

SOCIAL INOVATIVE POLICIES WITHIN LOCAL KNOWLEDGE TRANSFER IN ROMANIAN AGRICULTURE

Gabriel POPESCU¹, Adriana AGAPIE²

¹ Ph.D., Professor, Director of the Agri-Food and Environmental Department, Bucharest University of Economic Studies, Str. Mihail Moxa 5-7, Sector 1, Bucharest, Romania, email: popescug2004@yahoo.co.uk

² Ph.D., Associated Professor, UNESCO Department of Business Administration, Bucharest University of Economic Studies, Calea Griviței 2-2A, Sector 1, Bucharest, Romania, email: adriana.agapie@yahoo.com

Abstract

In agriculture, non-profit management is nowadays at the core of the co-operatives' integration in the context of both civil and commercial societies. Importing laws for the creation of correspondent structures in emergent countries in the European Union is different to importing know-how in technology. This is why, in the process of generating the law for the creation of the Romanian Chambers of Agriculture, along with the historical evolution and the counterparts in countries like France, Italy or Germany, the specifics of the today's Romanian economy need all of them taken into consideration. This paper comprises the full description of a hierarchical, mathematical model for the Romanian Chamber of Agriculture (RCA), built and evaluated together with experts gathered through several national conferences organized by the Regional Network of Rural Development (RNRD). This model is assembled with the aim of understanding and quantifying the main risk factors in the optimal design and institutional functioning of the Romanian Chamber of Agriculture and it constitutes one of the most important scientific recommendation for a new legislative project. Results refer to a specific optimal distribution of the members, fiscal policies and particular sources of funding. The method of deriving these findings is following the theory of Analytical Hierarchy Processes (AHP).

Keywords

Romanian Chambers of Agriculture, Analytical Hierarchy Processes, local knowledge transfer, social innovative processes

Introduction

For the legislative effort of instituting the content and the functions of the Agricultural Chambers and Agricultural Co-operatives, at a point where Romania is facing systematical lags in agricultural development in terms of infrastructure, property rights and market integration it is imperious necessary to deeply reflect over the desired functions of these institutions, embed the existing knowledge of experts in agriculture at every level of activity and from every major agricultural region, the history of the functioning of these institutions in Romania and come up with a legislative proposal which is more than an imported and eventually adjusted one from other countries in the European Union.

This paper is the result of an innovator philosophy over the way of defining institutions, of a brand new modeling approach in Romania and of an extensive consultation with experts in various fields and regions in the Romanian agriculture. The output is precise, in terms of every concrete aspect needed to be stated in defining the structure of either Agricultural Chambers or Agricultural Co-operatives.

The innovatory philosophy over the way of defining institutions consists in considering as focal the desired functionalities of the institution to be legally defined. Starting from this

conceptual thinking, an integrative view of the institution to be created is developed in relation with the agricultural market and with the rest of the economy. The final conceptual scheme with detailed desired functions for Agricultural Chambers in connection with the social economy and markets is regarded as an example of an innovative social policy.

The brand new modeling approach in Romania is the usage of the Analytical Hierarchy and Network Processes (AHP/ANP). Although this is a long time, highly reputed method of decision making with various and famous applications in the USA, it is marginally mentioned in the Romanian scientific environment. Its applications in Romanian economy and policies are virtually inexistent.

Upon a prototype of an AHP/ANP model for the optimal functioning of the Agricultural Chambers, starting from a careful consideration of their desired functionalities and their integration on the social and market Romanian economy an extensive consultation with experts in various fields and regions in the Romanian agriculture was conducted under the National Network of Regional Development agency (RNDR). After presenting the conceptual framework as well as the historical backgrounds, the AHP model for the Agricultural Chambers was discussed and amended by the participants and finally estimated. Results together with their interpretations conclude the paper.

1. Conceptual versus modelling paradigms

Associative structures in the agriculture as well as in other fields emerge as organisms designed to absorb, process and respond as individual interests' representation of their members to the pressures of the market economy and to the social economy. Based on general principles as the principle of voluntary association or the principle of democratic control, their objectives are to maximize the farmers' revenues and to minimize the corresponding profits. Revenues maximization is usually aimed to be achieved within associative structures through the attempt to obtain the highest possible prices for their products. These efforts are limited and distorted by specific national and agricultural policies regarding subsidies for different activities as well as by specific asymmetries of information regarding the markets. Minimization of the input factors is aimed through increasing bargaining power, due to grouping into specific associative structures. Also, the innovative initiatives have always better chances to be nurtured and properly developed within the context of specific associative structures.

