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Member States Positions and Voting Coalitions on the Agenda 2000 CAP Reform

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Positions et alliances
des états-membres
sur la réforme
de la PAC
de l'Agenda 2000

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Résumé – Dans le contexte de l'Agenda 2000, des réformes ont été apportées aux politiques de l'Union, notamment à la PAC. Les positions des états-membres à l'égard des propositions de la Commission ont été formalisées et débattues lors d'un processus de négociation qui aboutit, en 1999, à l'Accord de Berlin.

Cette étude, qui s'inscrit dans la démarche de la nouvelle économie politique, explore la formation de coalitions transnationales regroupant des états-membres aux positions similaires.

Utilisant une méthode de classification hiérarchique, elle s'efforce d'identifier l'émergence de ces groupes et le rôle qu'ils ont joué dans la conclusion d'un accord, en constituant soit des majorités soit des minorités de blocage.

L'analyse montre que les groupes constitués sont relativement dispersés dans le cas des céréales, mais davantage structurés dans le domaine des propositions de réforme relatives à la viande bovine et au lait.

Sur les propositions faisant référence aux mesures horizontales, le regroupement des pays présente une spécificité géographique. L'Allemagne semble être la plus isolée, tandis que le Royaume-Uni, les Pays-Bas, la Suède et le Danemark constituent un groupe homogène partageant des positions communes. L'Europe du Sud ne constitue pas un groupe homogène : la Grèce rejoint les positions de l'Irlande, la France et l'Italie ont des positions contradictoires.

Concernant la possibilité d'apparition d'une minorité de blocage, la plus forte probabilité se situe dans les propositions de réforme du secteur lait, et ensuite dans celles portant sur les céréales. Pour les réformes relatives à la viande bovine et les propositions de type horizontal, l'apparition d'une minorité de blocage est plus incertaine. Cette étude compare dans une deuxième phase les résultats fournis par l'analyse avec les résultats réels issus de l'Accord de Berlin, et propose des conclusions sur l'applicabilité de la méthode à des cas semblables.

Summary – The EU policy reforms introduced under Agenda 2000 included several modifications for the existing CAP agreement. The member states had expressed in an earlier stage of communications their opinions towards the Commission's proposals and this initiated a negotiation period that finalized with the 1999 Berlin agreement. The present study is supported within the New Political Economy Framework and explores the creation of inter-state groups with similar positions and coalitions at EU-supranational level. It employs cluster analysis to identify groups of countries that have stated similar positions regarding the proposed reforms and to define the role that these groups played in reaching an agreement on the Agenda 2000 proposals through the formation of voting majorities or blocking minorities.

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THE radical political and economic changes observed worldwide over the past decade have had a significant influence on the process of European integration. The changes in the political arena in all East European countries and the globalisation and liberalisation of international markets have all contributed to the creation of a new framework for reforming the CAP. The proposed reforms and their structures have been introduced through the Agenda 2000, which aimed simultaneously to reform the CAP, the EU budget and regional policy. The reformed package has been based upon two major requirements: first of all the preparation of the EU for the accession of new members from the East European countries, and second the need to facilitate the EU negotiating position in the forthcoming round of the WTO. It was envisaged that these developments would lead to an increasingly liberal CAP and would induce major developments concerning issues like competitiveness of agricultural production, overproduction, agricultural incomes support, CAP finance, etc.

The initial positions of the member states on the proposed reforms that the Commission announced were made public in November 1997. Although the proposals followed the same logic that had governed the 1992 CAP reform, there were major difficulties in integrating attitudes and in adopting a common position that led to discussions which lasted for over a year. An agreement was reached at the Agriculture Council meetings held in Berlin in March 1999, where a compromise had been achieved, although no actual voting has taken place. However, as the Vienna European Council had regarded Agenda 2000 as a package on which agreement could only be reached as a whole, the outcome of the Agricultural Council had been further discussed by the heads of states, thus leaving the final discussion and agreement on all the Agenda 2000 proposals to be achieved in the meeting of European Council in Berlin on 24-25 March 1999 (European Commission, DGA, 1999b). The latest discussions departed from the need imposed by a further reduction demanded on CAP spending for the period 2000-2006, thus further fine-tuning was needed for the final deal (Ackrill, 1999).

No attempt has yet been made to analyse the initially stated preferences of the EU member states, since in general only the final decisions made by the Council are published. This study is based on positions adopted by member states on the Commission's initial proposals and tries to identify the elements that helped in achieving the final compromise. It also examines the formation of coalitions between member states, which is further explored in relation to the degree to which these coalitions acted as supporters of or opponents to the proposed reforms.

Thereafter the paper is organised as follows. The first section gives a brief overview of the proposals for the CAP and the agricultural economy of the EU as included in the Agenda 2000. The second section discusses the relevance to the CAP reform of the theoretical approaches usually applied to explain agricultural policy formation, and special emphasis is placed on the interests of the member states toward CAP. The third section uses cluster analysis to investigate possible common positions among EU-members according to their specific positions in the context of CAP reform. The last section concludes with a discussion of alternative coalition scenarios, in the light of the voting power of individual members as well as coalitions between members. In addition it draws the relative conclusions on the way that these coalitions determined the directions given to the proposed compromises and the final outcome of Agenda 2000 negotiations.

AGENDA 2000 AND CAP REFORM

Agenda 2000 aimed at reformulating the targets set out by the 1992 CAP reform and at introducing certain changes to the previously determined objectives observed at the macro level. In the basic text where the new targets had been described several new issues appeared, such as competitiveness, security and quality of the agrifood products, stabilisation of the agricultural income, protection of the environment and alternative opportunities for job and income creation (European Commission, 1997a). The improvement in the competitiveness of agricultural products had been viewed as a response to the expected changes in global markets. Food security and the improvement of agricultural product quality were referred to as a prerequisite for competitiveness and they had been the basic obligation and priority of the CAP up to that point. The new measures envisage a generalised reorientation from mass production to the production of specialised food products with specific characteristics. The stabilisation of agricultural income remains a keystone of CAP. However, the present trend is towards diversified means of support through the restructuring of the present support mechanisms. Another major target is the protection of the environment, as well as the promotion of alternative forms of rural development (agrotourism, etc.) and an orientation towards the diversification of agricultural activities. These measures should lead to the creation of new job opportunities and provide additional sources of income for rural households, since the current trends point to the direction of reduction of employment opportunities in agriculture.

