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ABSTRACT

This study deals with the most important features of European agricultural cooperatives and puts special emphasis on the business dimension as the key factor in their economic development. Cooperatives were subjected to a cluster analysis in order to classify them according to variables related to their commercial dimension, the key factor in competitiveness. They were also assessed for their main strengths and weaknesses with a view to the possibility of extending their activities to foreign markets, this being one of the main challenges they have to face in the current economic context.

KEY WORDS: European agricultural cooperatives, competitiveness, dimension, internationalisation.

ECONLIT DESCRIPTORS: Q130, Q140, Q110.

Economía social y cooperativismo en Europa. Contribuciones a una nueva agricultura y desarrollo rural en la UE-27

RESUMEN: En este trabajo se analizan las características más sobresalientes de las cooperativas agrarias europeas, haciendo especial hincapié en la dimensión empresarial como factor clave de su desarrollo económico. Se realiza, por medio de un análisis cluster, una clasificación de las mismas en función de variables relacionadas con su dimensión empresarial, como factor clave de competitividad empresarial. Del mismo modo, se realiza una evaluación de sus principales debilidades y fortalezas, incidiendo en la posibilidad de internacionalización de su actividad, como uno de los grandes retos que se les plantean en el actual contexto económico.

PALABRAS CLAVE: Cooperativas agrarias europeas, competitividad, dimensión, internacionalización.

Économie sociale et coopérativisme en Europe : contributions à une nouvelle vision de l'agriculture et du développement rural dans l'Union Européenne des 27

RÉSUMÉ: Ce travail analyse les caractéristiques les plus importantes des coopératives agricoles européennes, en mettant l'accent sur la dimension commerciale comme facteur décisif dans le développement économique. Ces coopératives ont été soumises à une analyse cluster, afin de les classer en fonction de variables relatives à leur dimension commerciale, facteur clé de la compétitivité. Leurs principales forces et faiblesses ont aussi été évaluées, dans la possibilité d'étendre leurs activités aux marchés internationaux, ceci représentant l'un des principaux défis dans le contexte économique actuel.

MOTS CLÉ: Coopératives agricoles européennes, compétitivité, dimension, internationalisation.

1.- Introduction and Objectives¹

Agricultural cooperatives (agricoops) have long been established in the EU and have a much greater influence in their sector than cooperatives in other economic areas. Indeed, after the latest EU expansion, the nearly 25,000 agricultural cooperatives already in existence were joined by more than 11,000 from Central and Eastern European countries. Consequently, there are now more than 35,000 with over 12 million members and a turnover of more than €250,000 m (Table 1).

These organisations have a wide range of activities, the most important being marketing their members' products, in some cases after processing (as in the case of oil, wine, milk derivatives, meat products, etc.), providing them with supplies and providing them with certain services to assist with production. They can therefore be said to make a direct contribution to farm incomes.

The total agricultural cooperative production forms more than 60% of European agricultural output (EU-15). In some countries their production of certain commodities may be higher than 90%, for example milk production in Denmark, Austria, Finland and the Netherlands, pork in Denmark and cut flowers in the Netherlands (Table 2). It should also be noted that their market share is increasing in many sectors and Member States. This is happening in Belgium, Denmark, Germany, Finland, the Netherlands and Portugal with many of the products analysed in this study: fruit and vegetables, meat, milk products and cereals. In the remaining countries, with few exceptions, they have maintained their market share, which is a sign of the extent to which farmers rely on this form of association.

In the last 12 countries admitted to EU membership there are currently nearly 11,000 agricultural cooperatives. They have a large share of the market in many sectors, for example 30% in Cyprus and 65% in the Czech Republic (Tables 1 and 2). However, they are still relatively underdeveloped in comparison with their counterparts in other EU states. There are several reasons for their present situation. One of these is the mistaken concepts regarding cooperatives that were prevalent during the transition from socialist to free market economy. Many governments looked on the cooperatives as being closely linked to the socialist regime and therefore forced the cooperatives to share out the land among their members, who were also encouraged to abandon the organisations (Bartus, 1998). Government support for the cooperatives was reduced to zero and in many cases legislation acted as a disincentive. The outcome was that in several member states, and especially in the agricultural sector, cooperatives were converted into other types of business companies. However, in spite of the opposition, agricultural cooperatives continue to carry considerable weight.

1.- This work was carried out within the framework of the project "Diseño de herramientas de análisis y diagnóstico de la situación de las cooperativas agrarias valencianas", financed by the Universidad Politécnica de Valencia, and also in the project GV/2007/165, financed by Conselleria de Empresa, Universitat y Ciencia de la Generalitat Valenciana.

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Table 1. Statistics of Agricultural Cooperatives in the European Union-27, 1998-2003

	Year	Number of cooperatives	Members (000s)	Workers (000s)	Members per co-op	Workers per co-op	Turnover ¹	Turnover per co-op ²
Austria	1998	1047	560.7	19	535.5	18.1	ND	ND
Belgium	1999	345	36.3	ND	105.2		ND	10
Denmark	1998	21	99.3	41.5	4728.6	1976.2	12.570	598.6
Finland	1998	69	234	33.6	3391.3	487.0	8.400	121.7
France	1998	3750	612	ND	163.2		63.000	16.8
Germany	1998	4221	2964	140.9	702.2	33.4	37.700	8.9
Greece	2000	6470	745	ND	115.1		0.925	0.1
Ireland	1998	122	185.6	37.1	1521.3	304.1	11.300	92.6
Italy	1998	4278	571	44	133.5	10.3	12.723	3
Luxembourg*	1995	ND	ND	ND	ND	ND	ND	4.8
Netherlands	1997	ND	ND	ND	2204.2	ND	ND	176.05
Portugal	1998	908	ND	ND	ND	ND	0.867	0.95
Spain	1998	3968	1072	47	270.2	11.8	8.754	2.2
Sweden	1995	ND	ND	ND	6.000	ND	ND	165
UK	1995	ND	ND	ND	535.57	ND	ND	15.14
EU-15 Total		25199	7079.9	363.1	281.0	14.4	156.239	6.2
Bulgaria**								
Cyprus**								
Czech Rep.	1998	798	235	ND	294.49	ND	ND	ND
Estonia								
Hungary**								
Latvia	2000	68	7.5	0.4	110.2	5.88	5690	83.7
Lithuania								
Malta								
Poland**								
Romania**								
Slovakia								
Slovenia	2000	107	22.7	3.9	ND	ND	463	4.3
Total								
EU-27 Total								

(1): Thousand millions of €. (2): Millions of € per cooperative. ND: no data available.