SOCIAL ECONOMY		ASSOCIATIVE STRUCTURES		MARKET ECONOMY	
OBJECTIVES		OBJECTIVES		OBJECTIVES	
Respecting the human rights and liberties	←	The principle of voluntary association	Maximizing farmers' revenues by facilitating the highest possible prices for their products	→	Maximizing profits
Monitoring the state activities	←	The principle of democratic control	Minimizing farmers' expenditures through minimizing the input factors' prices, facilities for the production process and for services at the lowest possible prices.	→	Growing revenues
ORGANIZATIONS		ORGANIZATIONS		ORGANIZATIONS	
Groups of producers, Groups of local initiatives, inter-professional organizations, agricultural chambers, family agricultural associations-with or without juridical existence		Co-operatives, associations with different objects of activity		Economic societies (SA, SRL)	

Fig.1 The functionality of the associative structures within social and market economy

Specific associative structures in the Romanian agriculture contribute to the specific goals of the social economy through monitoring the state activities and react in real time and through assuring a continuous respect of the human rights and liberties. These complex relationships, also largely analyzed in and commented, being synthetized in the Figure 1.

2. An AHP model for evaluating the risks in the good functioning of the Romanian Agricultural Chambers

Following the conceptual scheme largely described in the section above and the methodology of the Analytical Hierarchy Processes (AHP) as in a top-down hierarchy was constructed having as top node the problem under investigation, namely identifying the risk factors in the optimal functioning of the Romanian Chambers of Agriculture.

Following the large consultation in two rounds with experts, under the National Network of Rural Development, based on the pilot model presented and after an extended presentation about the history of the development of the RCA and contemporary problems in their good functioning, criterions, sub criterions and alternatives were discussed and finally agreed, together with the correspondent top-down connections. The presentation of the model follows below with the mention that every node in a cluster of criterions, or sub criterions is connected with the nodes numbered accordingly.

The main risk factors identified as posing the most threat in the good functioning of the Romanian agricultural Chambers (RAC) are: 1. Institutional formation of the RCA's, 2 Influence of the political factors, 3. The associating structure, 4. Setting the main Objectives, 5. Sources for financing, 6. The practical Implementation of the existing rules.

The problem of the institutional formation of the RCA's was further splinted into two types of potential definition of the formation for such an institution: top-down, through public decision and down-top, through the organisation of a competition. Thus, in the sub-criterion cluster, the node 1. 1. Institutional formation of the RCA's is unilateral connected with the next two nodes: 1.1. Public Decision (top-down) and 1.2. Competition (top-down). The influence of the political factors is considered to be discernible either through the interference with the management or by imposing certain members with political affiliations. As a consequence, node 2 Influence of the political factors is further connected with the following nodes in the sub-criterions cluster: 2.1. Policy Decisions' interference with the RCA's management and 2.2. Politically imposition of managers and/or members. For defining the structure of the RAC's it was considered important to focus on an exhaustive list of the potential associates, on the hierarchy of the potential members and on the degree of representation. Therefore, the node 3. The associating structure is top-down connected with the following nodes in their sub-criteria layer: 3.1. The list of potential associates 3.2. The hierarchy of the potential members' 3.3. The degree of representation. The objectives were splint into fixed objectives, common to every type of Agricultural Chamber and flexible objectives, specific to the size, the region and the goals. So the node 4. Setting the main Objectives is further connected to the nodes 4. 1. Fixed, rigid objectives 4. 2. Flexible objectives. The node 5. Sources for financing is connected with 5.1. Financing from the Budget and 5.2. Other sources of financing. The node 6. The practical Implementation of the existing rules is connected to 6.1. Issuing permits 6.2. Authorization of new plantations and 6.3. Others.

The alternatives considered for the node 1.2. Competition are A.1.2.1. Guide quality and A.1.2.2. Expert quality. 3.1. The list of potential associates is splint into the following alternatives: A.3.1.1. Farmers, A.3.1.2. Experts, A.3.1.3. Financial units, A.3.1.4. Cadastru, A.3.1.5. Collecting/processing units, A.3.1.6. Non-profit associations, A.3.1.7. Commercial units, A.3.1.8. Cooperatives, A.3.1.9. Research Centers/Universities.

