

**EMPIRICAL MODELS FOR ENDOGENEOUS RURAL
DEVELOPMENT**

MODELE EMPIRICE ALE DEZVOLTARII RURALE ENDOGENE

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The Romanian rural communities have succeeded in finding a series of adjustment responses to the new requirements of the integrating society in agreement with the endogenous resources they have at their disposal.

The dynamic adaptive systems based upon self-sustainable economic and social entities, relatively autonomous, are part of this category of operation modalities in modernity terms.

Keywords: *endogenous development model, dynamic adaptive system*

The development type specific to the Romanian rural communities was determined by the difficult economic situation doubled by a prolonged crisis of the rural economy in the last decade. The rural communities tried to find their own solutions, adequate means specific to local development, generating economic and social modernization and trade-offs.

The rural crisis found its expression in the multiplication of natural, demographic and social capital fragilization, specific to each locality in part, being doubled by a prolonged period of change in the rural traditional values. The recoil of agricultural activities, the economic decline of urban centers, the modification of the status of towns as polarizing centers resulted in essential changes in the rural development. Furthermore, the rural society continued to be characterized by a significant demographic fluidity; as an open society, its adjustment modality was materialized in promoting increasingly consistent international migration flows. The effects of these flows are quite deep in the rural community life, encompassing various fields, from people's mentality to the household consumption structure, to social attitudes and behaviours. The demographic mobility induces an opening of the identity spatiality to a spatiality of action and performance.

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The empirical research activity revealed the existence of dynamic adaptive rural systems trying to respond to the modernization stimuli through the emergence and development of self-supportive economic and social systems. Rural development materialized in the establishment of complex systems with self-supportive and self-organization capacity, based upon endogenous resources. The model developed by M. Randell (2004) - based upon the model initiated by Kauffman - mostly operates in the case of certain rural regions from Romania; the structural conditions of the emergence of dynamic adaptive systems complexity were identified in the rural areas:

- the rural system inputs, materialized into information, data, etc. are those that ensure the viability of rural players/entities;
- diversity of rural players;
- the general situation of the system - in our case the shift to a new stage, named "stage transition" was identified, materialized into "formation, experimenting, normative ordering and reaching performance" (Tuckman, 1965); by means of these dynamic adaptive systems, the entire rural community goes from the economic chaos/disorder to an equilibrium stage, by changing the development process dynamics;
- superficial relations, not always institutionalized, as not all the actors are interconnected;
- competition or co-evolution of rural actors.

We mention that the research supporting this hypothesis, of the dynamic adaptive rural system, based upon endogenous development, is based upon case studies; these studies are not statistically representative for the whole Romanian rural area.

The territorial picture of the rural areas bears the print of the specificity of agrarian structures generating specific modalities of using the space, the natural and social capital. The territorial perspective is also defined by the type of relations that operate, by the nature of relations between the rural communities or between the rural communities and the urban communities. The economic gaps, the diminution of economic and social absorption power, have modified the traditional urban - rural relations; the economic domination relations, as well as the social polarization relations have been partially transformed or even replaced by other type of

relations, adequate to the new requirements and mainly to the new possibilities of urban economic expression.

The adjustment strategies specific to the rural communities from Romania have been empirically substantiated by a traditional natural and economic potentiality, promoting the endogenous opportunities with social visibility.

Their contents did not affect the spatial identity of communities and individuals, as it was not specific to a certain territory; it was rather the materialization of a multi-dimensional matrix of axes and inter-dependencies where the communities and individuals are located in multiple contingent, complex and contradictory ways. In this logic, one should not overlook the role that each community has as a social player of a spatial development system with specific functions and viable structures; each rural community can participate as an active player to the development of the whole system, to its operation under the conditions imposed by the endogenous type of development. The scarcity of financial resources, the prevailing subsistence farming, the prevailing peasant economy are obstacles to a normal development that the Romanian rural communities would like to go through; however, these obstacles can be surmounted by the change in the intervention modality.

One should not overlook that "agriculture development is not a mere derivation of the past", it is rather a fundamental process of rural modernization and community relations.

The conducted research established that the dynamic adaptive rural system is based upon the endogenous development as it operates on the basis of balanced local resources, of the modality in which these are combined and of the extent in which they are operated in a sustainable manner. "The local styles", generated and developed on the basis of combinations between the local resources and the "empirical constellations" consisting of specific economic activities, are main determinants in the process of community system development (Kaiser, 1990).

