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Markus F. Hofreither, Klaus Salhofer and Franz Sinabell^{*)}

Abstract.

The political influence of specific interest groups can be revealed using a "Political Preference Function" approach. Previous empirical studies have clearly shown that the strong promotion of agriculture in industrialized countries is due to the fact that farmers are able to exert greater political pressure than consumers and taxpayers. Extending the scope of investigation, this paper analyzes the role of upstream and downstream industries in the political process by concentrating on the Austrian bread grains market. It is found that the upstream and downstream industries were able to exert greater political pressure due to strong formal and informal influence channels, and have hence benefited considerably from agricultural policy.

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1 Introduction and problem

Most governments in industrial countries intervene in agricultural markets. Besides arguing for a "fair" level of income, comparable to that outside the agricultural sector, numerous other legitimations for agricultural support have been brought forward. According to Winters (1987: 291) market interventions as well as other support policies were put into effect in industrialized countries in order to

- promote agricultural efficiency and the optimal utilization of production factors;
- provide a local supply for domestic food processors;
- ensure 'reasonable' prices for consumers;
- conserve the natural environment and maintain vigorous and aesthetically pleasing rural communities;
- ease the farm sector's speed and the costs of adjustment to external factors;
- pay due regard to the social structure of agriculture.

Obviously, this list of goals not only contains a number of conflicting targets, but also comprises a mixture of ends and means. Nevertheless, such statements do find broad support among non-agriculturally involved citizens (Agra-Europe, 7/95, Documentation). Therefore, government and interest groups have considerable leeway regarding how they realize these goals.

Public choice literature offers two major explanations the existence of government policies favouring the agricultural sector. While Honma and Hayami (1986), de Gorter and Swinnen (1993b) and Swinnen (1994) focus on economic factors, Balisacan and Roumasset (1987), Gardner (1987a), and Miller (1991) refer to the ability of interest groups to produce political pressure. According to Raussier and Freebairn, (1974) the political power of interest

groups can be revealed using a Political Preference Function (PPF) approach. Empirical results based on this method (e.g. Sarris and Freebairn, 1983; Ohmke and Yao, 1990, Marchant, 1993) clearly show that in industrialized countries agricultural producers have more political weight than consumers and taxpayers.

The final outcome of policies "correcting" agricultural markets is a substantial redistribution of welfare from consumers and taxpayers to the farm sector. Because of the resulting welfare implications and their trade relevance, agricultural policies are well documented and various yearly updated indicators record transfers to the farming sector. A widely used OECD method of measuring support to farmers, the percentage PSE¹, amounts to an average of 55 % in Austria which is well above the OECD and EU average.

Breaking down the OECD percentage PSE data reveals that in Austria, livestock products rank 11 percentage points lower than crops (52 % versus 63 %) which implies that the crop farmers' share of income due to transfers is a multiple of that allocated to farmers in disadvantaged regions² who are officially the main target group of agricultural policies. Looking at the budgetary outlays makes an even wider gap visible. Cereals amount to about 10 % of the production volume, whereas an average of 40 % of agricultural export subsidies is allocated to them (BAWI, 1995). Having these statistics in mind, the assumption that Austrian agricultural policy shows preference for the agricultural sector's interests over taxpayers' and consumers' welfare does not seem sufficient to explain the apparent bias towards cereals. Instead such statistics lead to the hypothesis that there is political pressure being applied of a much wider scope of related industrial interest groups, e.g. exporters, stockpilers, and input suppliers.

The goal of this study is to test this hypothesis by taking a closer look at the role of upstream and downstream industries in the political process. In particular, we will reveal the opportunities agribusiness firms make use of to influence agricultural policy in Austria.

The Austrian bread grains sector serves as the empirical basis for our study, because in the past, the bread grains segment of the Austrian farm sector has been dominated by high pre-determined prices, and at the same time, it is comparably input intensive. Without taking into account the vertical links in this subsector, the farmers are considered to be the main beneficiaries of this price support scheme. Therefore, we will be empirically investigating, whether farm input suppliers and food manufacturing industries in this market profited from the past support policy; and we will estimate their benefits and the costs for society. Using a PPF framework we will measure the political weight of upstream and downstream industries; consumers and taxpayers; and farmers. In doing so, we avoid an inadequacy in the PPF studies to date which implicitly assume agricultural policy-makers are solely concerned with the benefits that farmers alone derive from agricultural policy (von Cramon-Taubadel, 1992).