The alternatives considered for the node 5.1. Financing from the Budget, connected top-down are as follows: A5.1.1. Financing from the budget in the form of a fixed percent out of the services, A5.1.2. Financing from the budget for PNDR consultancy, A5.1.3. Financing from the budget for paperwork regarding periodical payments, A5.1.4. Financing from the budget for collecting and delivering statistical data, A5.1.5. Financing from the budget for other services.

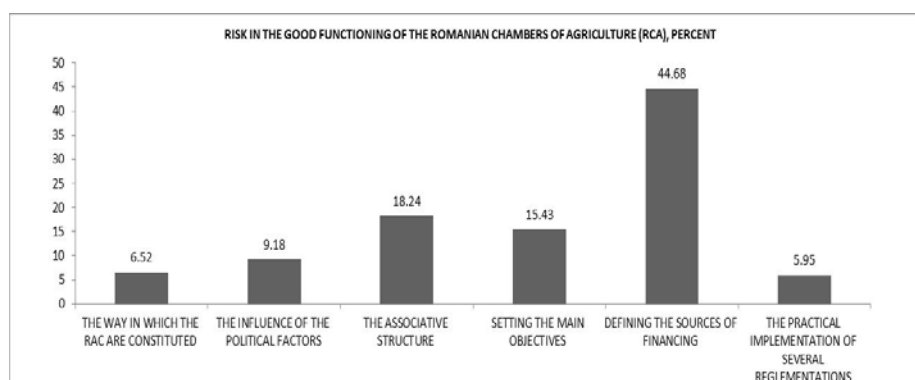


Fig. 2 Risk in the good functioning of the Romanian Chambers of Agriculture (RCA), percent

Regarding the other sources of financing than those from the budget, the alternatives considered from the node 5.1. Financing from other sources are the next ones: A.5.2.1. Financing from other sources as a percent from land impositions, A.5.2.2. Financing from other sources as a percent from selling/buying land, A.5.2.4. Financing from other sources as a fee for issuing producer' certificate, A.5.2.5. Financing from other sources as a consultancy fee, A.5.2.6. Financing from other sources for certifying biological material and A.5.2.7. Financing from other sources by considering other potential revenues. This model was estimated through large consultations and the opinions agreed for every pairwise comparisons and every decision matrices were imputed into the SuperDecisions software, freely available. The consistency index for every decision matrix was below 0.1, as recommended in several occasions by the founder of the theory, Thomas Saaty. Finally the model was synthetized and several of the most representative results are shown in the figures below. In Figure 2. Risk in the good functioning of the Romanian Chambers of Agriculture (RCA), percent is represented the vector of priorities corresponding to the main risk factors identified by the participants as endangering the good functioning of the Romanian Chambers of Agriculture.

The most attention should be devoted to defining the sources of financing for the Romanian Agricultural Chambers. Then, the way in which the associative structure is legislated followed by the way in which the main objectives are set are the next two criterions inducing significant risks if improper defined or if insufficient attention is given, to the good functioning of the RCA's. Since financing proved to be the most important category to be though and afterwards legislated, in Figure 3 above are detailed the several sources from the budget for financing, with their corresponding priorities.

It came out that offering paid consultancy on the National Plan for Regional Development (PNDR) constitute the most important source of financing from the budget, with weight of importance equal to 42.5 percent, followed by the activity of filling the paperwork for

periodical payments, with a weight of importance equal to 22.21 and fees from collecting and disseminating statistical data, with a weight of importance equal to 17.39 percent.

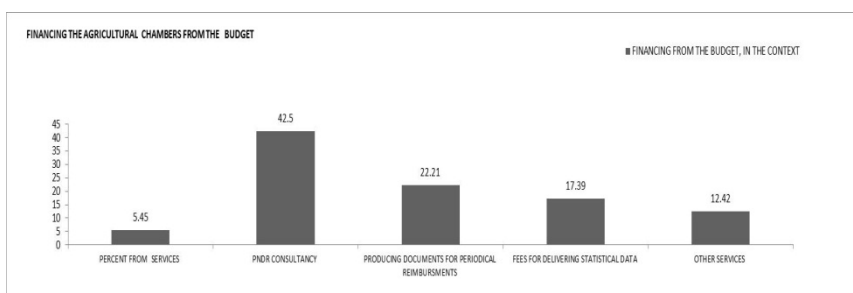


Fig. 3 The relative importance of several sources from the budget of financing RCA's within the AHP context

Regarding the sources of financing other than from the budget, the most important seems to be that of the membership fees, of 47,84 percent, followed by the fees for issuing producer's certificates, with a weight of importance of 21.98 percent. In Figure 4 below is also shown the difference in between estimating the weights of importance within the context of the AHP hierarchy built and out of the context, like the pairwise comparisons for the sources regarding the financing were by themselves alone pairwise compared.