The involvement of local human resources and strengthening their role in the revitalisation of communities represents one of the key-factors of local development, permitting the shift of focus upon the human potential. The capacity of human resources to induce novatory elements is revealed by their own history, by the socio-economic environment specific to their communities, by the realities of the rural areas.

polarizing role (Study conducted in 2004 "Rural diversification and extension consortium", World Bank). In this case, the local economic and social initiatives were the vectors of the local modernization process to the extent in which an emergence process existed between these and the endogenous resources and their proximity. At the same time, it was found out that the involvement of local human resources represented one of the key factors of local development. The capacity of human resources to induce novatory elements through new activities was revealed by their own history and by the socio-economic environment of the communities where they belong. A second modernization factor was the capacity of local rural communities to get polarized from the economic and social point of view.

The main factor of the adaptive system is the existence of firms that by their economic history, by their performance, also prove the modality by which they managed to develop and multiply the agricultural activities; they generated other firms or departments providing upstream services: seed production, mechanization services, agricultural input commercialization. Another aspect related to firms or entrepreneurs with economic convergence role is promoting land consolidation, agricultural land sale - purchase, land lease and concession which resulted not only in the increase of farm size with its respective economic impact, but also established new relations between the rural communities, new economic flows.

The local economy of the communities making up this early rural system was characterized by:

- **As regards land tenure:** the land ownership distribution went beyond the national average – the average size per household was 6.3 ha, i.e. 2.6 times higher than the national average (2.4 ha /household) (rural locality Borcea). Another example is provided by the commune Valcelele – the average land property size is 5.7 ha, i.e. 2.4 times higher than the national average (2.4 ha /household). As a specific phenomenon in land operation, land lease stands out (Tables 1 and 2).

Table 1

Land operation in associations and under land lease system
in the locality Borcea

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Legal entities that leased in land (associations)	Arable land - ha	Number of associated members
S.A. CERES	1200	350
S.A. BORCEA I	800	200
S.A. BORCEA II	650	200
Legal entities that leased in land (companies)	Arable land - ha	Number of owners
S.C. AGROFARM HOLDING	9770	-
S.C. MORAR PAN	800	200
S.C. GLOBAL SERVICE	300	100
S.C. AGRICOM BORCEA	1700	60
S.C. AGROMECC	2200	300

Source: Data on the main forms of land operation provided by Borcea local council

Table 2

Land operation under the land lease system in the locality Valcelele

Physical entities that leased in land	Arable land - ha	Number of owners
MOLDOVEANU	250	60
CLOPOT ION	40	10
OROIANU GABRIEL	75	18
OPINCARU VASILE	35	8
Legal entities that leased in land (companies)	Arable land - ha	Number of owners
S.C. ILDU	1600	370
S.C. ILIA	160	2
S.C. NOVAMIA	900	280
S.C. AGROMAPREST	260	90
S.C. AGROTEHNICA	200	20
S.C. MIHUT	350	120

Source: Data on the main forms of land operation provided by Valcelele local council

- **From the point of view of firm size and economic power:** they created paid jobs in agriculture, leading to the unemployment rate diminution; by land operation consolidation, the firms made agricultural production more profitable, their profits turning into new community prosperity potentials. The production structures of the firms that operate the agricultural land were mainly oriented, in the locality Borcea, towards extensive crops (wheat, corn, sunflower, soy-bean, peas) and towards new crops, i.e. saffron and sweet corn. In the locality Valcelele, the areas under new crop species with exclusive commercial destination and high value added (soy-bean, mustard, crocus) were much larger than

those in the locality Borcea. At the same time, the private entrepreneurs intended to increase the efficiency of their livestock production by establishing herds consisting of highly performant animals - bovines-Holstein and Friesen, which is a specific characteristic of this locality only.

- **From the rural infrastructure point of view:** in both localities the incapacity of infrastructure to support the economic and social modernization process could be noticed. For example, it can be noticed that out of the 2870 households from Borcea, 94% are connected to the water supply network, the network length being 44.3 km. The share of households connected to the sewerage network is much lower (3.5%), this being functional only on a length of 2 km.
- **From the labour force point of view:** the activities from which wages are earned reflect the insertion of the local rural economy structures in the market economy. Agriculture has a significant share in the total number of employees due to the existence of agricultural firms and associations that operate land and need and at the same time have the capacity to provide wages to the permanent employees (Table 3). The diversification of rural economy activities, although not having very high shares in total employed population, reflects an important option for community modernization.