The reduction of the cost of CAP was another objective of the Agenda 2000 reforms, although given the prevailing situation and the

discussions during the negotiation process, this target proved to be unrealistic. The new members acceding to EU in the first decade of the 21st century will need community funds in order to adjust their agricultural sector to EU policies, mainly through structural changes and secondarily through the support of markets and agricultural incomes. However, the Commission was confident that the proposed measures would permit a better management of the available resources and, above all, the avoidance of unforeseeable trends due to unpredictable fluctuations in the international prices of agricultural products (European Commission, 1997b).

The basic vehicle for the accomplishment of the aforementioned targets is composed of two elements. The first concerns price, markets and the income policies on which the Commission's proposal to transfer support from agricultural prices directly to agricultural income was based, *i.e.* a proposal for further reductions on agricultural prices and compensation for agricultural income. For the second one, which concerns rural development and the Structural Fund, the proposal meant the development of integrated rural development programs.

The requirement for CAP reform has been driven by the need to facilitate the integration of Eastern European countries, and to respond to a further liberalisation in agricultural trade, which will be much needed in the context of the forthcoming WTO negotiating round. Subsequently, the basic problem of the Commission has been the formulation of a common platform supported by all member states. However, countries and regions with serious structural problems and low dependence on non-EU international markets have serious doubts about the possibility of competing effectively against countries with low production costs in liberalised agricultural markets (Lowe and Ward, 1998; Begg, 1998). This issue concerns mainly the Mediterranean countries and the mountainous regions of central and northern Europe.

NATIONAL INTERESTS, AGRICULTURAL INTERESTS AND CAP

After the Commission's proposals to the Council of Ministers, the initial discussions identified a certain degree of agreement on required reforms for reaching the targets of Agenda 2000, but also attracted certain strong opposition from several member states on a variety of proposals for different reasons. Table 1 presents the early opinions of member states towards the elements contained in the Commission's proposals (*Agra Europe*, 1997). This assessment (made by *Agra Europe*) is based on a questionnaire sent to the respective national agricultural authorities that collected information in a qualitative form as well as statements for the reasons of disagreement (*Agra Europe*, 1998).

Table 1. Positions of EU member states towards the proposals of the EU Commission on the reform of the CAP (Agenda 2000)

Countries*	GR	PT	IE	AT	IT	FR	ES	LU	DE	BE	NL	GB	DK	FI	SE
Sectoral changes															
1. Cereals and oilseeds															
• Price reduction and partial compensation	-	—	-	-			-	-	—	-	+	+	+	—	+
• Price reduction and full compensation	+	+	+		+	+				+				++	
• Subsidy alignment between oilseeds and cereals		—		-	-	—	—	-	—		+	+	+	-	+
• Abandonment of subs for maize-silage	+	-		-	—	—	-	-	—	-	-	+		+	+
• Abandonment of compulsory set-aside	-	-	+	+	-	++	+	+	—	+	-		+	+	+
• Retention of subsidies for durum wheat	+	+	+	+	+	+				-		-		+	-
2. Beef meat															
• Price reduction with compensation	+			-	+	-			—		+	+	+	+	+
• Increase of extensification premiums		++	+	+	—	+			—		-			+	
3. Milk															
• Price reduction with compensation		-	+	+	+	-	-	-	-	-	+	+	+	-	+
• Connection of output with compensation	-		-		-	-		+		+	++		++		
• Continuation of quota system	+	+	+	+	—	+	+	+	++	+	-	-	-	+	-
• Introduction of double quota system			+						-				+		
Horizontal Measures															
A. Relation with WTO round	+		+	+	+	-	-		—	-	+	+	+	+	+
B. Subsidy ceiling per enterprise	+	+	+	+	-	+	-		-		-	—	-	+	
C. National distribution of subsidies		+	+			+	-					-		-	
D. Subsidies with environmental measures									-		+		+	+	+
E. Transfer of structural funds to FEOGA-guarantee	-	-			-	-	-	-	—	-		+	+	+	+
F. Abolition of Objective 5b				—		-	-	-	—	-					

Source : *Agra-Europe*, 1998

*: Country coding is indicated in Table 2.

Where: ++ = very positive position (+2), + = positive position (+1), - = negative position (-1) and — = very negative position (-2), no value = indifferent position (0).

Table 2. Positions of the EU member states regarding the 18 proposed reform points

	Most positive attitude	Most negative attitude	Indifferent
Cereals and Oilseeds	Finland (FI), Sweden (SE)	Germany (DE), Portugal (PT)	Denmark (DK)
Beef	Austria (AT), Finland (FI)	Germany (DE)	United Kingdom (GB), Greece (GR), Portugal (PT)
Milk	Ireland (IE), Denmark (DK)	Germany (DE), Italy (IT), France (FR)	Greece (GR), Portugal (PT), Austria (AT), Spain (ES), United Kingdom (GB), Finland (FI), Sweden (SW)
Horizontal measures	Finland (FI)	Germany (DE), Spain (ES)	Greece (GR), Netherlands (NL), Ireland (IE), Austria (AT), Luxembourg (LU)
All reform points (18 measures)	Finland (FI)	Germany (DE)	United Kingdom (GB), Greece (GR)

Note: Country codes in parentheses apply to all other tables and figures of this paper.

Close scrutiny reveals that most of the opposition to the proposals was generated by Germany, followed by Spain and Luxembourg. The very strong German opposition to any reform and restructuring of CAP was mainly a result of the heterogeneity observed in rural Germany, which has grown deeper with the integration of the Eastern German *länder*. The formulation of a unified agricultural policy within Germany, due also to the break of responsibilities between *länder* and federal level remains a laborious task of the German Ministry of Agriculture (Tracy, 1997). Spanish opposition concerned the objections raised to EU expansion to the East, and was mainly about the availability of the financial means for expansion, since that could entail a negative effect in the availability of adequate financial resources for the underdeveloped regions (Objective 1 areas) of the EU-15. The most positive reactions came from Ireland, Denmark, the UK and Sweden. These countries have a traditional orientation toward agricultural exports and their support for the proposed measures centred on their desire to improve their market share and agricultural businesses. With regard to the most basic concept of the reform proposals, *i.e.* the reduction of prices in favour of direct support to agricultural income, the United Kingdom, the Netherlands, Denmark and Sweden expressed the most positive attitudes, while Greece and Italy also displayed a moderately positive attitude.