Sources: Compiled by the authors from COGECA (2005). *Data for Luxembourg from COGECA (2000).

**Data for Cyprus, Hungary, Romania and Poland from ICA (1998).

Table 1. Statistics of Agricultural Cooperatives in the European Union-27, 1998-2003 (Cont.)

	Year	Number of cooperatives	Members (000s)	Workers (000s)	Members per co-op	Workers per co-op	Turnover ¹	Turnover per co-op ²	Co-op Turnover / Final Agricultural Output (FAO) (%)
Austria	2003	1046	441.3	19.9	ND	19.02	ND	ND	ND
Belgium	2003	355	35.8	20	100.8	56.34	2.75	7.7	40.4
Denmark	2003	14	81.5	35	5821.4	2500.00	18.85	1346.4	231.7
Finland	2003	45	215	45.2	4777.8	1004.44	13.3	295.6	320.3
France	2003	3500	580	150	165.7	42.86	67	19.1	104.6
Germany	2003	3286	2385	120	725.8	36.52	37	11.3	91.8
Greece	2002	6370	714	ND	112.1	ND	1.04	0.2	8.6
Ireland	2002	99	197.9	35.3	1999.0	356.57	12.4	125.3	215.8
Italy	2003	3863	536.2	64	138.8	16.57	20.83	5.4	47.5
Luxembourg*	1999	9	ND	ND	ND	ND	ND	25.6	91.6
Netherlands	2002	44	143.14	ND	45160	3253.2	ND	1026.4	277.3
Portugal	2002	924	ND	ND	ND	ND	ND	0.95 (a)	22.0 (a)
Spain	2003	4175	932.1	78.4	223.3	18.78	14.19	3.4	34.5
Sweden	1999	53	300	13.6	5660.4	256.60	10	188.7	228.1
UK	1999	565	241	13.6	426.5	24.07	12.4	21.9	51.3
EU-15 Total		24419	6916.6	654.6	283.2	26.81	232.5	9.5	
Bulgaria**	1996	3267	743	0.231	ND	0.07	ND	ND	
Cyprus**	1996	36	15.7	ND	436.1	ND	ND	1.3	
Czech Rep.	2003	686	54.8	ND	79.9	ND	ND	ND	
Estonia		ND	ND	ND	ND	ND	ND	ND	
Hungary**	1996	1345	300	ND	223.0	ND	ND	0.9	
Latvia	2003	72	8.4	0.5	116.7	6.94	0.023	0.31	
Lithuania		ND	ND	ND	ND	ND	ND	ND	
Malta	2003	17	0.003271	0.102	192.4	6.00	0.038	2.2	
Poland**	1996	4938	630	ND	127.6	ND	ND	0	
Romania**	1996	ND	ND	ND	ND	ND	ND	ND	
Slovakia	2002	745	ND	47	ND	63.09	ND	ND	
Slovenia	2003	86	19.5	3.4	226.7	39.53	0.51	5.93	
Total		11192	5042						
EU-27 Total		35611	11959						

(1): Thousand millions of €. (2): Millions of € per cooperative. ND: no data available. (a): The Portugal ratio is for the 1998 year.

Sources: Compiled by the authors from COGECOA (2005). *Data for Luxembourg from COGECOA (2000).

**Data for Cyprus, Hungary, Romania and Poland from ICA (1998).

Table 2. Market Share Percentages of Agricultural Cooperatives in the EU, 1998-2003

	1998	2003	1998	2003	1998	2003	1998	2003	1998	2003
	Milk		Fruits and Vegetables		Meat		Agricultural Inputs and Supplies		Cereals	
Austria	94	94			20	20			60	60
Belgium	50	50	72	80	20	25	40			40
Denmark	95	97	20	30	89	90	57***	ND	57	80
Finland	96	97			69	74	41***			
France	49	37	35-50*		34		45-60***		74	74
Germany	69	68	45	45	30	35	50***			
Greece	35-50***		50***		5-30***		-		49***	
Ireland	97	97	-		70	70	65	65	69*	
Italy	38*		41*		10-15*		15*		15*	
Luxembourg	80**		-		25-30*		75-95**		75**	
Netherlands	82	85		60	35		54		-	
Portugal	62	65	45		-		-		-	
Spain	40	40	15-45	15-45	25-35	25-35	70	70	35	35
Sweden	95	90			40***	30	40		75*	70
UK	55**		25-40**		10-25**		30**		25**	
Slovenia	89	80	19	76	87	76			90	28
Latvia		25		1						30
Cyprus	*Overall market share 30%									
Czech Republic	*Overall market share 65%									

* 1996 data ** 1999 data ***1998 data

Sources: 1996, 1998 and 1999 data from COGECA (2000); 2003 data from COGECA (2005); Cyprus and Czech Republic data from ICA (1998).

Clearly, those responsible for the economy failed to see the potential of cooperatives for protecting the interests of small producers, creating jobs, stimulating new business activities (especially in the less advantaged areas), providing services to their members and helping to keep the farming community from abandoning the countryside.