Table 3

Structure of employment in the commune Borcea

Activity sector	% in total number of employees
- agriculture	67.4
- industry	3.9
- constructions	1.8
- trade	4.5
- post, communications, transport, storage	9.2
- public administration	1.6
- education	10
- health and social assistance	1.3

Source: Data supplied by Borcea local council

In total activities carried out in the rural locality Valcelele, 70% of the active population was working in agriculture.

The social reflex of early economic modernization is still under its materialization stage.

The rural players that have an important role in the local economy - as defined by one commune or several communes - may be those with entrepreneurial spirit who have commercial farms or those who managed to institutionalize their agricultural business. The nature of business was quite limited due to the agricultural zone specificity, of the prevalence of agricultural activities; they were generally firms whose main object of activity was the production, collection and storage of agricultural products. The characteristics of agricultural holdings were specific to those of a modern farm, namely:

- existence of cash flow on farm;
- contract-based activities on farm;
- commercial character of farm,
- activities from which wages are earned on farm;
- clear options for rural partnership forms.

A. Dimensions of economic behaviours

- ◆ The characteristics of the behaviour in relation to *land* were the following:
 - The land areas into ownership had various sizes, which determined an active behaviour of land transactions; in the commune Valcelele the average size of operated areas was 56 hectares – in case of buying land – or 300 hectares – in the case of land lease; in the commune Borcea the largest bought area was 67 hectares, while the leased in area 520 hectares. The contract-based form is preferred in most cases in Valcelele; 8 farmers have written contracts, in which their rights and obligations are stipulated, which imposes a different discipline, other than the traditional one; it is a regulation not specific to the market economy that farmers already began to respect and internalize it. In the commune Borcea, the farmers who leased land had only written contracts.
 - The land fragmentation level was high, 4.6 parcels on the average for Valcelele and 3.4 parcels for Borcea. The problem of excessive fragmentation was estimated by entrepreneurs in the terms of the lack of efficiency, of poor performance: "land parcelling hinders investments" (farmer, commune Borcea); this was a problem because:

- it permitted the increase of labour force price due to costs multiplied by the transport between the parcels,
- the remote parcels were difficult to supervise,
- it did not permit intensive farming development.

Land organization that could be noticed in the investigated farmers is the result of a social universe in which the modalities of access to land resources have been respected and in which land is used as an interface of the economic exchanges regulated by the market economy rules. It is a modality to adjust and to strengthen one's own economic power that can induce another type of microeconomic development having an incidence upon the entire economic community from the local rural area. Out of this reason, one of the farmers considers that: "the agricultural area is more compact" (interviewed subject-Valcelele) in the case of land lease, and out of this reason land lease should be a more common form of land operation used by farmers. Furthermore, the social perception of the land lease phenomenon is in terms of discrimination from the perspective of access to fiscal and quasi-fiscal means: "the system of subsidies is discriminating because it is only landowners who receive subsidiesthe landowners pay an income tax that also includes the amount coming from land leasing" (farmer, Borcea).

The analysis of the status of operated land areas reveals the following characteristics:

- the land areas leased in by farmers represent 50-94% of total operated land areas;
- the increase of land property size was achieved due to land sale - purchase process and was not based upon the successional process;
- the leased in land was only arable land.

◆ The *economic* behaviour of agricultural entrepreneurs was specific to performant micro units because:

- *the input use* was a characteristic - all the investigated farms from the communes Valcelele and Borcea bought certified seeds - for maize, sunflower, wheat, barley and they also bought chemical fertilizers, herbicides and insecticides on a regular basis:

§ the supplier was only from the private sector and in general the relations involved cash