We will proceed as follows: In Section 2, the decision-making process in Austrian agricultural policy is described and the roles of the government; farmers; downstream and upstream industries; and consumers and taxpayers are identified. Both the formal and the informal institutional structures are outlined. In Section 3, alternative approaches of political economists in explaining the basic issue of this paper are reviewed in short. Finally, an empirical model which focusses on the Austrian bread grains market is developed. The gains and losses of the different interest groups are then calculated, and their political impact is derived.

2 Formal and informal structure of the decision-making process

Basic information

As part of the empirical analysis, 27 persons including politicians, agro-industrial managers and observers of Austrian agricultural policy were contacted in order to obtain a general insight into

the policy formation process in December 1994. Eleven of them, however none from the agribusiness, were willing to be interviewed.

The Austrian economic system can be characterized by a corporate model. The specific institution in which different interest groups can find a consensus is called the "Social Partnership". It is here that the Chamber of Commerce, the Chamber of Employees, the Standing Committee of the Presidents of Chambers of Agriculture, and the Austrian Labor Union are represented. The political influence of this institution which advises the government and plays a coordinating role in the decision-making process is very major, as the interviews suggest. Figure 1 illustrates the following verbal description of the structure of the institutions involved. The straight lines refer to the formal structure and the dashed lines to the informal aspects.

Government

The main result of the interviews illustrates the fact that the most important decisions are made by the Minister of Agriculture. These decisions, however, are the result of a balanced interaction of formally-involved institutions and interest groups acting via informal channels.

Only measures which were coordinated within the Social Partnership have a chance of passing the Council of Ministers. Here, decisions have to be made unanimously before bills are passed on to the parliament. In the past, the Austrian Parliament has ratified agrarian bills without substantial amendments. The role of the Minister of Finance is seen to be important, but in many cases it is held in balance by the countervailing political power of the Minister of Agriculture and the head of the Standing Committee of the Presidents.

A weekly "agricultural summit", chaired by the Minister of Agriculture, is held in order to coordinate short term strategies of the Agricultural Ministry with the other main bodies in this

field which comprise the head of the Standing Committee of the Presidents, delegates of the Austrian Farmers' Union, and a representative of the Raiffeisen-Cooperatives, representing a market-dominating union of firms in the downstream and upstream sectors.

Farmers

Farmers are indirectly represented via the parliament, and in the Social Partnership via the Standing Committee of the Presidents. According to our findings, the Standing Committee of the Presidents is the second most important body involved in the Austrian agricultural policy arena besides the Minister of Agriculture. Formally, its role constitutes coordinating the activities of nine regional agricultural chambers and representing them in the Social Partnership. Actually, its main activity is to give expert opinions on a variety of bills (Präsidentenkonferenz aktuell, 1994), and play an active part in the pre-formulation of these bills in cooperation with the agricultural bureaucracy (Cselko, 1994), on the one hand. On the other hand, it also coordinates activities with the remaining Social Partners.

Downstream and upstream industries

Interestingly, there is a non-chamber member in the Standing Committee of the Presidents: the umbrella organization of Raiffeisen-Cooperatives which have a dominating position on important input as well as output markets (see Table 1). Therefore, the Standing Committee of the Presidents, being the representative of the farmers, not only tries to pursue policies favoring farmers, but also has to represent the interests of parts of the downstream and upstream industries. Hence, in Austria there exists a legally established forum where potentially conflicting interests are closely tied.

Price policies stimulating agricultural output which requires processing are therefore favored by management as well as employees of the upstream sector. This is reflected by our finding that, among the other partners of the Social Partnership, the Austrian Labor Union has a great influence on agricultural policies. In some industries (e.g. milk, starch and sugar) almost 100% of the employees are members of this organization (Göbl, 1995).

On the other hand, the influence of the Chamber of Commerce, generally striving for competitiveness and efficiency, does not seem to be very strong. This is explained by the fact that Raiffeisen-Cooperatives are members of this chamber too, and that market shares of non-cooperative firms in agribusiness are marginal (see Table 1) because they were discriminated by the tax system over long periods (Fahrleitner, 1991: 418).