Nor should it be forgotten that in most of the latest Member States to be admitted to the EU, agriculture still produces a share of the GDP well above the European average, as illustrated by the percentage population occupied in agriculture, which in 2005 ranged from 4.1% in the Czech Republic to 17% in Poland (European Commission, 2007).

This study aims to analyse the current state of agricultural cooperatives (agricoops) in the European Union (EU) and considers the principal variables responsible for their present situation and modes of operation, which undoubtedly form the basis of the activity of European agricultural producers and consequently of the activities of their cooperatives. They include especially those related to the demand for agri-foodstuffs, globalisation, liberalising markets and the EU Common Agricultural Policy (CAP).

Finally, bearing in mind that the analysis points to considerable differences in the levels of commercial development achieved by cooperatives in the various Member States, we performed a cluster-based classification of the cooperatives. This enabled us to identify the leading States in agricultural cooperative development, and hence the relationship between their level of development and degree of consolidation and internationalisation as a means of strengthening their presence in the sector.

2.- Agriculture and Cooperatives in the EU: a necessary binomial

Agricultural cooperatives have made a considerable contribution to the economic development of rural areas all over Europe and are a major source of direct and indirect rural employment, a key factor in the current state of agricultural prosperity (Bogström, 2003).

However, the role that they can and should play in EU social economy needs to be re-defined and the challenges they face in order to carry out their traditional role of defending farmers' interests must be identified. The time has come to ponder the factors that will shape future agricultural markets and rural life.

For this we must inevitably deal with three major issues: globalisation, changes in the demand for agri-foodstuffs, and the so-called *multifunctionality* mentioned in Agenda 2000 which constitutes the basic philosophy underlying the CAP reform approved 26 June, 2003.

Globalisation, the phenomenon that is leading us towards the ever-increasing internationalisation of all economic activity, is accompanied by a strong tendency towards free markets. Agricultural production is not exempt from this, due to the multilateral agreements reached at successive summits of the World Trade Organization (WTO). We must remember the progressive reduction of customs tariffs in the sector together with continuing pressure from members of the CAIRNS Group, the United States and other developing countries to reduce and eventually eliminate agricultural subsidies, especially those directly linked to production (amber box), although those indirectly connected (blue box) have also come under attack.

Another consideration to bear in mind is that the EU is now going through a period of budgetary constraint, added to the increasing pressures caused by the enlargement of the Union. The number of those involved in agriculture in the EU-15 increased by 55% in the enlargement of 2004 and by another 53% in January 2007 (European Commission, 2007). This clearly shows that it is impossible for the CAP to meet all its financial obligations to the Common Organisation of Markets (COM) at the present level of EU budgeting.

Another factor not to be lost sight of is the growing competition to European products from those of other countries that have substantially lower costs. Costs may be lower because of inherent advantages such as country size and climate, or for extrinsic causes such as labour legislation, taxation, and less demanding environmental or phytosanitary legislation (García Azcárate, 2002).

Yet another influential sector characteristic is provided by periodic changes in the demand for agri-foodstuffs, some of which are due to new consumer habits and attitudes, others to the development and concentration of food distribution (Juliá and Meliá, 2003). An example of this evolution is the way that social and economic changes in the developed countries (working women, smaller families, ageing populations, increased concern with health, access to a wider range of leisure activities, etc.) have led to a growing preference for convenience products that are easy to prepare and consume.

The CEO of Ahold, the world's third largest food distribution chain, has said that consumers are putting more value on quality and on foods that are safe and healthy but easy to prepare and eat. He also said that one of the biggest changes in food demand is due to the market concentration in mega distribution chains and the enormous power they have acquired.

This concentration of power and internationalisation are all too clearly seen in recent mergers, such as that of Carrefour, which is now the European leader and the second largest retailer in the world. Other examples can be found in all sub-sectors and countries. In 2004, the ten largest distributors controlled 36.8% of the European fruit and vegetable market. This figure is forecast to rise to 37.9% in 2008 (COAG, 2007). These large companies show a growing tendency to buy in ever larger quantities from an ever smaller number of suppliers. It seems inevitable in the long term that smaller cooperatives which cannot supply commodities in the volumes required, or those which cannot adapt to new conditions, will be squeezed out.

Another element to be taken into account in the sector analysis is agricultural multifunctionality, included in Agenda 2000, which deals with agriculture's other functions. For example it contributes to conservation of the environment and the landscape and helps to maintain the rural population, so that it plays a strategic role in land use policy and rural development. This contribution serves to justify aid and incentives not directed at production but rather are designed to achieve objectives related to the environment, the land or rural development.

This principle remains in force in the latest CAP reform (23 June 2003), as can be seen from the reform's main recommendations for action, which demand that aid be separated from production, and made dependent on environmental aspects, food security, quality and rural development, among others.

These new parameters which now govern European agriculture should not make us forget the fact that it is still a highly heterogeneous sector. Some extremely efficient producers, both in terms of Net Value Added to basic prices and NVA added to annual work units, such as Holland, Denmark, the UK, Belgium and France, coexist with markedly less efficient producers such as those of the Mediterranean Basin. Even though differences had been reduced in recent years, they are again widening after the last European expansion.

In view of this new set of variables which together with certain others now constitute the present European agricultural situation, the still unanswered question is whether the cooperatives to which most agricultural producers belong are dealing correctly with the situation. It has to be admitted that their characteristics, correctly used, give them a competitive advantage, especially if they make their existence known. However, in other scenarios these same characteristics can become a drawback that must be overcome.

Table 3 shows some of the cooperatives main strengths and weaknesses taken from the results of a survey conducted by COGECA for a memorandum on European agricultural co-operatives (COGECA, 2004).

