

# The Dualistic Model of European Agriculture: a Theoretical Framework for the Endogenous Development

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**Abstract.** The European model of agriculture refers to a multifunctional and virtuous model of agriculture that is progressively substituting the productivist model of agriculture, that, in the recent past, has been supported by agricultural community policies. However, the European model of agriculture comprises heterogeneous realities and economic actors characterised by different local conducts. Schematizing this model, we can distinguish two agriculture typologies: modernised agriculture and traditional agriculture. In this article, we will develop a theoretical framework which encompasses the different patterns of endogenous development in both agriculture typologies. Through this article, we aim to create the theoretical basis necessary to undertake the study of the dualistic model of European agriculture.

**Keywords:** endogenous rural development, european model of agriculture, traditional agriculture, modern agriculture, multifunctionality

**JEL Code:** N5, N55, O13, P32, Q19

## 1. Introduction

The European model of agriculture, defined for the first time on Agenda 2000, refers to a multifunctional and virtuous model of agriculture that is progressively substituting the productivist model of agriculture, that, in the recent past, has been supported by agricultural community policies. The multifunctionality of the new European model shows in its main functions (Arzeni *et al.* 2001):

a) *Food functions:* the function of producing quality food in accordance with food safety both from a quality and quantity perspective. Therefore, European agriculture should be sustainable and virtuous but also competitive in the global market without applying for funding or dumping policies.

b) *Environmental functions:* the function of producing positive externalities such as protection of landscape and biodiversity, reduction of pollution and reduction of all negative externalities produced by agriculture.

c) *Rural functions:* in this case, it refers to an agriculture that can support the sustainable development of rural communities, in compliance with history and local culture.

After having introduced the multifunctionality of this model, we should clarify that the European model of agriculture comprises heterogeneous realities and economic actors characterised by different local conducts. Schematizing this model, we can distinguish two agricultural typologies: modernised agriculture and traditional agriculture. Modernised agriculture has integrally accepted technologies, inputs and more in general industrial values. It reflects faithfully the productivist model and at the same time it is a big producer of negative externalities (erosion of biodiversity, loss of agricultural landscapes, loss of traditional peasant culture, *etc.*). By contrast, traditional agriculture typology encompasses those fragile and less favoured areas where the paradigm of modernisation could not be applied effectively, efficiently and profitably. For such reasons, traditional agriculture is firstly based on local elements, such as peasants' knowledge, biodiversity and traditional agricultural techniques. Therefore, traditional agriculture is virtuous: in fact, it unconsciously protects biological and cultural local elements, at the base of those agricultural activities, which are socially and environmentally sustainable.

Dualism in the model of European agriculture is, as we will discuss in the first paragraphs of this article, a bequest of modernisation processes in agriculture. Such dualism has already been identified and analysed by Rossi-Doria in 1958, who described <<la polpa e l'osso>> (the "beef" and "bone") in the agriculture of Southern Italy (Rossi-Doria M., 1958). According to Rossi-Doria, "beef" is represented by modern agricultures insisting on fertile and productive lands, while "bone" is made up of mountainous areas, latifundium areas and, in general, areas characterised by unfavourable social and/or pedo-climatic conditions. Rossi-Doria's lesson about the dualistic agriculture of "beef" and "bone" can be summarised in the following way: different realities must correspond to different public policies (Rossi-Doria M., 1958). This principle has not been applied yet at the European governance (De Benedictis M., 2002).

Other interesting observations on dualistic agriculture between modernity and tradition are made by T.W. Schultz. However, he refers to developing countries rather than to the European context. According to Schultz, even though traditional agriculture has a low production level, it cannot produce more, consequently it cannot contribute valuably to the economic development. On the contrary, since modernised agriculture produces in plenty, it can contribute to the economic development more than it has thus far (Schultz, 1964). Schultz indicates the solution of such a paradox: it is necessary to modernize traditional agriculture in developing countries through exogenous inputs (such as technology) mainly through investments on education and farmers' training. Hence, according to Schultz, paraphrasing Schumpeter, it is necessary to "destroy" traditional agriculture in poor countries to "create" economic growth.