Agricultural policy models and the attempt for a CAP reform

The relevant literature identifies two basic models (Swinnen and van der Zee, 1993) that are frequently being used for the rationalisation of

agricultural policy. These are the lobbying model (Gardner, 1987; Miller, 1991; Balisacan and Roumasset, 1987) and the so-called voting model (de Gorter and Tsur, 1991; Swinnen and de Gorter, 1993; de Gorter and Swinnen, 1994). The lobbying model is based on the theoretical background developed by Olson (1965) concerning the importance of the production costs in the creation of coalitions and groups of interests that have as a common goal the approval of policies favourable to their interests. From this point comes the position regarding the ability of small groups to obtain protection. Also the size of the benefits to be secured is a basic motivation in the creation of groups, since between two groups that face the same organisational cost, the one that will expect the higher benefit will be the one most actively seeking protection (Olson, 1985). The voting model is based on the assumption that political decision-making is influenced by two groups (Downs, 1957). On the one side are the politicians, who due to their position and accomplishment of common interests can (or are willing to) offer protection. On the other are the voters, who ask for protection by offering in exchange their voting support to politicians who satisfy and serve better their interests. There are politicians who for their own interest can use income redistribution to the advantage of low-income groups (Baldwin, 1989) or more specifically towards the imposition of measures of agricultural policy protectionism (de Gorter and Tsur, 1991). This is explained by the increase in political support that results from a strong redistribution policy and greater economic support, whose size corresponds to the decrease in support due to the reduction in the number of farmers. Under this approach, agricultural protectionism increases as agricultural income decreases in relation to the incomes per capita realised in the non-agricultural sectors of the economy (Swinnen and de Gorter, 1993). Elliott and Heath (2000) pointed out that CAP currently benefits a small but well organised minority of farmers at the expense of the vast majority of consumers who remain fairly unorganised and underrepresented in the context of CAP reform discussions. Farmers' interests prefer CAP control to be central rather than local, as this permits decisions to be taken further away from electorates that eventually bear the costs of the agricultural policy, thus also leading to resistance to ideas promoting the co-financing or else the re-nationalisation of agricultural policies.

Endogenising the decision making on a supra-national policy such as the CAP, invariably poses certain difficulties. First of all because the interventions of the interest groups take place at the national level and are transferred to the EU level mainly through the national governments. Secondly, because the approach of the voters can only be interpreted with great difficulty regarding decisions at the EU level, since the attitude of the voters is formed basically at a national level and the decision makers are controlled in an indirect manner by the body of voters. On the other hand, one might argue that for CAP, the possible objections are somehow circumvented, since, as the actions of the many interest groups acting at the EU level have been stated, a large and

powerful bureaucracy has been created and, finally, a process that will transmit certain powers to the directly elected bodies (*i.e.* the European Parliament) is present. However, the importance of all these factors should not be overestimated. The European Parliament, mainly because of its limited powers, is rarely subject to pressures exerted by interest groups. These groups lobby primarily the Commission, which is responsible for the formulation of proposals submitted for discussion and approval by the Council, whose members are, in turn, exposed to pressure and lobbying at national level (Swinbank, 1989). There, the interest groups lobby for the formulation of national positions on issues under discussion in Brussels that favour their interests. Thus, quite often, severe differences appear in the attitudes of member states and their representatives at a national level and in the EU Council and Parliament. On the other hand, the long-term presence of national representatives on the EU bodies and mainly the Council has resulted in the development of long-term attitudes and positions of member states. This makes possible the identification of groups and subgroups for the basic issues under discussion in the context of CAP reform.

According to Tracy (1997), two major groups have been created in terms of agricultural policy; the first group consists of countries characterised by significant differences between them, but with a relatively clear and predictable overall political position. This first group includes a subgroup of countries with a liberal orientation and a tradition of large and efficient agricultural enterprises like the United Kingdom, and of countries whose agricultural sector has strong structural advantages, like the Netherlands and Denmark, which are countries with an export orientation. This first group includes a subgroup of countries with an agricultural sector of considerable size, which is characterised by structural problems of a different magnitude, like Spain, Greece, Portugal, Ireland, Finland and Austria. The second group, according to Tracy, is limited to two countries: Germany and France. These two countries are characterised by a tremendous agricultural heterogeneity. In the case of Germany, heterogeneity derives from the different policy objectives set by the individual *länder* and the differences between the eastern and the western parts of the country (ex DDR and Federal Republic of Germany, respectively). This has often left Germany unable to present an integrated political position despite a stated preference toward the continuation of the status quo. The French positions aim at satisfying heterogeneous and frequently contrasting interests within the country. The history of CAP reforms shows that no decision has ever been taken over the opposition of both France and Germany.

But even between countries with common positions and interests, differences can be observed in relation to their political willingness, particularly where policies on specific products are concerned. A good example of this is the block of the Mediterranean countries of the EU. While Greece and Spain both demand an increase of the Maximum Gua-

ranteed Quantity for cotton, they take very different positions in regard to the existence of a national quota for cotton, where Greece is in favour of its abolition, while Spain wishes its continuation. The opposite applies to the case of olive oil, with Greece supporting the introduction of a national quota, while Spain is against to this option. Thus, the importance of each product is the determining factor in the formulation of national positions with regard to CMO discussions.

Generally speaking, the basic factor that determined the national positions on previous CAP reforms was the net benefits derived by the member states from the Community Budget (Tracy, 1997). The countries leading the calls for the current CAP reform are UK and Sweden followed by Denmark, while Germany opposed the proposals driven mainly by budget considerations, supported by Ireland and Spain which opposed reforms for reasons related to budgetary allocation to Structural Funds. But the reasons for the exerted opposition or support were not unique or simple. For instance, although the UK was in favour of cost cuts it was against the introduction of ceilings on the subsidies given to agricultural enterprises, which were expected to help in the reduction of CAP costs. This was mainly due to the high number of big farms in the UK, as in this case the introduction of ceilings would have resulted in a reduction of receipts from the EU budget that would have been greater than UK's contribution to it. This simple example identifies the difficulties to reach an agreement, since the Agenda 2000 proposals reformed not only market policies, but also imposed budgetary constraints and changed the way that agricultural policy interacted with regional policy.