It should be emphasised that these co-operatives carry out activities (and should perhaps do so to an even greater extent) that provide farmers with additional income. These activities gain in effectiveness when they are organised and administered on a large scale. Rural tourism and speciality foods made by traditional methods are leading examples.

Co-operatives are also finding answers to the serious problem in some regions of the increasing average age of the rural population by encouraging ageing farmers to hand over control to the next generation. This maintains the population and avoids not only the flight from the land but also the subsequent harmful environmental consequences. One of the methods used is to offer aids to production.

Table 3. Main Strengths and Weaknesses of Agricoops

	Strengths	Weaknesses
Spain	<ul style="list-style-type: none"> • Make economic development possible in areas where it is difficult to establish activities from outside the primary sector. 	<ul style="list-style-type: none"> • Strong roots in the locality reduce freedom to opt for the relocation strategies, whether for production or supply, used by other forms of enterprise.
Finland	<ul style="list-style-type: none"> • Ensure maximum transparency in the food supply chain ("from the field or the stable right to the table"). 	
Italy	<ul style="list-style-type: none"> • Close relations with producer-members. • Close links with the area. 	<ul style="list-style-type: none"> • Scarce financing. • Small size.
Sweden	<ul style="list-style-type: none"> • Provide opportunities for farmers to market their products and obtain fair prices. 	<ul style="list-style-type: none"> • Run risk of being hamstrung by restrictions that do not apply to their competitors when it comes to restructuring the business, closing plants, etc.
Germany	<ul style="list-style-type: none"> • Consolidate offer and obtain value added by processing. • Give members a say in their cooperative's business policies. • Ensure traceability of agricultural produce. 	<ul style="list-style-type: none"> • Their usual source of financing (members' contributions) has serious limitations. • Have to deal with a highly concentrated food distribution industry in the EU.
Ireland	<ul style="list-style-type: none"> • Cooperative movement values create a different ethic and culture from those of capitalist enterprises. • Both commercial and social benefits accrue to ordinary people when they are members of a cooperative. 	
Slovenia	<ul style="list-style-type: none"> • Have strong ties to their social foundations and to the communities where they are located. 	<ul style="list-style-type: none"> • Need more capital. • Are short on training. • Need the legal basis on which cooperatives operate to be better adapted to their special characteristics.
Belgium	<ul style="list-style-type: none"> • Cooperation makes it possible to reduce operating costs. • Can expand their activities to sectors like processing and distribution. • Offer the possibility of greater transparency in the differences between prices at the farm gate and those paid by the end consumer. 	<ul style="list-style-type: none"> • Need specifically designed sources of financing. • Need more investment in innovation (European Innovation Fund) and should adapt their products to the demands of modern marketing. • Weak marketing plans: There is a proposal for a marketing research and support institute to assist cooperatives in this matter.

Source: Compiled from replies to the questionnaire for the COGECA Memorandum on European Agricultural Cooperatives, Brussels, 16 July 2004.

Another aspect that could make a special contribution to the cooperative formula is their role in the food-processing industry, where they are in an ideal situation to guarantee the traceability of agricultural products. However, even though it appears illogical, when it comes to choosing products from the supermarket shelves this does not seem to give them an advantage in buyers' eyes. It is therefore not surprising that the cooperatives in certain Member States, such as Belgium, are considering the creation of a Central European Cooperative Marketing Research and Support Centre to publicise cooperative values and their commitment to society. It is hoped that this will give consumers increased confidence in cooperative products due to their ideal position for following a food production process from beginning to end.

For some time cooperatives have also been taking an interest in quality of life in rural areas, since farming is widely considered not only to provide very low incomes, but also to involve hard work and little free time, in comparison with other occupations.

There are also other weaknesses: the comparative disadvantage of having to sell in markets in which other types of business organisations can cut costs by outsourcing all or part of their production, the need to attract the investment necessary for ambitious projects from members or from outside the organisation and the under-use of Information and Communication Technologies (Juliá, J.F., García, , Meliá, E., 2006)

3.- Agricultural Cooperative Consolidation Response. Cluster analysis

The viability of European agricultural cooperatives has been largely determined by the important social and economic changes that have taken place in the last few years and which cannot be ignored.

Europe is one of the world's most open economies and today is unquestionably the world's leading market in terms of trans-national movements, as is shown by the high level of exports and imports in proportion to the GDP of many of its Member States (Germany 69%, Spain 60%, United Kingdom 57%, France 51%, etc.) (Barea 2002).

The agri-foodstuffs market, as we have already said, is dominated by large international firms that hold a position verging on monopsony and are still continuing their apparently unlimited expansion process. This being the situation, one should ask what is the role of the cooperatives and if they will be reduced to being mere suppliers to the large distributors.

The cooperative sector has reacted by seeking greater competitiveness through consolidation, often in the form of mergers, the result of which is bigger cooperatives with the ability to make their presence felt internationally.

In fact an analysis of cooperative evolution in the UE-15 countries (there is no corresponding data for UE-27) in recent years (1998-2003) reveals that their number has fallen by 3% and members by 2%, although this has not been accompanied by a corresponding reduction in business turnover or in the number of workers. In fact, turnover has increased by 49% and the number of workers by 80% (Table 1).

It should be pointed out that these apparent increases are partly due to the incomplete data available for 1998, which was available for 2000 and 2003. Nevertheless, if we allow for this distortion by excluding countries for which the data was not available for both periods, the result is still a 9.6% increase in the number of workers, which represents in absolute terms 34,700 workers and a 27.5% increase (corresponding to €25,131m) in turnover, while the number of cooperatives has gone down by 9.4% (1,197 units).

We can therefore conclude that, despite the fall in the number of cooperatives in the UE-15 during the period examined, far from reducing the level of activity, this has on the contrary been accompanied by an increase in the number of workers and total turnover. This can be explained by two factors: elimination of the less efficient cooperatives and consolidation of business organisations.