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- § in general the obtaining of inputs was based on a contract; the economic dimension of farms was one of the factors that positively influenced the adoption of such a production behaviour
- § these relations were mainly based on cash; in the case of large-sized farms, the payment was only under cash form, for example in the case of the 520 ha farm from Borcea or 200 ha farm from Valcelele. It was noticed that in the case of farms with less than 100 ha, mixed forms could be found, cash and payment in kind. The mixed forms are preferred for buying certified seeds, fertilizers, pesticides, insecticides and herbicides.
- *the commercial behaviour* - production sale was an important objective, however not always based on a contract. Most entrepreneurs sold their products to the local firms - in the case of those from Valcelele, the relations were based only on cash and payment was effected at delivery. The commercial behaviour had not clearly defined characteristics due to the drawbacks of the entire financial and economic environment in which these activities took place; the entrepreneurs were tributary to a system that induced economic inhibitions through its dysfunctionality
- there was an obvious integration of entrepreneurs at the level of *production infrastructure*; the most illustrative case was offered by the entrepreneurs from Valcelele, that managed to cover their logistic needs by renting the storage premises offered by the agricultural firms
- the entrepreneurs managed to stand out in the economic life of rural communities by their performance, due to the *labour force type* they used. We cannot draw the conclusion that the investigated farms were capitalist farms where paid labour force prevailed, but we can come to the conclusion that most of them also use paid labour, which also induces another mentality, another discipline of work. On most farms both permanent and seasonal workers can be found, paid on a monthly or weekly basis, in cash. These farms are obviously distinguished from the subsistence farms where labour force consisted of family members and other relatives. The cash-based relations were introduced and supported by the type of farming practised by entrepreneurs, being one of the important economic emancipation factors.

B. Social behaviours

The entrepreneurs' expectations envisaged an institutionalized perimeter of an association/co-operative with objectives that should have in view:

- “association for buying inputs” (farmer, Valcelele)
- “association for obtaining performant crop varieties and equipment” (farmer, Valcelele)
- “association for the whole range of services, from certified seeds to marketing, processing and storage included” (farmer, Borcea)

The weaknesses in the economic activity determined farmers to grow aware of the benefit of organization under partnership forms that can be the solution to difficulties that they cannot surmount by themselves: “We should get associated in order to establish a partnership that permits negotiating prices with those collecting the products” (farmer, Valcelele).

The empirical studies identified another type of dynamic adaptive rural system that partially operates according to the old patterns of the urban polarization areas. Such a system exists in the rural area of the Arges county: there are rural localities that are partially polarized by the town Campulung Muscel but that have already become polarizing centers: Albesti, Valea Mare Pravat, Leresti and Schitu Golesti (study conducted in 2004 “Estimations of sustainable development in Muscel zone. "Case study”). It is a rural system type that defines its social identity in conformity with:

- exterior relations between the localities: subordination/competition/indifference-based relations;
- distance between the lower rank administrative units centers - rural locality and the regional convergence centers - town or municipality;
- economic, demographic and position potential of localities involved in the system;
- historical antecedents of the relations between the localities involved in the system.

exploited in an efficient way. The existing firms are not integrating poles for a larger area than the administrative area of the commune, they provide a low number of jobs to the active population and exploit the existing resources on a moderate basis.

Rural tourism still represents an opportunity, not a reality.

The occupational diversity falls within the same matrix of natural resources utilization in the terms provided by undeveloped rural economy; the main occupations are found in the forestry, agricultural and calcareous stone mining.

The economic level of the commune is specific to a poor, traditional community.

The rural locality Albesti - as player of the adaptive rural system - had its own evolution pattern, it was related to the other rural or urban communities only for covering a series of basic needs.

In this respect its dependency on the urban center - the town Campulung Muscel - was materialized only in the educational, health and leisure relations for the young population segment. There was no functional system in place, however there existed a system for covering the basic needs, mainly those referring to human capital development; there was a system of educational and health compensation and partially economic, as regards the jobs that part of the population maintained in the urban area and the commercial relations, as part of the rural inhabitants sell their products on the market from the town Campulung.

The relations with the other rural localities mainly referred to the participation to animal fairs, on a weekly basis - Voinesti, located at 8 km is an example. This is a traditional relation that could multiply only economic relations.

In the empirical investigated network, Albesti is identified as a community node with a low number of relations generated by the coverage of vital community needs; this node did not have a clearly defined status in a rural system. Its connection to the urban center was determined by a socially frustrated behaviour.

The rural community Leresti is the second empirical node of the rural network. This community consists of three villages, namely Leresti, Voinesti and Pojorata, located in the hilly zone.

The spatial identity is an asset for a multiple economic development, being also supported by the forestry resources lying on its area. The spatial

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management of land and its population is facilitated by a high access level due to the intracommunal asphalt connection roads. The distances between the component villages are quite low (3 km village Voinesti and 1 km village Pojorata), which permits a permanent and easy flow between all the spatial entities. The natural location incurs a series of risks for certain zones, landslides and areas prone to flooding. The node status of the rural area surrounding the town Campulung is also due to the road accessibility to the town; there are 8 buses connecting this area to the urban center; this adds to the transport line connecting this area to Bucharest and to Pitesti implicitly.