Table 1

Taxpayers and consumers

The fourth member of the Social Partnership, the Chamber of Employees, usually takes an active role in representing consumer interests. However, activities targeted to reduce the gap between domestic market prices and world market prices seem to be neutralized by the fact that the representatives in this Chamber are exposed to pressure by their paying members, among them employees in the food industry, represented by the Austrian Labor Union. Taxpayers or voters were never mentioned during the interviews. This finding leads to the assumption, that taxpayers' and consumers' interests are under-represented when agricultural issues are being dealt with in the Social Partnership.³

Interpersonal links

Practically all members of parliament who are farmers, as well as officials of the Chamber of Agriculture, are members of the board or top management of important cooperatives. This combination of activities not only helps to reduce information costs and maintain loyalty of farmers and industry, but also opens perspectives for a career in the food industry, when the political career is over (Ebner, 1994).

Figure 1

3 Modelling political interests

3.1 Alternative approaches and previous studies

In general, the political economy literature offers three lines of explanation for policy intervention: traditional models of a government maximizing social welfare, models relying on the interaction between politicians and voters, and models of interaction between pressure (or interest) groups and government.⁴

The traditional view of political economy, emanating from Pigou (1932), relies on an autonomous government being fully exogenous to the economic system. Like an omniscient, benevolent dictator, the government tries to maximize "social welfare" by correcting market failure and ensuring allocative efficiency in the economy. If the occurrence of less than optimal

policy outcomes is detected, this can be explained by a lack of specific knowledge or poor management (Swinnen and van der Zee, 1993: 262-263).

As a reaction to the obvious shortcomings of the Pigovian approach, the 'new political economy approach' emerged, wherein the behavior of politicians, bureaucrats, pressure groups and voters is clearly motivated by self-interest. These rationally behaving agents try to maximize an objective function similar to agents in economic markets. However, since the political system cannot create wealth per se, the links between the economic and the political system are an important feature in ensuring optimal behavior of the agents in both systems.

One line of research, focusing on the interaction between politicians and voters, emanates from Downs (1957). Recent research in this tradition in the field of agricultural economics has been done by de Gorter and Tsur (1991), de Gorter and Swinnen (1993a, 1993b, 1993c) and Swinnen (1994). Politicians seeking support provide policy interventions to meet the demands of voters supplying support. The support which politicians receive depends solely on how their actions affect the economic welfare of individuals in the favored group.

A different approach, based on Olson (1965), Peltzman (1976) and Becker (1983), focusses on the behavior of and interaction between interest groups and government. Important contributions focusing on agricultural applications have been made by Rausser and Freebairn (1974), and Gardner (1983). According to Bhagwati (1989), one can identify two analytical viewpoints within this approach: the *self-willed government* formulation which assumes that the government chooses policy instruments in order to maximize its own political support (Rausser and Freebairn, 1974; Sarris and Freebairn, 1983; Riethmueller and Roe, 1986; Lopez, 1989; Ohmke and Yao, 1990; Rausser and Foster, 1990; von Cramon-Taubadel, 1992; Bullock, 1994a); and the *clearinghouse government approach* which assumes the government reacts to intervention of interest groups in a way that maximizes the expected value of its re-election

prospects (Becker, 1983, 1985; Gardner 1987a, 1987b; Carter et al. 1990, Miller, 1991; Bullock 1992, 1994b).

Since our findings in Section 2 suggest that interest groups control the forces of supply and demand in political markets rather than individual voters, we developed a model according to the interest-group approach in the tradition of the “*self-willed government*”.

3.2 Modelling the political economy of the Austrian agribusiness sector

We will be formulating a three-stage vertically-structured model similar to Sawar and Fox (1992).⁵ The first stage, the farm input sector, includes firms that construct buildings and supply machinery, labor, operating input (fertilizer, gas, chemicals, etc.) and land. The second stage, the farm sector, consists of farms that combine this input to produce bread grains, which in turn are used for exports or domestic production. The third stage, the food manufacturing sector, combines bread grains and non-agricultural input (machinery and buildings as well as labor) to produce food. It is assumed that all markets are competitive, all firms at each stage are identical, and producers maximize profits. This market system can be represented by the following system of equations:

The production of bread grains is represented by

$$Q_s = X_{Q_s} \prod_i i^{\alpha_i}, \text{ with } i = C, L, N, B, \quad (1)$$

where Q_s denotes the produced quantity of bread grains, C machinery and buildings, L labor, N operating input, and B land. X_{Q_s} is a production function shift parameter, and α_i are the elasticities of output with respect to each input. Factor prices are set equal to the value of the marginal product

$$P_i = \alpha_i \frac{Q_S}{i} P_S, \text{ with } i = C, L, N, B, \quad (2)$$

P_S being the supply price of bread grains, and P_i the price of input factor i , both at the farm level.