An analysis of average turnover per cooperative unit in the EU member countries for the period 1998-2003 (Table 1) shows that there has been a considerable increase in all countries, without exception. During this period, German cooperatives increased turnover by an average 25%, the Danish by 125%, the Spanish by 54%, Finnish 142%, French 13%, Greek 50%, Irish 35% and the Italian 80%.

Although there is a trend towards larger business organisations as a reaction to the many current challenges in the agricultural sector, it should also be pointed out that development in the various EU Member States has been unequal, and this has undoubtedly had an impact on the weight cooperatives have acquired in their respective national sectors.

Another way of describing the cooperative movement's development in the different states is by considering the ratio Co-op Turnover / Final Agricultural Output (FAO) of each country, as shown in Table 1. This is not an accurate figure for the cooperatives' market share, since the FAO does not take account of (among other factors) the value of agricultural inputs or of imported products marketed by cooperatives. Nevertheless, the ratio is a good indicator of the cooperatives' position as key elements in the agricultural sector of their national economies.

National differences are pretty clear; for example, to take the most extreme cases, there are countries such as Greece where cooperative turnover represents barely 9% of FAO; while Denmark, Finland,

the Netherlands, Ireland and Sweden have high figures which seem to indicate not only domestic processing and marketing but also a large volume of activities connected with products acquired abroad, in other words, their operations include a fairly high level of imports from other countries.

Given these differences, we set out to determine the level of development in each EU Member State and compare it with that of equivalent organisations in the other EU countries. We therefore decided to classify the cooperatives by the statistical clustering technique Using the Average Linkage (between clusters) method and the Squared Euclidean Distance. The two variables used in the analysis were average annual turnover for the years 1998 and 2003, and the ratio of agricultural cooperative turnover to Final Agricultural Output for 2003, according to the data shown in Table 1. The results are given in Appendix 1.

The dendrogram of the first hierarchical clustering (Analysis 1), which covers the cooperatives in all EU Member States, provides two clusters: one containing only Danish and Dutch cooperatives, and another containing the rest. The reason for this simplified classification is the big difference between Denmark and Netherland and the other countries in terms of average turnover per organisation. The fact is (as shown in Table 4) that 77% of total Danish turnover, and the 62% of Dutch turnover, is in the hands of only 5 cooperatives.

We therefore performed a second cluster analysis (Analysis 2.a) excluding the Danes and Dutch, since the difference between them and the other EU states would act as a distorting factor and the results would be skewed.

The second analysis provided the following three groups:

- Group 1, composed only of the Finnish cooperatives, the most highly developed
- Group 2, containing the Irish and the Swedes, with advanced development
- Group 3, a combination of all the rest.

The hierarchical analysis is reinforced by K-means analysis (Analysis 2.b), and can be stated that the clusters established have statistical validity.

There are clear differences between the groups in the level of development of the Danish, Dutch, Finnish, Swedish and Irish cooperatives, shown by their high average turnover compared with the others, contained in a single cluster. It could be asked whether the strong development of the cooperatives in the first three groups is in any way related to the strategies of consolidation described above. The answer is of course that it is.

The extent to which cooperatives have consolidated in the different EU Member States can be shown by calculating the share of the five largest cooperatives in the total turnover of the cooperatives in each country (Table 4). The analysis reveals that consolidation has gone so far in Denmark, Finland, Ireland and the Netherlands that the five largest cooperatives are responsible for more than 60% of

total cooperative turnover. In Finland and Ireland the proportion is over 80%. The level of consolidation can be seen in sectors such as dairy, in which more than 80% of milk is processed by one cooperative (in Denmark), 2 (in Netherland), or 6 (in Ireland) (Promar International, 2.003). However, this trend cannot be extrapolated to all EU States; despite the general trend towards larger businesses, small size continues to be a drawback in many countries, for instance Italy, Greece and Spain (Table 4).

This finding is important, since it seems to demonstrate a relationship between degree of consolidation, level of business development and the importance of the cooperatives in their respective markets. The countries with the biggest average cooperative size (i.e. Denmark, Finland, Ireland, the Netherlands and Sweden) have a larger market share in the sectors whose activities are most extensive in the EU (Tables 1 and 4). For example, the market share of Danish, Finnish, Irish and Swedish dairy cooperatives exceeds 95% and the Dutch hold about 85%; Danish meat-producing cooperatives have 80% and the Irish 70%.

It is worth noting that the effects of consolidation are not confined to Europe. In the United States there were 10,035 supply and marketing cooperatives with a total turnover of \$8.7 billion in 1950. In 2000 there were 3,346 with a turnover of approximately \$100 billion. The fall in numbers is as striking as the increase in turnover and it is clear that mergers have contributed to both (Dunn, 2002).

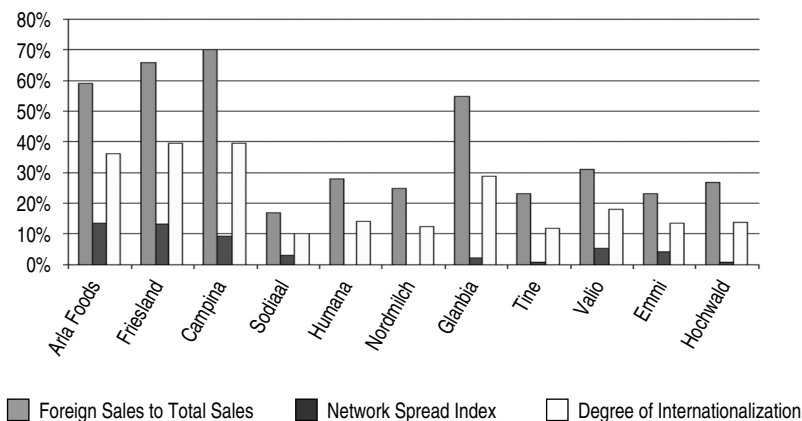
4.- Internationalisation of Agricultural Cooperatives

The question now to be examined is whether internationalisation is among the strategies that have made these cooperatives market leaders in these countries. Again, the reply is yes; however we must also analyse the advantages and disadvantages of these strategies.