The economic identity is the second asset that supports it as rural convergence center, as rural polarization center. The human and economic potential is one of the elements that used to substantiate endogenous development, a sustainable type of agriculture based upon its own resources that however supported the emergence and multiplication of a network to which other rural centers could also be connected. The commune Leresti had obviously an important node status in the investigated empirical network. Its relations with the other rural localities are of the following nature: economic - providing jobs for a part of labour force from the communes in the neighborhood; commercial - organization of fairs on a weekly basis; health services - existence of a pharmaceutical point providing a minimum amount of medicine for the rural people living in the neighborhood. The relations established with the town Campulung were determined by the satisfaction of basic needs generated by the health condition, educational and cultural needs. To these motivations, the occupational motivations are added - labour force commuting from Leresti to Campulung - and of economic nature - a part of the farmers from Leresti sell their products on the market in town. The functionality of the network of localities is ensured by the economic and social compensation behaviours rather than by the needs of entities that develop together, under community partnership forms.

The rural community Schitu-Golesti was one of the main actors of the adaptive system. As a relatively large-sized rural community, it consists of 6 villages: Schitu-Golesti, Lazaresti, Valea-Pechii, Loturi, Costita, Burnesti.

The number of bus transport lines benefiting the commune facilitated the road access between the central village of the commune, Schitu-Golesti and the urban centers: there were 14 lines Campulung -

Schitu-Golesti and 4 lines Campulung- Bucuresti, that passed through Schitu-Golesti. Its relations were multiple from the economic standpoint, as they contributed to the development of commercial contacts and provided jobs for the people from other rural localities. The spatial location provided a well-defined status in the process of inter-community communication facilitation. The development profile of the commune Schitu-Golesti was determined by its spatial identity as it lies at the junction of two polarization zones: the immediate polarization zone of the town Campulung - 10 km - and the diffuse polarization zone of Pitesti municipality - 40 km. The commune's own evolution pattern has been permanently at the confluence of the two polarizing poles. The occupational structure contracted several times, due to the local industry decline and to the non-assimilation of certain occupational patterns that could have re-oriented the active population from the social point of view. The modernization of agricultural activity featured certain stagnation as in the last three years no new crops or animal breeds were introduced and no commercial farms emerged. The occupational process was limited by different stagnation and involution forms due to the economic crisis initiated in the last decade.

The trade relations have a well-defined status, which induces the important node status from the inter-rural network of the locality Schitu-Golesti. Twice a week, a grain and non-food commodity fair is organized in the commune - on Friday and Saturday. There are 50 agricultural producers who sell their products on the market in Campulung. The easy access of the locality to markets is one of the main opportunities at commune level.

The occupational diversity has minimum manifestation levels, although the spatial identity confers a multi-functional economic development.

The semi-modern profile of the development level induced economic contagion phenomena for the other participants in the network and promoted economic and social emancipation behaviours.

The rural community Valea-Mare Pravat has a natural and economic capital providing modernization and development opportunities, as well as a series of constraints, mainly of social nature, that act as weaknesses. The commune consisting of 8 villages is located at 60 km from the county capital and at only 5 km from the nearest town, Campulung. As it is located in the mountain zone, the commune features a strong natural and economic vulnerability due to the existence of easily flooded zones,

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landslides and depth of phreatic layer. There are different development styles for the component villages of the commune, owing to the different possible combinations between the natural resources and to the access level that resulted in a separate community development. The community history and the specificity of the zone explains the non-association behaviour; the commune was not co-operatized, the prevailing occupations imposed a behaviour focusing upon rural entity - individual or household - and permitted the moderate development of the institutionalized inter-human networks.

The economic and social structure were characterized by the peasant economy, by the prevalence of the subsistence and semi-subsistence household farms. Without being a polarizing node in the rural system, this locality represented an active economic participant to the rural system.

The two examples of rural adaptive systems were identified in the poor rural areas; the first system based upon agriculture development and occupational modernization emerged in a rural zone considered to be one of the "poverty bags" of the Romanian rural area; the second is part of the rural areas located in a zone with urban influence, typical enclaves of rural poverty for Romania. These systems, in early forms, are part of the response that rural communities could provide to the challenges of the economic transition.

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