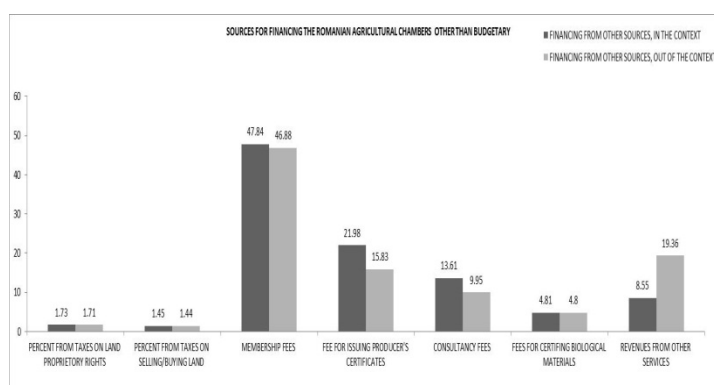


Fig. 4 The relative importance of several sources apart from the budget of financing RCA's in and outside the AHP context

It can be noticed, therefore that although in some categories regarding the financing appear to be no differences or these are insignificant, like is the case of the membership fees, in other cases, like is membership fees or fees from issuing producers' certificates, these are either under or over estimated.

Finally in the Figure 5 is shown, in the context of the AHP model and outside the context the composition of the RCA's.

Thus, the most numerous as members should be the agricultural cooperatives, followed by the collecting and processing units. It should be noticed the striking difference in between the number of cooperatives estimated in the AHP context and outside. This comparison is once again emphasizing the importance of judging aspects in the corresponding context. It is

an illustration of a social innovative process and also of how the local knowledge can be properly estimated.

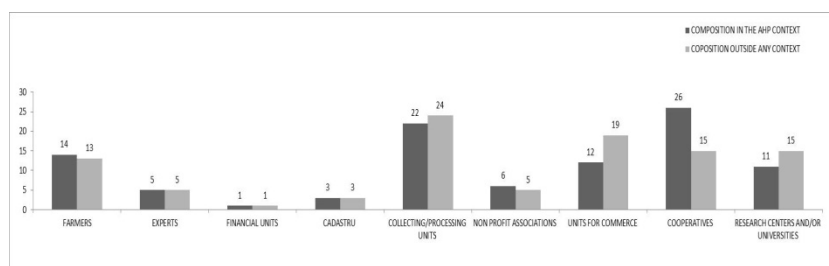


Fig. 5 The composition of the RCA's as ideally perceived within and outside the AHP context

Conclusions

Recognizing the specifics of the knowledge transfer, latest developments in the literature bring at the forefront the concept of the local knowledge transfer, with its several important illustrations in the agriculture in several countries. In this stream it is emphasized the importance of including this type of knowledge into the plans and actions of restructuring and modernizing agriculture. This paper brings an important example of the way in which this local knowledge can be included in a rigorous multi-criteria decision model. The AHP hierarchical model, constructed through a large consultation with experts all over the country offers concrete insights about the main risk factors which could impede on the good functioning of an associative structure like the Romanian Chamber of Agriculture is. This model is constructed starting from a conceptual design of the desired functions of this institution, in the context of both social and market economy. In this sense, the approach tackled is considered to be a social innovative process. The very concrete percentages of importance associated to the diverse sources of financing, both from the budget and from other sources, the number of the members as well as the estimation of the risk factors constitute a valid support for any project aiming to legislate the constituency of these associative structures.

References

1. Bratianu, C., Agapie, Ad., Orzea, I. 2011. Modelling organizational Knowledge Dynamics using Analytic Hierarchy Process” *Electronic Journal of Knowledge Management*, 9(3): 236-247.
2. Bratianu, C., Agapie, Ad., Orzea, I., Agoston, S. 2013. *Knowledge strategies and decision Making*, Editura ASE.
3. Popescu, G. 2014. *Cooperatia in agricultura, de la argumentul istoric la transferul de cunoastere*, Editura Academiei Romane.
4. Saaty, T.L. 2010. *Principia Mathematica Decernendi Mathematical Principles of Decision Making*. Pittsburgh, PA: RWS Publications.