Based on the fact that the creation and the development of the CAP has been driven by different national positions and interests, the study of differences and similarities in the positions of member states is of particular interest. Following that, the key issue is the identification of possible coalitions made, taking into consideration each country's positions at the early stages of the decision-making processes. Several additional questions arise:

- i) On what common ground and to what degree did the formation of groups of countries take place ?
- ii) What was their degree of internal stability ?
- iii) What conditions were set for the approval of the Agenda 2000 proposals ?

Decision-making process

Due to the relation between national interests and decisions taken at EU level, the negotiations that take place inside EU bodies are a two-stage process (Putnam, 1988) where national interests determine the negotiating position and behaviour of each member state. The whole process is complicated, since final decisions are frequently influenced by develop-

ments in issues that do not concern the matter under discussion, but other issues, which may also be of importance to the member states and their representatives at EU (Hosli, 1996). Many researchers also argue that CAP reforms had always been achieved only when EU has been faced with a crisis situation, mostly related to budgetary conditions. This time, although there has been a strong budgetary constraint, several other issues played a role in the final decision and the formulation of the agreement, like parallel discussions raised by Germany, the Netherlands, Sweden and Austria about the high levels of their net CAP contribution, whilst at the same time UK was receiving a partial rebate on its budget contributions. In addition, a group of peripheral countries led by Spain were arguing about the reduction of Structural and Cohesion Funds. Germany during its Presidency re-introduced the idea of co-financing of the CAP, only to attract a strong opposition by France for measures of this kind, which in its turn came up with the idea of degressivity.

Since the beginning of the 1980s most decisions taken in relation to the CAP are the result of majority voting. Only rarely have member states claimed reasons of national interest (the Luxembourg compromise) or reached unanimous decisions (Teasdale, 1993). This means, that in the EU-15, 62 votes are needed for a decision to be taken, while 26 votes are enough for the expression of a blocking minority. Majority voting is especially important for CAP, since it applies to the most important of the bodies that would decide on any reform: the Council of Ministers.

However, the different weight given to each country does not accurately represent its power to determine an outcome. This is determined by the minimum limit of votes required in obtaining a decision and the predetermined attitude of certain members to any attempt to form coalitions. Even if the resort to the ballot represents today a rare situation, the possibility of using the tool of majority voting has influenced the negotiation behaviour of the member states. Obviously, decisions are taken more effectively when member states have homogeneous views or, in the presence of heterogeneity, by linking national preferences into package deals. The more heterogeneous member states are, the more they can gain by linking decisions and the less likely it is that a single compromise solution will pass (Kirman and Widgrén, 1995).

Experiences with previous member states grouping – coalitions

Based on the political behaviour of member states at the Council of Ministers, there have been in the past groupings of countries on several issues. Despite the frequent changes of government, it has been observed that the positions of the national representatives remain relatively constant. Thus, assigning countries to groups is a logical exercise, even if it sometimes entails certain risks. The grouping of the EU-12 countries

according to their attitude towards free trade carried out by Hamilton (1991), placed the United Kingdom, Germany, Denmark and the Benelux in the free market group, while France, Italy and the Iberian countries were considered as primarily protectionist. Greece and Ireland occupied the middle ground. When Hamilton examined the positions of EU countries on environmental issues he concluded that the countries of the European South (*i.e.* Greece, Spain and Portugal) would not support countries like Denmark, Belgium, Luxembourg and the Netherlands, which are more environmentally minded. This thinking supports the idea that there is a permanent character to the inequality that appears between the developed countries of the North and the less developed South.

With regard to the CAP, one of the few studies that attempt a comparison between member states according to their attitude towards farm income support and consumer protection is Harvey's (1982), which refers to EEC-9. Regarding the first issue, Germany, Italy and France had formed the group most supportive of agriculture, while consumer rights were of greater importance to the United Kingdom, Belgium, Luxembourg and the Netherlands. In addition, Priebe (1984) presents a comparison between the attitudes of the member states of EEC-10 (1981), towards the Community's structural policy. There he makes a clear distinction between the less developed South (Greece, Italy and Ireland) and the more developed North (the United Kingdom, Denmark and Benelux), with France and Germany in between. A general agreement can be observed for all studies, although the issues under examination are not directly comparable. This agreement highlights the common basis that has evolved in nearly all issues between the northern countries (*i.e.* the United Kingdom, Benelux and the Nordic countries) and the southern Mediterranean countries, who are joined by Ireland, Finland and Austria. France and Germany can generally determine individual positions and almost all previous studies had identified a distinct willingness of both countries to stay apart, to determine their own paths and influence CAP according to their desires of the moment.

COALITIONS OF COUNTRIES IN THE CONTEXT OF AGENDA 2000 CAP REFORMS. APPLICATION AND RESULTS FROM CLUSTER ANALYSIS

This study aims at identifying groups of countries with common positions towards the proposals for CAP reforms under the framework of Agenda 2000, thus identifying possible coalitions of member states. The institutional arrangements of the EU determine decision-making for CAP reforms, but little empirical research has been done on this issue. Game theory appears to be suitable for analysing CAP decision-making. Voting game models have been used in the past to produce estimates for vote cal-

culatation in different EU enlargement scenarios (Widgrén, 1994) and to explore the distribution of power in the decision-making process under different information integration assumptions (Widgrén, 1999). Further Baldwin *et al.* (2000) undertook a more complex game analysis related to questions concerning decision power in the European Central Bank under various scenarios of enlargement and in the light of changes in the EU voting system discussed in the Nice Summit. Their analysis demonstrates the need to identify possibilities of groups with homogeneous positions in order to continue from a pre-fixed basis with voting game models.