Supply of input used for bread grains production is denoted by

$$i = X_i P_i^{\varepsilon_i}, \text{ with } i = C, L, N, B, \quad (3)$$

where X_i is the shift parameter, and ε_i the elasticity of supply of input i . Food production is specified as

$$Q_F = X_{Q_F} \prod_k k^{\alpha_k}, \text{ with } k = C_F, L_F, Q_D, \quad (4)$$

where Q_F represents food products. C_F , L_F , and Q_D denote machinery and buildings, labor, and the quantity of bread grains used to produce food. Agrarian factor prices are equivalent to the value of their marginal product

$$P_k = \alpha_k \frac{Q_F}{k} P_F, \text{ with } k = C_F, L_F, Q_D, \quad (5)$$

with P_F being the price of food products, and P_k the price of input factor k , both at the food sector level. The input supply for food production is represented by

$$k = X_k P_k^{\varepsilon_k}, \text{ with } k = C_F, L_F \quad (6)$$

where X_k is the shift parameter, and ε_k is the elasticity supply of input k . Finally, demand of food products is calculated as

$$Q_F = X P_F^\eta, \quad (7)$$

where X is the shift parameter and η the elasticity of demand.

According to Salhofer (1994), interventions in the Austrian bread grains market can be illustrated using Figure 2. D is domestic demand, S domestic supply, S_C a quota, and W the foreign demand/supply line, both perfectly elastic at the prevailing world-market price because of the small-country assumption. The support of bread grains farmers is provided by a floor price P_{Q_D} , backed by import controls and export subsidies. Since 1988, bread grains have been subject to quota restrictions on a farm level, defined by acreage and quantity. Thus, bread grains farmers can deliver by contract the quantity Q_C at the price P_{Q_D} . Quantities which exceed the quota can be delivered at a reduced price of P_S . This leads to a total supply of Q_S and a domestic demand of Q_D . Without intervention the world-market price P_W would apply. Consumption would be Q'_D instead of Q_D and production Q'_S instead of Q_S

Figure 2

3.3 Estimating the gains and losses effected by agricultural policy

The elasticity of demand η has been adopted from a study by Schneider and Wüger (1988), who estimated own-price elasticities for wheat and rye flours of -0.2 and -0.4. In accordance with these results we chose a demand elasticity of -0.3. Land is assumed to be fixed, and therefore $\epsilon_B = 0$. All other elasticities ($\alpha_L, \alpha_C, \alpha_N, \alpha_B, \alpha_{C_F}, \alpha_{L_F}, \alpha_{Q_D}, \epsilon_C, \epsilon_L, \epsilon_N, \epsilon_{C_F}, \epsilon_{L_F}$) are estimated using time series data and OLS and ARIMA estimation procedures. Estimation results are reported in Appendix 1. Using these elasticities, the shift parameters are calibrated to match the three year price and quantity averages over the period of 1991 to 1993. Since P_S and P_{Q_D} are policy

instruments, equations (1) through (7) represent a solvable system of sixteen equations in sixteen unknowns.

The gains and losses of each group caused by market intervention are computed by means of standard welfare measures (Just, Hueth and Schmitz, 1982). The welfare change (ΔPSF) of farmers is computed by changes in revenue minus changes in costs plus the rent derived from supplying labor. Welfare change of input suppliers (ΔPSI) is measured by the rent of supplying input factors, machinery and buildings (at the farm level as well as at the food manufacturing level) and operating input. The food manufacturers' welfare-change (ΔPSI) is measured by the rent of supplying input factor labor for food production. The change in consumer welfare (ΔCS) is measured by the change in consumer surplus, and the change in taxpayers welfare (ΔTA) by the budget revenue necessary to finance the agricultural program.

The computed welfare changes are compiled in Table 2. Transfers to bread grains farmers due to market intervention amount to 1.318 billion ATS. Table 2 also reveals that input suppliers gained 0.763 billion ATS and food manufacturers gained 0.101 billion ATS. Since the costs of consumers and taxpayers amount to 3.587 billion ATS, the deadweight losses (DWL) caused by market intervention are 1.405 billion. ATS or 64 % of each ATS transferred ($\text{DWL}/(\Delta\text{PSF} + \Delta\text{PSI} + \Delta\text{PSA})$). Based on these results the political power of each group will be estimated.