Through this article, we aim to create the theoretical basis necessary to undertake the study of the dualistic model (modernity/tradition) of European agriculture. For this purpose, we will analyse some theoretical frameworks taken from sociological and economic literature. Firstly, we will refer to the sociological theory of endogenous rural development, related to fragile agricultures, that we will extend to modernised agriculture. Lastly, we will outline a theoretical framework taken from economic literature emphasizing the pros and cons of these approaches.

## **2. Theory of rural endogenous development**

The theoretical reference, utilised as a starting point to provide the framework of the dualistic model of European agriculture, is the paradigm of the rural endogenous development. This paradigm has been elaborated and discussed in the last decades of 1900, within sociological and agro-economic literature (Ploeg J.D. van der 1992; Slee B., 1992, Iacoponi L., 1993). It

attempts to interpret the birth of self-supported development processes in particular rural areas excluded by modernised processes. This paradigm has developed further and its most recent reinterpretation has been renamed "New paradigm of rural development", but its basic assumptions, that will be described now, are the same.

The development model taken from this paradigm is "self-centred", because mainly based on (but not exclusively) endogenous resources, traditional techniques and local knowledge, such as agricultural biodiversity, locally spread techniques and local informative atmosphere. At the same time, the development model is "conservative"; for instance, local elements, being at the base of the productive process, are preserved, protected and exploited to that end (Iacoponi L., 1993; Sortino A., 2007). The paradigm is based on the three following starting assumptions: 1) the local choice of the development options; 2) the check or local monitoring of the development process; 3) local appropriation of development assets (Slee B., 1992).

Exogenous elements, as the so-called modern *inputs*, essential to the attainment of an efficient economics, are not uncritically refused but inserted, once they have been deconstructed and reconstructed, in accordance with the "local style of farming" (Ploeg J.D. van der, 1992). That means that a technology can be redesigned and modified instead of being applied integrally: its main components can be rearranged in order to distinguish it from the original exogenous model to adjust it to the local needs (Ploeg J.D. van der 2006). Then, the last aspect is one of the paradigm's crucial points, able to distinguish the endogenous development from a simple endogenous preservation and from an exogenous development. The endogenous conservation, namely the attempt to preserve the countryside, managing it as it was a museum, indeed does not entail any insertion of external components into the local history or tradition, which in some contexts often transforms into folklore. The exogenous development, that has affected the most profitable agriculture, vice versa imposes a strong and fast change of the natural environment through a copious integration of chemistry and technology, to increase the productivity of land, work and capital factors.

### 3. Original sources of endogenous development

According to Slee and Lowe, previous rural development policies have been influenced by different Liberal, Marxist or Keynesian theoretical approaches (Slee B., 1992; Lowe P., 2006). These approaches utilize different analytical instruments, but share the common goals: industrialization, specialization and integration to promote rural and dependent exogenous development for rural areas (Lowe P., 2006)

The endogenous approach to the rural development, and alternative to Keynesian and Neo-liberalist policies, has arisen in Europe, according to Lowe, in the 80s of last century from a series of practical experiences of alternative development.

With the concept of "endogenous approach to rural development", Lowe indicates a sustainable development "led from inside" and based on local elements (natural, human and cultural). Lowe identifies four original sources (that are summarised just below) of endogenous development, which have represented an opposition "in daily practices" to Keynesian and Neo-liberalist paradigms (Lowe P., 2006).

**First source:** the progress of some rural and semi-urban areas in the 70s and 80s with internal dynamics unknown until then. Some researches have tried to identify the key-success of these regions (flexible work markets, dynamic nets of small companies, communitary market, informative and technological atmosphere, local institutions regulations, rules and customs)

and if the experience could be repeated in other regions (Ploeg J.D. van der *et al* 1995; Iacoponi L., 1993). The most sensational example in Europe has concerned Italy after the '60 in the last century. Several areas located in the north-east and in the centre of Italy (the so-called NEC regions), characterised by a rural economy and by a society based on sharecropping, far from big industrialised centres, have experimented a rapid economic dynamism rooted in the rural and based on the nets of industrial and agro-industrial districts (Sotte F., 2006). In this case, the development model, which has been less-sustainable in environmental terms, is alike to the endogenous development model, because it is based on local elements such as human capital, locally shared values, technological and informative atmosphere.