The existing work in this field demonstrates how difficult it is to use voting game theory when a considerable number of players (15 member states and the Commission) is involved and the decision-making process displays the characteristics of a repeated game (several compromising attempts). In addition to these conditions, in the case of Agenda 2000 negotiations, information had been altered during the progress of the game (due to counter proposals that have appeared during the negotiation phase). In the present study, we choose to employ cluster analysis to identify possible groups of countries that present a homogeneous attitude towards the CAP reform proposals. Cluster analysis in this sense appears to be a suitable first step to a game theory analysis, as it contributes in reducing players to groups of players (member states), thus allowing for the identification of a set of common strategies followed by these groups of member states.

Cluster analysis is a statistical technique which has been used in the past for grouping countries or areas according to a variety of structural or other type of characteristics (Jacquemin and Sapir, 1996; Hirschberg *et al.*, 1991; Berlage and Terweduwe, 1988) in order to test hypotheses related to common performances, welfare, attitudes, etc. The objective of cluster analysis is to classify objects into a series of groups on the basis of measured characteristics, so that there is within-group homogeneity and between-group heterogeneity. The analysis can be performed on both metric and non-metric data. Cluster analysis techniques vary according to the method of grouping they follow. The main methods are divided into hierarchical and non-hierarchical ones. The first one starts by allocating each object to its own cluster and then it merges the objects into successively smaller numbers of groups, until all groups form one cluster. This procedure use the information on inter-object distances and in every step mergers take place between the groups with the closest distances, since these groups are the ones that are more similar. Thereafter, according to the level of concentration and information that the researcher desires, he has to decide on the number of clusters to be presented. The non-hierarchical procedure starts with a pre-determined number of clusters and all the objects are grouped into the clusters using as criteria the minimisation of within-cluster variance or the maximisation of between-cluster variance.

In this study cluster analysis will permit the determination of K groups of homogenous units out of a set of $N > K$ units. In other words,

we will try to construct groups or clusters of countries within the set of the 15 EU countries, which are homogeneous from the point of view of their expressed attitudes towards the 18 points contained in the CAP reform proposals. The attitudes, which have been presented in Table 1, have been coded to numeric values ranging between -2 (which stands for the very negative position) and +2 (which stands for the very positive position), with 0 denoting an indifferent position.

Of all the available hierarchical clustering procedures Ward's method is the one most frequently used. This method is designed to optimise the minimum variance within clusters and applied to the data of the present study. In parallel, **Average Linkage** and **Complete Linkage** clustering methods have also been applied in order to enable the validation of cluster membership. The first method calculates the similarity between the centroids of two clusters that are to be merged, while the second one looks for the minimisation of the maximum distance between any two attributes in two clusters. Although other hierarchical methods are available, these have not been considered, as in previous research they have been found to provide extreme solutions (Hirschberg *et al.*, 1991). In this way clusters have been created for a 15-space dimension so up to 14 clusters can be considered as a possible outcome. Some researchers consider the final decision regarding the number of clusters as an arbitrary one (Jacquemin and Sapir, 1996). Several prefer to present the number of clusters that best suits the level of information they want to present, or to test a range of solutions (Hirschberg *et al.*, 1991). One of the statistical criteria available for choosing the appropriate number of clusters is the examination of the change of the **fusion** or **agglomeration** coefficient, which is the numerical value at which various cases merge to form a cluster (Andenderfer and Blashfield, 1984). The coefficient is analogous to the clustering method employed, and a sudden increase in it means that no new information is derived from the subsequent mergers of clusters. This practice is analogous to the **scree test** employed in factor analysis (Everitt, 1993). In order to validate the solution given by applying hierarchical clustering methods, a subsequent non-hierarchical run is used to verify the number of clusters provided as solution by the hierarchical method and the countries membership.

The application of cluster analysis to all 18 points of the CAP reform proposals provided four distinct clusters. The first cluster is comprised of the United Kingdom, the Netherlands, Denmark, Sweden and Italy. In the second, France, Luxembourg and Belgium have joined Portugal and Spain, while Ireland, Greece, Austria, and Finland form a third cluster which can be defined as the **periphery group** given that these countries are the outermost countries of the EU. Germany from the very beginning forms a one-member cluster. Italy being an unstable country could be removed from her group, thus generating a new cluster of its own. This leads to a solution of 5 clusters, as it can be seen in the dendrogram presented in Figure 1a, indicating that Italy has a loose connection with the countries remaining in this group.