Taking the dairy sector as a reference, since it is the one in which most of the leading cooperatives in the five top countries are involved (Table 4), we can see in Graph 1 that the largest cooperatives are also the most internationalised: Arla Foods (the biggest Danish-Swedish cooperative and itself the result of a cross-frontier merger), Friesland Coberco Dairy Foods and Campina (first and second Dutch cooperatives in size), Glambia (second largest Irish cooperative) and the Valio Group (second largest in Finland).

It should be pointed out that the international operations of the cooperatives are not confined to exporting products or buying supplies from abroad. Both these strategies are reinforced by alliances with foreign enterprises, and not only with cooperatives. The largest firms also own many more foreign

Graph 1. Degree of Internationalisation of the Largest European Dairy Cooperatives



Source: O. Ebneth and L. Theuvsen, 2005.

Foreign sales to total sales: $FSTS = \text{foreign sales (exports + subsidiaries)} / \text{total sales}$

Network Spread Index of Garcia letto-Gilliies [1998]: the number of countries in which an enterprise maintains subsidiaries (n) / total number of countries that received direct investments in 2004 (191); $NSI = n / 191$

Degree of internationalisation: $FSTS + NSI / 2$.

subsidiaries: Arla (26), Friesland (25) and Campina (18), contrast with Nordmilch (0), Humana (0) and Tine (1). This is clearly shown by the Network Spread index² (Graph 1) (Ebneth, O, Theuvsen, T., 2005)

The leading cooperatives in other sectors have adopted similar strategies. The Danish slaughtering segment is an example. In 1980, there were 18 cooperative slaughterhouses, whereas production in 2000 was concentrated in three cooperatives, namely Danish Crown, Steff-Houlberg and Tican. These three cooperative slaughterhouses accounted for 95% of the slaughtering. In 2001, Danish Crown merged with Steff-Houlberg. The Danish competition regulator approved the merger on the condition that Danish Crown sold one of its existing plants. At present about 90 per cent of the company's sales are outside Denmark, and it plans to go on concentrating its processing operations and expanding internationally. In line with this policy, Danish Crown has recently acquired Flagship Foods in the UK and became a majority shareholder in a Polish processing plant. It has also bought a processing plant in Germany.

2.- Results taken from the study "Internationalization and Financial Performance of Cooperatives Empirical Evidence from the European Dairy Sector", Ebneth O., Theuvsen L., 2005.

Table 4. Statistics of the Top Five Cooperatives in Each EU Country, 2003

							Top Five Industry Cooperatives Sector : Market Share of Each Sector (%)				
	Sales of The Top Five (000,000 Euro)	Total Sales of all Coops (000,000 Euro)	Top Five Market Share	No. of Members in Top Five (000s)	Total of Members in all Coops (000s)	Top Five's proportion of Members	1st	2nd	3rd	4th	5th
Austria							FS: 75	SU: ND	D: 36	D: 13	D: 7.8
Belgium	1,096	2,750	40%	13.7	36	38%	D: 31	V: 38	V:25	F+V: 18	F:11
Czech Republic	695	ND	ND	0.6	55	1%	D: ND	MP: ND	PO: ND	F+V: ND	P: ND
Denmark	14,460	18,850	77%	74.1	82	91%	D: 93	MP: 84	FS: 41	FS: 35	Fur: 99
Finland	12,430	13,300	93%	162.8**	215	76%	Fo: 34	D: 80	MP: 33	ND	MP: 38
France	11,176	67,000	17%	50***	580	9%	MP: ND	MS: ND	D: ND	MP: ND	SU: ND
Germany	13,683	37,000	37%	ND	2,385	ND	BM: ND	D: ND	D: ND	BM: ND	BM: ND
Greece	234	1,043	22%	57**	714	8%	CO: ND	T: ND	W+ OO: ND	W+ OO: ND	AL+L+C ND
Ireland	10,160	12,400	82%	39.4	198	20%	D: ND	D: ND	D: ND	MK: ND	D: ND
Italy	2,208	20,834	11%	47.84**	536	9%	F+V: ND	D: ND	D: ND	W: ND	F+V: ND
Latvia	17.04*	23.21	ND	0,291*	8	3%	CE: 25	CE: 20	ND	ND	ND
Lithuania	11.13	ND	ND	1087.0	ND	ND	MS: 1.7	MS: 1.4	MS: 0.9	MS: 0.8	MS: 0.6
Luxembourg	ND	230	ND	ND	ND	ND	ND	ND	ND	ND	ND
Netherlands	14,189	22,740	62%	36.4	257	14%	D: ND	D: ND	ND	V: ND	V: ND
Portugal	433.06	ND	ND	8.2	ND	ND	D: 28	D: 4	D: 4	D: 4	D: 3
Spain	1,777	14,194	13%	103.7	932	11%	PO: ND	F+V: ND	F+V: ND	SU: ND	C+D: ND
Sweden	ND	10,000	ND	120.1**	300	40%	D: 90	CE: 70	MP:30	F: 50	ND
UK	ND	12,380	ND	ND	241	ND	ND	ND	ND	ND	ND

ND: no data available. No data at all available for Cyprus, Slovakia, Slovenia, Estonia, Malta, Hungary and Poland.