Table 2

3.4 Estimating the political power by means of a simple Political Preference Function approach

Such deadweight losses may occur if in the spirit of Peltzman (1976) and Becker (1983) the observed policies are a set of interactions between the interest groups affected by the policy and the administering agents (government). According to this model, interest groups compete for political influence since their well-being is influenced by government policy. A government maximizes the probability of re-election. Thus, politicians choose policies supporting the most influential groups. This behavior is formally equivalent to maximizing their preferences (similar to the consumer problem) described by a Policy Preference Function (PPF). A PPF is composed of the weighted sum of groups' well-being, the weights measuring the political influence of each group as perceived by the government. In this setting, policy instruments are endogenous variables chosen by the government according to the political influence (or pressure) of various interest groups. Pressure and response are determined in part by the size of the group, the transaction costs, total benefits per group member, the distribution of benefits within the group, the possible influence channels of the group, and the costs of influencing the government (Becker, 1983). A government will redistribute welfare from group A to group B, if group A is able to exert stronger pressure than group B. By observing the actual policy, one can subsequently reveal government bias toward a specific group (Rausser and Freebairn, 1974).

According to Bullock (1994b), the government's objective of maximizing a PPF can be modelled as follows:⁶ Let $\mathbf{x} = (x_1, \dots, x_m)$ be a vector describing levels of government policy instruments currently in use 1, . . . , m.⁷ A particular value of the variable vector \mathbf{x} is called a policy. Let $\mathbf{u} = (u_1, \dots, u_n)$ be a vector describing welfare levels (or well-being) of all n social groups 1, . . . , n, affected by government policy. Social groups might be those comprising wheat farmers, income taxpayers, tractor producers, etc.⁸ Let $\mathbf{b} = (b_1, \dots, b_z)$ be a vector of

exogenously-determined market parameters. Examples of elements of vector \mathbf{b} might be supply and demand elasticities, as well as parameters describing weather and technology. A social group's well-being is determined by market conditions and government policy: $\mathbf{u} = (h_1(\mathbf{x}, \mathbf{b}), \dots, h_n(\mathbf{x}, \mathbf{b}))$. Given that market conditions are described by \mathbf{b}' , a government's choice set $F(\mathbf{b}')$ is the set of all feasible policy outcomes:

$$F(\mathbf{b}') = \{\mathbf{u} \mid \mathbf{u} = \mathbf{h}(\mathbf{x}, \mathbf{b}')\}. \quad (8)$$

The shaded area in Figure 3 describes such a choice set in the case of two conflicting interest groups. Each point in this shaded area represents different policy instrument combinations. For example, if group 1 is consumers and group 2 is farmers, the welfare outcome described by point B in Figure 3 might be achieved by free trade of agricultural products, whereas point A might be achieved by a policy promoting high floor prices and import quotas for agricultural products.

Figure 3

Furthermore, let $\mathbf{w} = (w_1, \dots, w_n)$ be a vector describing the weight that a government attaches to all n social groups $1, \dots, n$. This political weight of each group depends on the political pressure a group is able to produce. The more pressure a group is able to produce, the more weight a government attaches to it. Given that the vector of political weight is given by \mathbf{w}' , the government's objective function is described by

$$PPF = w_1' u_1 + \dots + w_n' u_n. \quad (9)$$

and the government's maximization problem by

$$\text{MAX}_{\mathbf{x}} \text{ PPF} = \sum_i^n w'_i \cdot u_i = \sum_i^n w'_i \cdot h_i(\mathbf{x}, \mathbf{b}'). \quad (10)$$

Hence, government chooses \mathbf{x} to maximize PPF (the probability of re-election) given the political influences \mathbf{w}' . Let \mathbf{x}^* be the policy vector which solves the government's maximization problem, and $\mathbf{u}^* = \mathbf{h}^*(\mathbf{x}^*, \mathbf{b}')$ the solution induced by \mathbf{b}' and \mathbf{w}' and \mathbf{x}^* . If the actual policy was determined by such a maximization process of the government, then \mathbf{x}^* and \mathbf{u}^* must be identical with the policy which was actually observed and the related welfare outcome. Eventually, the political weight of each group can be subsequently revealed with the help of the first order conditions of equation (10).