Figure 1. EU member states coalitions to the EU Commission Agenda 2000 proposals

Figure 1a. All 18 proposed reform points

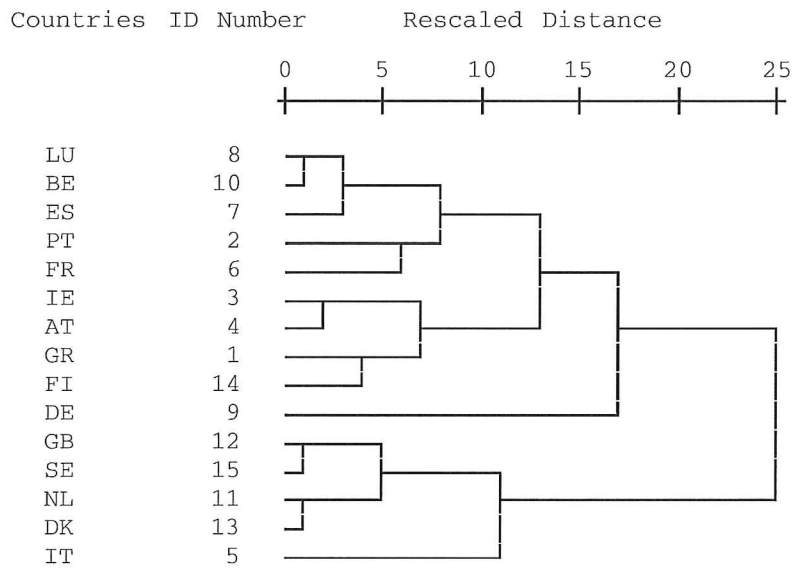


Figure 1b.
Proposed reforms for cereals and oilseeds

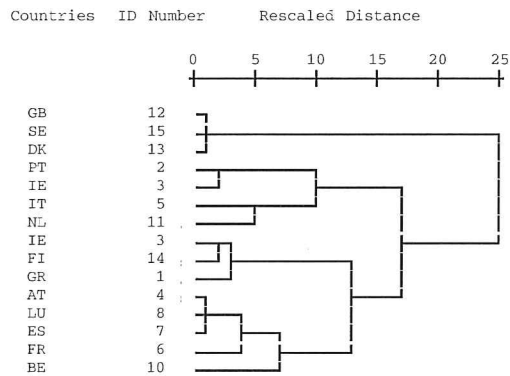


Figure 1c.
Proposed reforms for beef

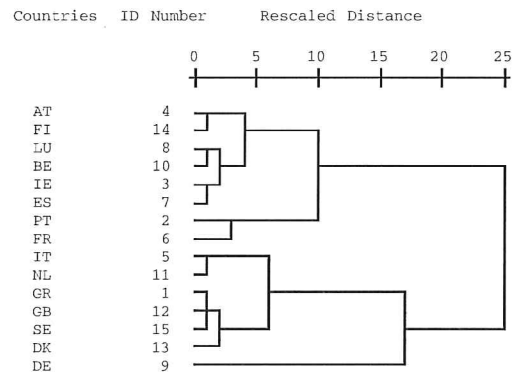


Figure 1d.
Proposed reforms for milk

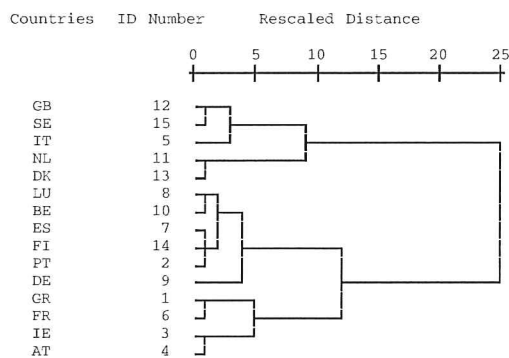
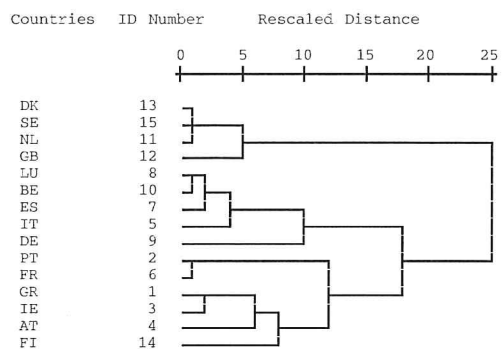


Figure 1e.
Proposed reforms on horizontal issues



In a further step, the 18 points have been divided into two general packages, one concerning sectoral reforms, thus allowing a further division to the measures proposed for cereals and oilseeds, for beef and for milk, and a second referring to horizontal issues. This was deemed necessary for this study, as the review suggested that the structural differences between member states and the heterogeneity in their interests could have been related to specific proposals and not to the general reform package. This helped identify the extent to which the achievement of the compromise had been impeded by the different sectoral proposals or the horizontal issues. The same analysis was then performed for all these four groups of reform proposals, to understand whether the groups created for each respective package vary from the groups created in the first analysis presented above. If differences were found, this would mean that certain countries with a specific position towards the Agenda 2000 package could have different positions to specific structural changes. This could be a consequence of specific agricultural structural characteristics of the country and might signal difficult or controversial points for the country, which define further its bargaining position.

The main opponents for the cereals and oilseeds reforms were Germany and Portugal, followed by Spain, Luxembourg, Austria and Italy. For beef reforms, Germany presented the strongest opposition, while for the milk reforms Germany had again expressed the strongest negative attitudes along with Italy and France. With regard to horizontal proposals the most negative countries were Germany and Spain, followed, to a lesser extent, by Italy (Table 2). It has to be noted that under these considerations we explore the possibility of formulation of different coalitions among countries for all of the four proposal packages. The cluster analysis by package provided the following information (Figures 1b, 1c, 1d and 1e):

- Reforms proposed for cereals and oilseeds

The grouping of the 15 countries according to their attitudes towards the 6-dimension reform proposals framework follows a very different pattern from the initial grouping (Figure 1b). No country presents any independent attitude, but this time a solution of four groups has been accepted. The first includes the United Kingdom, Denmark and Sweden, the second Portugal, Germany, the Netherlands and Italy, the third group Belgium, Luxembourg, France, Spain and Austria, and the fourth group Greece, Finland and Ireland. These results alter considerably the patterns developed earlier, with the distinctive groups formed by the peripheral countries, the Iberian and French-speaking countries and the North Sea countries. Portugal and Germany merge since their attitude towards nearly every measure proposed was negative, Greece, Finland and Ireland remain as a condensed peripheral group with a strong positive attitude towards the proposed subsidies for hard

wheat, and Austria enters the French-speaking group along with Spain. Strikingly, the Netherlands presented a similar attitude to Italy.

- Reforms proposed for beef

There are two reform proposals for the beef sector. According to their attitudes towards these reforms, the 15 countries form four clusters, with Germany accounting for her own cluster, while the other three clusters created as Portugal and France; Ireland, Austria, Spain, Luxembourg, Belgium and Finland, and finally Italy, the Netherlands, Greece, the United Kingdom and Denmark merge together. Compared with the other groupings, Germany in this analysis again stands alone as she did in our first analysis, while the Netherlands and Italy will form a separate group if a solution of five clusters will be requested, as in the analysis regarding the cereals and oilseeds proposals.

- Reforms proposed for milk

Regarding milk, the clustering according to the four proposed measures provided four clusters with the following synthesis: Denmark and the Netherlands merged in the first cluster; the United Kingdom, Sweden and Italy formed the second; Ireland, Austria, Greece and France formed the third; and finally Portugal, Spain, Luxembourg, Belgium, Germany and Finland formed the last one. The first group was somehow expected since milk production is central to the agricultural economy of Denmark and the Netherlands. The second group closely follows the first, and in the subsequent validation clustering all five countries formed a single cluster, which then splits into two. It should be noted that the dendrograms corresponding to the beef (Figure 1c) and milk analysis (Figure 1d) are very dense compared to the rest, something that indicates that very strong similarities existed between the groups and the countries.