**Second source:** movements and regional agencies that, trying to overcome the failures of Keynesian and Neo-liberalist policies, have attempted to promote in local communities forms of development less dependent from exogenous resources. In particular, local action comprised rural diversification and support to local productive activities. Such movements and agencies can be found in the marginal areas of different European countries: Ireland, France, Scottish Highlands, Iceland and rural Wales, Austrian and Italian mountain communities and groups for the development of the villages in North Sweden (Lowe P., 2006)

**Third source:** the debate on rural sustainability, including Cork declaration, that has attempted to match the economic development of rural communities with the environment protection and with the quality of life in rural areas, without which it is difficult to keep sustainable economic activities and employment; to avoid the depopulation of rural areas and to protect the environment (Lowe P., 2006).

**Fourth source:** a boost to "self-reliance" and to local self-organization's abilities promoted by environmentalists' movements and development radical activists, that work at close contact with groups of particularly marginalized areas. These ones have transferred Schumacher's thought of "small is beautiful" to the community economics field, trying to reassert the local control on economic activities, to protect the community from the homologous effect of globalization (Lowe P., 2006). Lowe lists some examples of such kind of development based on the concept of "small is beautiful", present in the outskirts of South Spain, West Ireland, North Sweden (Lowe P., 2006).

In order to partially integrate Lowe's ideas, we refer to two exogenous sources, that has advocated endogenous development in European rural areas. We will now discuss the combined action of the two phenomena: a) changes of the European society and the food style of its citizens, that have stimulated the endogenous development in rural areas; in particular we refer to the consumers' demand, that has moved from standardized products to a diversified range of customised and niche products (Sotte F., 2006; Pieroni P. *et al.* 2007 ); b) the contribution of new technologies, also IT, that have allowed small-middle companies to reach competitive levels (through external network economies), once reached only by large-sized companies (Sotte F., 2006).

#### **4. A new pattern of endogenous development for modernised agriculture**

The paradigm of endogenous rural development, as we have seen, rises in the context of rural areas excluded by modernised processes. At the light of the European model of agriculture that we have defined dualistic, this paradigm has been refined and extended to modernised agriculture. It is reckoned that the latter agriculture typology, in the attempt of restoring the lost virtuosity, accepts the even partial return of virtuous elements from tradition (for example

good agriculture practices, use of autochthonous seeds, crop rotations etc.), trying obviously not to come out from sustainable economic field.

Therefore, two patterns of endogenous rural development are set up. They will be summarized more clearly here below. The first pattern, already analysed mainly in sociological literature, concerns the development of fragile agricultures (Ploeg J.D van der, 1992). It is focused on local resources and it is supported, in order to achieve economic sustainability, by the introduction of exogenous elements duly accustomed in accordance with environment and "local feeling".

The second pattern of endogenous development, emerging from the hypothesis here formulated, concerns the qualitative evolution of modernised agriculture or, according to other authors, agriculture "qualitative modernisation" (De Benedictis M. 2002). With the perspective of converting environmental sustainability of productive activities, this agriculture typology prepares for the acceptance of past virtuous elements' return, duly readjusted to the new productive structure. In a preceding paper by the authors (Sortino A., Chang M., 2007) some indicators of the return of techniques have been underlined. For example: a reduction of synthesis products which are used in agriculture, expansion of organic agriculture; increasing the demand of traditional/typical products.

The endogenous development *pattern* that concerns modernised areas is related to a sort of quantitative decrease in production. It does not always match with worse economic performances, since products from tradition mostly fetch higher prices in advanced economies. Therefore, in such development context of quantitative decrease, the term "post-productivism" is a perfect synonym for "post-industrial".

## **5. The neoclassical economics and the endogenous rural development**

The theoretical inspiration of this paragraph originates from the analysis of some researches made by agriculture economists who, a few years ago, have studied the possible theoretical connections between the endogenous rural development paradigm and neoclassic economy (Iacoponi L. 1993; Romano D., 1996). In this paragraph, we will identify the evolutionary process of the neoclassical growth theory, from the exogenous Solow's theory to the most recent models of endogenous growth.