In Figure 3 the straight lines portray Political Indifference Curves (PIC) derived from the PPF. A government strives to maximize the probability that it will be re-elected by choosing a policy that results in the welfare outcome C, which lies on the highest-valued PIC. The slopes of these indifference curves are given by $-w_1/w_2$. Hence, in this example, the government is biased towards group 2, since $w_1/w_2 < 1$ implying $w_1 < w_2$. Vice versa, it is possible to subsequently reveal the value of w_1/w_2 , and hence the political influence, by observing the slope of PIC2 in point C.

According to our model for the Austrian bread grains market, the government has two policy instruments available ($\mathbf{x}^* = (P_s, P_{Q_0})$) for redistributing welfare among three groups, namely, farmers, agribusiness firms (input suppliers and food manufacturers), and consumers/taxpayers, hence $\mathbf{u}^* = (\Delta\text{PSF}, (\Delta\text{PSA} + \Delta\text{PSI}), (\Delta\text{CS} + \Delta\text{TA}))$.¹⁰ The market parameters \mathbf{b}' are given by the demand and supply elasticities and shift parameters derived in the last section. The first order conditions of (10) for \mathbf{x}^* and \mathbf{u}^* (FOC) are:

$$\frac{\partial \text{PPF}}{\partial P_s} = w_F \frac{\partial \Delta \text{PSF}}{\partial P_s} + w_A \frac{\partial (\Delta \text{PSI} + \Delta \text{PSA})}{\partial P_s} + w_C \frac{\partial (\Delta \text{CS} + \Delta \text{TA})}{\partial P_s} \quad (11)$$

$$\frac{\partial \text{PPF}}{\partial P_D} = w_F \frac{\partial \Delta \text{PSF}}{\partial P_D} + w_A \frac{\partial (\Delta \text{PSI} + \Delta \text{PSA})}{\partial P_D} + w_C \frac{\partial (\Delta \text{CS} + \Delta \text{TA})}{\partial P_D}, \quad (12)$$

where w_F , w_A , w_C indicate the political power of farmers, agribusiness firms and consumers/taxpayers, respectively. With the additional assumption that

$$w_C = 1 \quad (13)$$

we have three equations in three unknowns (w_F , w_A , w_C) and are able to solve equation (11) through (13)¹¹.

The derived political weights are reported in Table 2. The results reveal that farmers are weighted more highly than consumers/taxpayers but less than agribusiness firms. This is surprising because the official policy goals for the Austrian farm sector summarized in Section 1 would suggest quite a different outcome.

4 Concluding remarks and outlook

In this paper we have focussed empirically on the role of the upstream and downstream sectors in the political process. This role does not seem to be well-documented by literature. With an empirical model of an agribusiness subsector (bread grains) we were able to show that not only farmers, the target beneficiaries of Austrian agricultural policy, but also downstream and upstream industries have benefited considerably from price supports. Furthermore, it was revealed that the deadweight losses caused by market intervention are extremely high. We conclude that this has only been possible because farmers and agribusiness firms were able to produce high political pressure determining the actual policy-making process, whereas consumers and taxpayers were not.

Utilizing a PPF framework we were also able to quantify the political weight of agribusiness firms, bread grains producers and consumers/taxpayers.¹² The analysis not only reveals, that farmers and agribusiness have more political weight than expected when compared with taxpayers and consumers; surprisingly, the political power of agribusiness is ranked significantly higher than that of farmers. Therefore, not only farm lobbies are to blame for the high level of intervention and the resulting social costs. However, the public puts the blame for welfare losses entirely on farmers, since agribusiness firms are rarely mentioned in the official declaration of agricultural targets.

Our findings are in line with the standard results of the theory of competition among interest groups:

- Since interest groups of farmers and agribusiness firms are small compared to those of consumers/taxpayers, our findings are in accordance with Olson's hypothesis that small interest groups are more effective in obtaining political favors than large groups.
- According to Becker (1983), we would say that agribusiness firms are able to exert stronger political pressure than the other groups because they have more and stronger influence-channels.
- Similarly to Babcock, Carter and Schmitz (1990) and Ndayisenga's and Kinsey's (1995), research on the US agricultural policy, we argue that since consumers and taxpayers are inefficient lobbying groups, and farmers as well as agribusiness firms are efficient ones, a reform of agricultural policies is being resisted by a strong coalition.

Austria's accession to the EU will definitely change individual producer behavior and the market structure in this sector. However, administered market prices and production-linked premiums for even more commodities and additional protection for certain input (e.g. fertilizers) are not likely to change the present situation substantially from a rent seeking point of view.