- The horizontal measures and structural issues of the reform

Apart from the sectoral measures, certain support measures of a horizontal nature have been proposed, forming the “second pillar” of CAP. These measures linked Agenda 2000 to the WTO negotiations, environmental concerns, the abandonment of Objective 5b, the national redirection of agricultural support and the transfer of structural funds for agricultural development to the FEOGA fund. There were certain differences within the attitudes of the 15 EU countries towards all these very diverse issues, since, for instance, some had favoured the environ-

mental concerns of Agenda 2000, while others had been reluctant to abandon policy instruments such as support for Objective 5b areas that guarantee them extra funds. Thus, regarding the 6 proposed elements of reform, the analysis provided the following five clusters: the Netherlands, the United Kingdom, Sweden, and Denmark form the first cluster, Germany forms a one-country cluster (but in the validation process Spain merges with her), then, Belgium, Luxembourg, Italy, and Spain (a group which is quite unstable) form the third cluster, (in a later stage clusters two and three merge together). Portugal and France form the fourth cluster, while Austria, Finland, Ireland and Greece form the fifth (Figure 1e).

Table 3. Coalitions and voting power of EU member states groups according to positions towards the proposals of Agenda 2000

	All proposals (18 points)	Cereals and Oilseeds (6 points)	Beef (2 points)	Milk (4 points)	Horizontal actions (6 points)
Cluster 1					
Countries ^a	DE	GB, DK, SE	DE	DK, NL	DE
N. of votes ^b	10	17	10	8	10
Position ^c	-	++	0	+	-
Cluster 2					
Countries ^a	NL, GB, DK, SE, IT	DE, PT, IT, NL	PT, FR	GB, SE, IT	NL, GB, SE, DK
N. of votes ^b	32	30	15	24	22
Position ^c	+	-	+	-	+ / -
Cluster 3					
Countries ^a	PT, ES, FR, LU, BE	BE, AT, FR, ES, LU	IE, AT, ES, LU, BE, FI	IE, AT, GR, FR	BE, LU, ES, IT
N. of votes ^b	30	29	25	22	25
Position ^c	-	-	++	++	-
Cluster 4					
Countries ^a	GR, IE, AT, FI	FI, IE, GR	IT, NL, GR, GB, DK, SE	PT, ES, LU, DE, BE, FI	AT, GR, IE, FI
N. of votes ^b	15	11	37	33	15
Position ^c	+	+	+	+ / -	+
Cluster 5					
Countries ^a					PT, FR
N. of votes ^b					15
Position ^c					+

^a: Country coding is indicated in Table 2.

^b: Computations have taken into account the results of Figure 1 and the number of votes that each member state had in 1999 (for number of votes by member state, see Swinbank (1997, page 65)).

^c: Information from Table 1 has been used for allocating a sign to overall position of the group. Thus ++ denotes a very positive position, + a positive position, - a negative position and + / - indicates a mixed attitude including positive and negative positions from member states.

The previous presentation of the cluster analysis results can lead to specific conclusions. The analysis by product indicated a grouping at a later stage for cereals and oilseeds measures, in contrast to the beef and milk measures where, as presented in the corresponding dendrograms, groups were formed at an earlier stage. This is important, particularly if we consider that the "indifferent" attitudes regarding cereals and oilseeds were significantly less than in the other sectors, *i.e.* 18/85, against 26/60 in beef and 20/60 in milk (Table 3). This signifies that member states had built stronger positions in relation to the proposals concerning the reforms for oilseeds and cereals. In the cases of beef and milk reforms, cluster analysis identified better-defined and denser groups and so the potential for reallocation of the countries into new clusters was more limited. Thus, in the respective cases, the countries could not exhibit unexpected attitudes, as their positions due also to the structural characteristics of the sectors were more or less predetermined. This means that in the case of cereals and oilseeds measures, the possibility of reaching a compromise was slightly lower than in the other two cases, *i.e.* for beef and milk reforms and so additional efforts were needed.

For the horizontal issues, a less extreme situation can be observed in relation to the formation of groups and their internal stability. The most important element observed is a geographic homogeneity, and in certain cases proximity between the countries belonging to the same group. Groups created by south European, north European and central European countries are very well defined, verifying the spatial dimension that the horizontal issues entail.

The attitude of certain countries as derived from the application of the analysis for all 18 measures and for the four groups of measures (*i.e.* cereals and oilseeds, beef, milk and the horizontal issues) requires further discussion. Germany appears to be isolated in most cases. On the other hand, the United Kingdom, Denmark, Sweden and the Netherlands frequently form a single group. Finland appears to follow a different course than that followed by Sweden and in some cases she merges, as does Austria with countries of the European South, indicating its placement in the EU periphery rather than a group of Northern countries. However, the periphery does not form a single group, since only Greece and Ireland exhibit a high degree of common attitudes, while the two countries of the Iberian Peninsula follow their own course. Finally, the countries with the most contradictory coalitions are France and Italy.

Based on the country grouping according to the basic subjects of the reforms as settled by cluster analysis, we will proceed with an assessment of the votes accounted for by each group. In addition, taking in mind the positive, negative or indifferent position of the countries forming the groups under examination, we examine the possibility of generating solutions based on voting majorities, or, conversely, the appearance of blocking minorities.