The neoclassical economic theory comprises at its core the "endogenous growth theory", called also "new growth theory", born to fill some gaps from the *tout court* neoclassic growth theory elaborated mainly by Solow in the second half of '900. The main gap in Solow's theory was evident in its representation of country's growth governed by exogenous elements: population growth rate and technical progress rate (Solow R., 2000). According to this theory, every single country has reduced possibilities to be able to influence its own economic growth. In addition, the long term convergence of countries is conjectured at world level. A part from the initial conditions, world countries' economies should reach a similar stable state characterised, in particular, by the same gross domestic product (GDP) *per capita* (Solow R., 2000).

The "new growth theory", without questioning any basic assumption of the neoclassical theory, considers that the economic growth of a country could also depend on endogenous lever like public and private investments on knowledge, education and training. In this way, the missing convergence is justified by the fact that, rich countries can invest big resources on human capital, consequently making their work-force more productive, whereas poor countries are obliged to renounce it. They do not have even the resources to guarantee primary education, that is of minor importance compared to the demand of satisfying other needs, even

more essential (starvation and sub-nutrition in the countries of the Third World). Education, as we all know, in many countries, is considered to be a luxury.

The "new growth theory" aims to provide a descriptive scheme of reality (Pasinetti, L. 2000) and consequently of post-modern society and immaterial production, where knowledge, training, language, but also affection make more and more economic wealth (De Masi D., 2003). Even the paradigm of endogenous rural development is particularly at its ease in the post-modern context. Such assertion is confirmed by the demand growth of those users enjoying landscape-environmental services, produced by endogenous agriculture as well as by the added value created by services included in food and agriculture assets (for example traditions, healthiness, environment protection) of the same agriculture. This appears as a good starting point to search for possible contact points between the two theories.

Our opinion is that both theories assign a fundamental role to "human capital" namely a growth and development force, as it is even corroborated by agricultural economics literature. Moreover, as Pasinetti says, the introduction of the concept "*physical quantity*" of human capital has occurred within the "new growth theory", <<without any apparent need to consider the logical foundations or the conditions under which it could quantitatively be represented>> (Pasinetti L., 2000). All the more reason for validating this criticism in a context of endogenous rural development where traditional agricultural skills and "informal" knowledge, namely that one handed down from father to son (e.g. traditional cheese-making techniques), cannot be compared to "study hours" or "school years".

The differences between the "new growth theory" and the paradigm of endogenous rural development are instead several; many of these have been already identified and discussed in previous researches made by agricultural economists. We highlight the five main differences existing and we list them below.

A) The first difference is pretty obvious: the different meaning assigned to the terms "growth" and "development", in the literature of the last decades; indeed, the first term mainly conveys the idea of quantity, while the second one refers to the idea of quality (life quality, food security, biodiversity *etc.*) (Romano D., 1996).

B) In the new growth theory, there is no hypothesis of any development sustainability, something which is instead implicit in the theory of endogenous rural development (Romano D., 1996).

C) Endogenous growth models have been formulated from simple assertions and deep simplifications (Solow R., 2000). By contrast, the starting assertions of endogenous rural development cannot be easily summarized in simple mechanics to be inserted in models of economic growth.

D) The new growth theory is macroeconomic. However, in those rare cases when the endogenous rural development paradigm was applied, the analysis of the agricultural system and the rural system could not be expanded further (Romano, D. 1996).

E) The new growth theory does not entail, and does not aim to do it, the processes of adjustment of external elements into a non-modernized context or the processes of re-adjustment of traditional elements into industrialized agriculture that characterize, as we have seen, the two *patterns* of endogenous development identified on this article.

## 6. Conclusions

Our contribution is essentially theoretical and it has concerned the European model of agriculture and the hypothesis of its endogenous development. We have schematized this model into two agriculture typologies: modernized agriculture and traditional agriculture. This distinction is not new in literature: Rossi-Doria and T.W. Schultz have already described agriculture activity in a similar way.

The theories that have been critically analysed in this article take form from sociological sciences and, in particular, we have referred to the theory of endogenous rural development, extending it to modernized and less virtuous agricultures. Moreover, we have created an economic background searching for possible contact points between the endogenous rural development theory and the new theory of neoclassical growth, known in literature also with the name of theory of endogenous growth. The conclusion, in this last case, is that the tools offered by the neoclassic theory, which for its own nature promotes an exogenous and global development (Iacoponi L. 1993), are not the most suitable for the study of endogenous development phenomena that can entail traditional agricultural and, through the return of traditional techniques, modernized agriculture.

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