Therefor only a portion of the pressure so far concentrated on policy makers in Austria will be redirected to Brussels.

We are aware of the fact that our empirical model remains very simple. Nevertheless, in accordance with our descriptive analysis, we are able to emphasize the role of the agribusiness sector in the political decision-making process. Further analysis should therefore concentrate on three issues: looking into at the political weight of other sectors with substantial vertical integration (e.g. milk production and the dairy sector); elaborating the model by explicitly taking into account the horizontal linkages between output as well as input markets; and to differentiating among subgroups of consumers/taxpayers to learn more about redistributive effects of farm policies among different farm sizes.

Notes

- ¹ The percentage PSE "indicates the total value of transfers as a proportion of production (valued at domestic prices) adjusted to include direct payments and to exclude levies and feed adjustments" (OECD, 1994, p. 106).
- ² In 1993 transfer income per FAK (farm labour unit) was 82,249 ATS for crop farmers and 31,471 for mountain farmers who mainly produce livestock products (BMLF, 1994).
- ³ Similar observations with respect to other activities of this institution are made by Van der Bellen (1994).
- ⁴ For a comprehensive survey refer to Swinnen and van der Zee (1993), and de Gorter and Swinnen (1994).
- ⁵ The model is on a simple neoclassical model often used in agricultural economics (Floyd, 1965; Gisser, 1967, 1971, 1993; Rosine and Helmberger, 1974; Gardner, 1975, 1987b).
- ⁶ Critical assessments of the Political Preference Function (PPF) approach are made by Gardner (1989), Beghin and Foster (1992), von Cramon-Taubadel (1992), Coggins and Bullock (1993), Bullock and Jeong (1994), and Bullock (1994a, 1995).
- ⁷ For example, x_1 might be a floor price, x_2 an income tax, x_3 might be an import quota, etc.
- ⁸ In the extreme case a group may consist of one individual.
- ⁹ In general, the PPF approach allows for different functional forms. Theoretically, political indifference curves are expected to be convex, but mathematical simplicity often leads to linear indifference curves, implying fixed-weight PPFs (Gardner, 1989).

- ¹⁰ Putting consumers and taxpayers into one group is possible with the hint that a high floor price on food is similar to a poll-tax and budget revenues in Austria are financed not only by income tax but also by a high value-added tax; and therefore the system of taxation doesn't seem to be too progressive. Input suppliers and food manufacturers are treated as one group because of their ties described in Section 2.
- ¹¹ Equations were solved by using GAMS software (Brooke, Kendrick and Meeraus, 1988)
- ¹² According to our knowledge the PPF model formulated in this paper is the first one to include the vertical structure of the farm sector.

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Adjusted R-squared = 0.919 F-statistic = 80.594 Durbin-Watson = 1.838

Production of food:

$$\ln Q_F = -0.308 + 0.414 \ln C_F + 0.383 \ln L_F + 0.203 \ln Q_D + 0.008 \text{TREND}$$

(-3.01) (7.54) 6.31 (3.88) (2.77)

Adjusted R-squared = 0.996 F-statistic = 2725.292 Durbin-Watson = 1.822

Supply of machinery and buildings:

$$\ln C_F = 2.985 \ln P_{C_F} - 1.544 \ln \text{LABOR COST} + [\text{AR}(1)=1.519, \text{AR}(2)=-0.524]$$

(4.11) (-4.05) (6.26) (-2.18)

Adjusted R-squared = 0.952 F-statistic = 79.121 Durbin-Watson = 1.473

Supply of food industry labor:

$$\ln P_{L_F} = -0.714 + 0.190 \ln L_F + 1.002 \ln \text{INDUSTRY WAGERATE} - 0.037 \ln \text{UNEMPLOYMENT RATE}$$

(-1.60) (2.26) (89.89) (-7.06)

Adjusted R-squared = 0.999 F-statistic = 42961.83 Durbin-Watson = 1.738

Table 1. Estimated market shares of Raiffeisen-cooperatives on different downstream and upstream markets

market	share
beef	25 %
milk	90 %
pigs	20 %
wine	18 %
juice	17 %
cereals	66 %
oilseeds, beans, peas	80 %
starch	100 %
sugar	100 %
fertilizers	70 %
pesticides	75 %
machinery	40 %