* Only 2 cooperatives ** Only from 4 cooperatives *** Only from 3 cooperatives

Key to the industrial sectors:

CO: cotton; OO: olive oil; PO: poultry; SU: sugar; MP: meat products; BM: buying and marketing; CE: Cereals; MK: marketing; D: dairy products; F: fruits; Fo: forestry; V: vegetables; MS: multisector; W: Wine; P: potatoes; FS: farm supplies; T: tobacco

Source: COGECA (2005).

Increasing numbers are pointing to the need for greater internationalisation, and not only in marketing, which is already common practice in certain sectors, but also in production. An example is the pronouncement of the Economic and Social Council of Europe in response to the demands from cooperatives operating in more than one Member State in favour of allowing them to reorganise and restructure their operations on a Community-wide scale by establishing companies with the participation of operators from other countries.

It has to be acknowledged, however, that cooperatives face numerous restrictions on their way towards internationalisation. The following deserve special mention: *“Their marketing often tends to be producer oriented instead of market oriented; they are tied to their members and to a particular area for the supply of raw materials, whereas non-cooperative businesses can choose to draw supplies from other countries on the basis of price and availability; unlike non-cooperative firms, they are restricted from producing in one area and processing in another. In addition they have trouble finding sources of financing, because the liquidity of investments in international companies, many of which are listed on the stock exchange, is an incentive to investors that cooperatives cannot match, even though the legislation in several EU countries permits them to issue common stock.”* (Donoso, 2003)

Against these difficulties must be offset by the considerable opportunities that internationalisation brings in the production sphere, because of the chances to obtain supplies in the form of products from beyond national frontiers. In this connection, being able to supplement their production with that of other countries would enable agricoops to cover slack periods in their markets caused by the fact that their own commodities are seasonal. This is important because customer fidelity to a brand largely depends on it being continuously available at the points of sale. And of the strategies open to the cooperatives which are not based on costs, one is certainly customer fidelity to their brands

In many instances internationalisation allows the cooperatives to broaden the range of products they can market, and that would put them in a better position vis-à-vis the distributors. Whether a cooperative can persuade distributors to buy from it depends partly on its ability to supply not just one product but a good range of products.

Furthermore it is a basic principle of investing that diversification reduces the overall risk, and this would apply to the cooperatives. They should observe it by not letting their business success hang on a single campaign, a single product or a single region, so that one product's failure in the market can be attenuated by the success of others that may be substitutes for the unsuccessful one.

Nonetheless, when the time comes to integrate foreign members into a cooperative, one needs to watch out for tensions with the original members. Let it not be forgotten that the latter set up the cooperative to ensure the marketing of their produce. Hence the new possibilities often create opposing points of view: on the one side there is opposition from members to the cooperative's marketing the produce of the outsiders because they feel they are letting in the competition with themselves; on the other side, there is management's interest in improving the profitability of the cooperative as a whole,

which would reflect well on their administration (Dunn 2002). Neither can it be ignored that without the new members the cooperative would lose the opportunity to process and market competitive commodities when – unlike what is happening in the countries of origin – it already has access to suitable channels of distribution.

However, the two positions are not irreconcilable, and the key to a rapprochement lies in persuading members to go along with the move by giving them a share of the profits that it will bring to the cooperative and ultimately to them too. This applies whether products are to be imported to rationalise the use of production facilities when they are not being exploited to maximum capacity, or to extend the sales period for existing products throughout the year, or to market new products, and so on.

In the final analysis, it should be borne in mind that the real competitors in the present economic context are not the cooperatives in neighbouring European countries but the big international corporations, which are the ones who largely fix the prices and terms of business (Hakelius, 1999).

5.- Conclusions

Agricultural cooperatives have made a very significant contribution to the development of European rural areas, and they will be called on to continue the task in an EU already enlarged to 27 countries with more than 35,000 cooperatives.

However, the parameters within which the current scenario for European agriculture is unfolding (globalisation, freer markets, concentration of the distribution system, agricultural multifunctionality, aid with conditions attached, changes in consumer demand, etc.) are obliging the cooperatives to rethink their role and devise new means of operating successfully as businesses. As organisations that bring together the majority of European farmers, they must also reconsider the services that they provide to their members to make their work easier and increase their incomes through processing and marketing.

It must also be admitted that cooperatives' intrinsic characteristics can be a competitive advantage if they are properly exploited. Not the least of their benefits is the fact that they are often the economic mainstay of a rural area. They help maintain the social fabric and protect the environment. Their close relationship with their producer-members puts them in a privileged position for ensuring food safety and traceability while upholding their own cooperative values. These last turn them into inherently good corporate citizens.

Nevertheless, as we have pointed out, there are still many difficulties, inherent in their present operational environment. Some typical examples: unfair competition from other kinds of businesses that use partial or total offshore outsourcing as a cost-reduction strategy; the need for new methods of financing that can attract investment – essential for undertaking new capital-intensive projects.

However, it has to be admitted that because the level of business development differs greatly from one EU cooperative to another, they are not all equally prepared to cope with the challenges. As our analysis indicates, the internationalisation and consolidation strategies that have been the keys to progress for the more advanced cooperatives (Danish, Finnish, Dutch, Swedish and Irish) could serve as a reference for the others.

Another fact of life for all businesses in the agri-foodstuffs sector is that their survival depends heavily on aggressive investment in RDI, as well as on agricultural product processing methods that return value-added profits to producers. None of this is feasible unless the businesses are large enough to start off with. On the other side, it is not always possible to grow to the necessary size within a single country. So, cooperatives that transcend national frontiers are growing ever bigger. And in so doing, the supranational cooperatives find openings to become more competitive producers as well as marketers, thanks to their broader range of offerings drawn from an international catchment area, to lengthening the supply season for some products and, last but not least, to diversifying the risks.

