework that may help economists to conceive regional rural development policies more effective and truly dedicated to the specificities of agricultural regions similar to the one in analysis.

Moreover, it is very important to consider that our job should be considered a work in progress and that the concept of agricultural district must be considered as a dynamic rather than a static entrepreneurial model of development for the rural/agricultural regions. To be effective in their end of helping the use of better policies and to obtain better synergies for financial resources allocated to these policies, this is a concept that must adapt to the specificities of different rural territories, that may differ due to different cultures – and so, different production systems and value chains – as well as the different type of actors involved in the socio-economic structure of rural territories.

We consider to have advanced in part for a better knowledge of the dynamics that characterize rural and agricultural regions and by doing this we believe that we gave 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.

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