CONCLUSIONS AND VIABILITY OF THE CAP REFORMS UNDER AGENDA 2000

Based on the previous cluster analysis of the EU member states, as well as the positive, negative or indifferent position of each country towards the proposed measures, the following conclusions can be drawn. With regard to cereals and oilseeds, according to the votes estimates presented in Table 3 two distinct opportunities for the creation of a blocking minority were present, namely clusters two and three. Both clusters had a negative position for the proposed measures, although in the second cluster, Italy had stated a relatively positive position. None of the countries that belong to the third cluster had a definite negative position and furthermore the internal stability of the cluster was not high. Mention too must be made of the differences in positions in response to the proposals. The UK, Denmark and Sweden wanted to end set-aside; Belgium, Germany and Spain wanted full compensation for the price cuts and France, while Spain and Portugal were concerned about the rebalancing of the support levels between arable crops. However, a possible dissolution of the Franco-German axis would have had a negative impact. The most probable solution for a decision based on majority voting was one based on co-operation between the countries of the first cluster, which consists of the countries with the most positive attitudes (representing a total of 17 votes), together with the relatively positive countries of the fourth cluster (a total of 11 votes) and the positive attitude of Italy in the second cluster (10 votes) and some of the countries of the bigger fourth cluster which account for 29 votes. An analysis of the compromise achieved suggests some elements proposed for alleviating the pressure, mainly the abolition of compulsory set-aside from 2002 onwards, the granting of specific drying costs for cereals and oilseeds for Finland and Sweden and an increase in two steps of the area payment for arable crops and a decrease in the proposed price cuts from 30% to 20%. These have been supplemented with reductions in area payment for oilseeds in three annual steps and with the possibility of using agri-environmental programmes within the framework of the rural development regulation (Reg. 1259/99) for sunflower and spring rape production. An increase of 150,000 hectares has also been introduced for the base area to allow for the new German *länders*. Portugal, which had stated its opposition to the proposed sectoral reforms, managed to double its maximum guarantee area for durum wheat from 59,000 hectares to 118,000 hectares.

Regarding the proposals for the beef sector, according to the results of the cluster analysis, no group of countries was strong enough to form a blocking minority. Also, with the exception of Germany, no country had stated a sufficiently strong opposition toward the proposed reforms. Moderate opposition had been stated by Austria, Spain and Finland, which opposed the end of intervention, while the UK, France, Ireland

and Portugal were seen as gainers due to their extensive herds. Thus, despite the observed differences, it seemed possible that a sufficient majority would be achieved. The proposals of the Commission and the achieved compromise resulted in a reduction of the basic price, while the intervention price will remain as a safety net. Additional support to the beef sector will be granted through increases in all other available premiums (slaughter and extensification premiums and suckler cow premium) (European Commission, DGA, 1999a). It should be noted that the first agreement achieved for the beef reforms package, which was the most radical of the sectoral proposals, remained intact during the final discussions by the heads of state (Ackrill, 1999).

The milk sector reforms presented a high potential for the formation of a blocking minority. The second cluster, consisting of Italy, Sweden and the UK (the London Club) had stated strong negative attitudes led by the requirement for abolition of the quotas, and with the addition of Germany from the fourth cluster, represented 33 votes in total, which were more than those required for the creation of a blocking minority (Table 3). The negotiations for the dairy sector attracted most efforts on sectoral discussions, thus identifying the area as a major point of controversy in the Agenda 2000 reform (Núñez Ferrer and Emerson, 2000). This situation led to what is effectively the postponement of any reform of the milk sector, as the minor price cuts introduced will only be effective from 2005/6. However, according to the terms of the compromise, the quota system would remain in place until 2008, all member states getting an 1.5% increase, while five countries got a 2.4% increase in their milk quotas (European Commission, DGA, 1999b), the majority of which (82%) was allocated to just two countries, Italy and Spain. Another positive aspect that assisted this compromise was the lack of external pressure from the world market which would have provoked the milk reforms, as there are no major global exporters for milk the way the USA and Canada affect the cereals sector (Mahé and Roe, 1996).

Significantly fewer problems appeared with the proposed reforms of the horizontal measures, since none of the five clusters was able to form a blocking minority. The group consisting of Sweden, Denmark, the UK and the Netherlands (second cluster, 25 votes) strongly supported the reforms. Clusters four and five (accounting for 15 votes each) had also indicated a positive attitude. Apart from Germany, which was generally opposed to all reforms and formed a group of her own, negative positions were also taken by the countries of the third cluster formed by Italy, Spain, Belgium and Luxembourg, a cluster that accounts for 25 votes. According to our analysis these two clusters merge at a latter stage (Figure 1e), which would have resulted in a blocking minority of 35 votes. Thus, to proceed with these proposals attention had been given to the less developed countries of the South, and, above all, efforts had been concentrated on solving the problems related to the financing of

the Structural Funds (*i.e.* attracting Spanish and Italian support). This strategy had a significant impact on the acceptability of the proposed horizontal measures, in the form of positive position from countries that receive substantial assistance from the Structural and Cohesion Funds, mainly Spain, Greece and Italy.

The Commission's initial Agenda 2000 CAP reform proposals were the most radical and ambitious proposals for reform at the Commission since the establishment of CAP in the early 1960s. Our analysis demonstrated the use of cluster analysis for the identification of possible coalitions between EU member states that subsequently acted as voting majorities or created blocking minorities for the approval of the proposed CAP reforms in the context of Agenda 2000. This analysis is based on the positions stated at the end of 1997, immediately after the submission of Commission proposals. The results indicate the presence of strong coalitions resulting in a negative position towards the Commission's proposals, thus leading to a blockage of proposals, and identify the cereals, oilseeds and dairy reforms, and to a lesser extend the horizontal proposals as possible arenas for conflict.

It should be kept in mind that the actual vote cast by each country would have been determined not only by the pre-stated positions presented above, but also by the outcome of the continuous negotiations on CAP reform proposals and Agenda 2000, as well as on the negotiations concerning the entire spectrum of the European integration process. However, the compromise achieved in the Council of Ministers for the total package of CAP reform proposals has never been put to a vote, but it has been ratified, even if further compromises took place at the Berlin Summit, thus facilitating an agreement in the whole Agenda 2000. The outcome of these negotiations and the compromise that resulted verify the results presented in this analysis. The compromises postponed dairy reform by putting off price cuts until the 2005/6 period, produced significant decreases in the cuts proposed by the Commission to the levels of subsidies for all sectors and introduced various modifications in other parts of the proposals to alleviate member state specific difficulties. Subsequently, the deal achieved has not substantially altered the pre-1999 CAP, and it has allowed the Commission to "closely follow the markets and their developments" and report for the mid-term review. This leaves open the possibility of re-initiating CAP discussions in the frame of the 2002-2003 mid-term review, a possibility clearly supported by statements by Commissioner Fischler: *'the midterm reviews indicate that new problems are coming up on agricultural markets and CAP has to react'* (Fischler, 1999). Also, new developments in agricultural policy like the recent food security crises (BSE and foot and mouth disease - FMD), the current round of international trade discussions and the reforms required for EU enlargement are a prompt for quick action towards more radical CAP reform.

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