Hence a combination of both strategies ? internationalisation and consolidation ? presents itself as a way to compete successfully with non-cooperative multinational agri-food businesses (O. Ebneth and L. Theuvsen, 2005).

This is not to overlook that on the business management side, EU cooperatives have already made marked improvements in recent years both at national and supranational level. This has been achieved by processes of integration and consolidation of various kinds, although what has been done in some countries clearly remains inadequate.

The slow progress is not only due to inertia in the cooperatives themselves, which limits their actions and discourages growth, nor to members' and executives' reluctance to embark on the process of business integration. One has to understand that national governments and the EU bear a share of the responsibility and ought to promote initiatives that can give their cooperatives a stability that is often lacking at present.

However, expressions of support are not enough. The regulations of the EU itself act as clear disincentives to large-scale cooperatives; because when financial aid is being allocated, enterprises with more than a certain maximum turnover are ineligible. It is senseless to put a brake on cooperative mergers by making mere size a reason for exclusion from rural development support measures (García Azcárate, 2005).

To conclude, we believe that action should be taken to make the most of the undeniable contribution that cooperatives can make in the spheres of agricultural policies, EU enlargement processes, rural development, job creation and meeting society's new demands. But at the same time it has to be recognised that for them to do all that, there has to be a clear commitment, both by the cooperatives themselves and by national and European governments, to developing business strategies that will enable the cooperatives to compete successfully in today's marketplace. Among these strategies, the importance of consolidation and internationalisation of agricultural cooperatives is indisputable.

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Appendix 1

1. Cluster Analysis 1 (includes the cooperatives of all EU-15 countries)

HIERARCHICAL CLUSTER ANALYSIS

Case Processing Summary

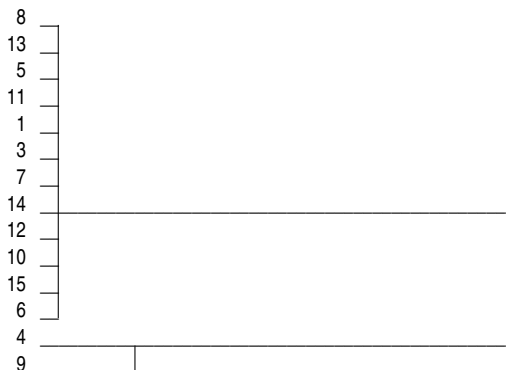
		Cases			
Valid		Missing		Total	
N	Percentage	N	Percentage	N	Percentage
14	93.3	1	6.7	15	100.0

1. Using Squared Euclidean Distance
2. Average linkage (between clusters)

Dendrogram Using Average Linkage (between clusters)

Rescaled Distance Cluster Combine

CASE 0 5 10 15 20 25
Label Num +-----+-----+-----+-----+



1	Germany	6	Finland	11	Italy
2	Austria	7	France	12	Luxembourg
3	Belgium	8	Greece	13	Portugal
4	Denmark	9	Netherlands	14	UK
5	Spain	10	Ireland	15	Sweedeen

2. Cluster Analysis 2 (excludes Danish and Netherland cooperatives)

2.a) HIERARCHICAL CLUSTER ANALYSIS

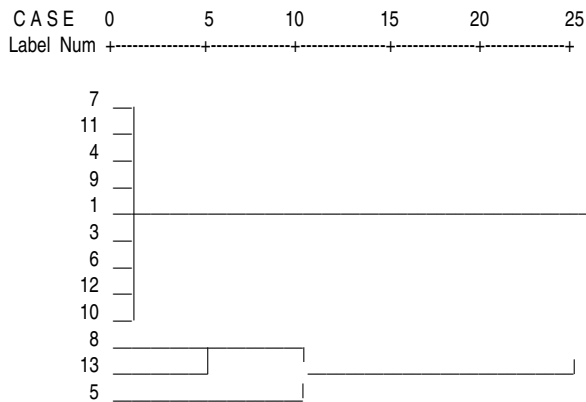
Case Processing Summary

Cases					
Valid		Missing		Total	
N	Percentage	N	Percentage	N	Percentage
12	92,3	1	7,7	13	100,0

- Using Squared Euclidean Distance
- Average linkage (between clusters)

Dendrogram using Average Linkage (between clusters)

Rescaled Distance Cluster Combine



1	Germany	6	France	11	Portugal
2	Austria	7	Greece	12	UK
3	Belgium	8	Ireland	13	Sweeden
4	Spain	9	Italy		
5	Finland	10	Luxembourg		

2. b) K-MEANS CLUSTER ANALYSIS 2 (3 clusters)*

Initial Cluster Centres				Distance from centre of final clusters			
	Cluster			Cluster			
	1	2	3		1	2	3
Av. Turnover 98	121,70	92,60	,10	1		138,785	307,257
Av. Turnover 03	295,60	125,30	,20	2	138,785		190,516
Coop Turnover/ FAO 03	3,20	2,16	,09	3	307,257	190,516	

Cluster Assignments			Cluster Assignments		
Country	Cluster	Distance	Country	Cluster	Distance
Germany	3	2,168	Ireland	2	48,118
Austria	.	.	Italy	3	6,500
Belgium	3	4,276	Luxembourg	3	15,131
Spain	3	8,602	Portugal	3	11,344
Finland	1	,000	U.Kingdom	3	13,986
France	3	13,065	Sweden	2	48,118
Greece	3	12,436			

ANOVA

	Cluster		Error		F	Sig.
	Mean square	df	Mean square	df		
Av. Turnover 98	16097,324	2	324,861	9	49,551	,000
Av. Turnover 03	48127,703	2	302,642	9	159,025	,000
Coop Turnover/ FAO 03	4,824	2	,102	9	47,324	,000

Using SPSS V. 16 for windows.

* Denmark and Netherland have been excluded, because of their distance to the other countries, which distorted the results.