Source: Fischer, 1994, pp 79

Table 2. Welfare changes caused by market intervention:

		bread grain	agribusiness		consumer/	DWL	
		producers			taxpayer		
welfare	change	(Δ PSF)	(Δ PSI)	(Δ PSA)	(Δ CS)	(Δ TA)	
	bill. ATS	1.317	0.763	0.101	-2.369	-1.218	1.404
political	weight	w_F	w_A		w_O		
	level	1.21	2.73		1		

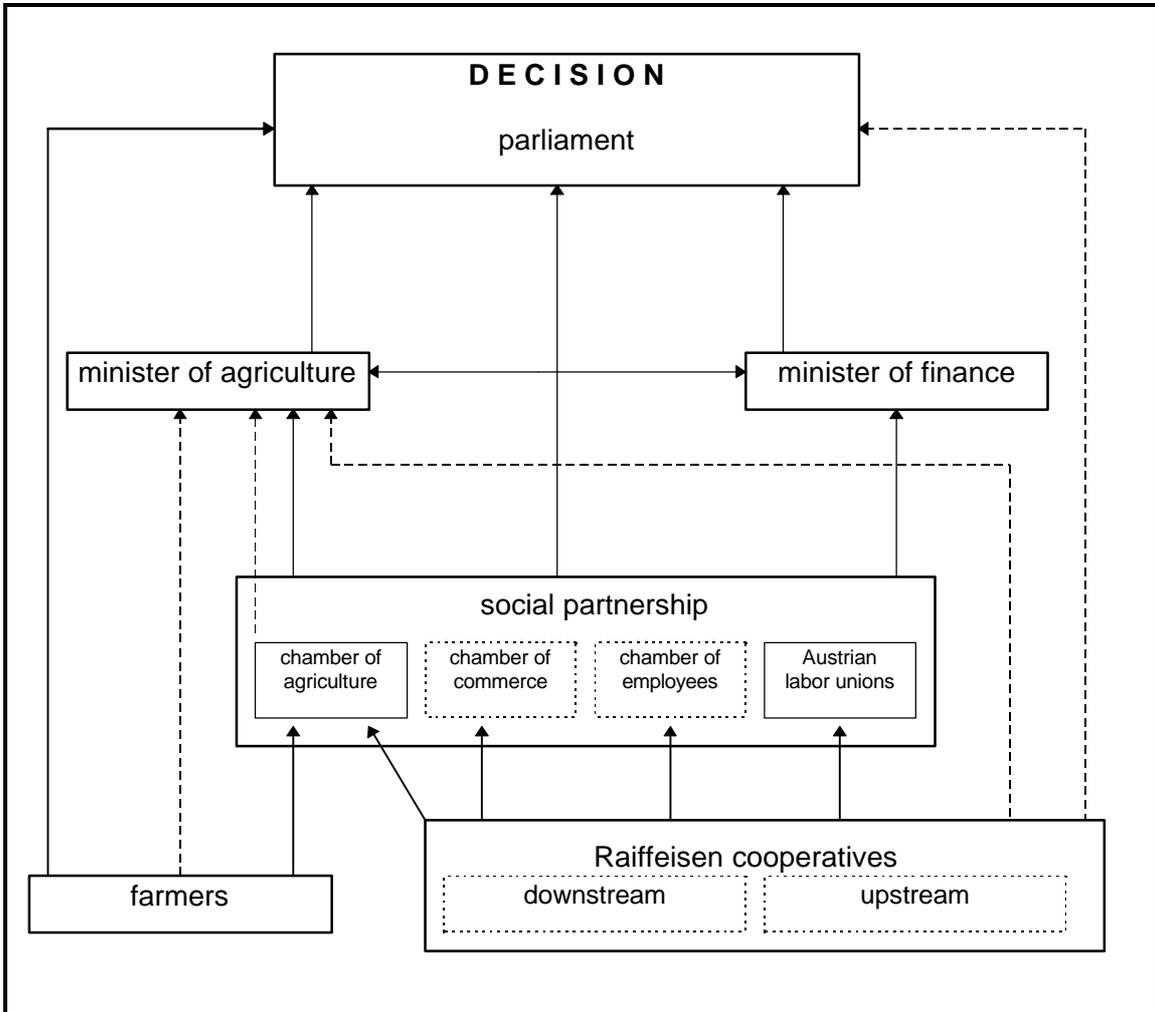


Figure 1. Decision process in Austria agricultural policy: formal and informal (hashed arrows) political representation

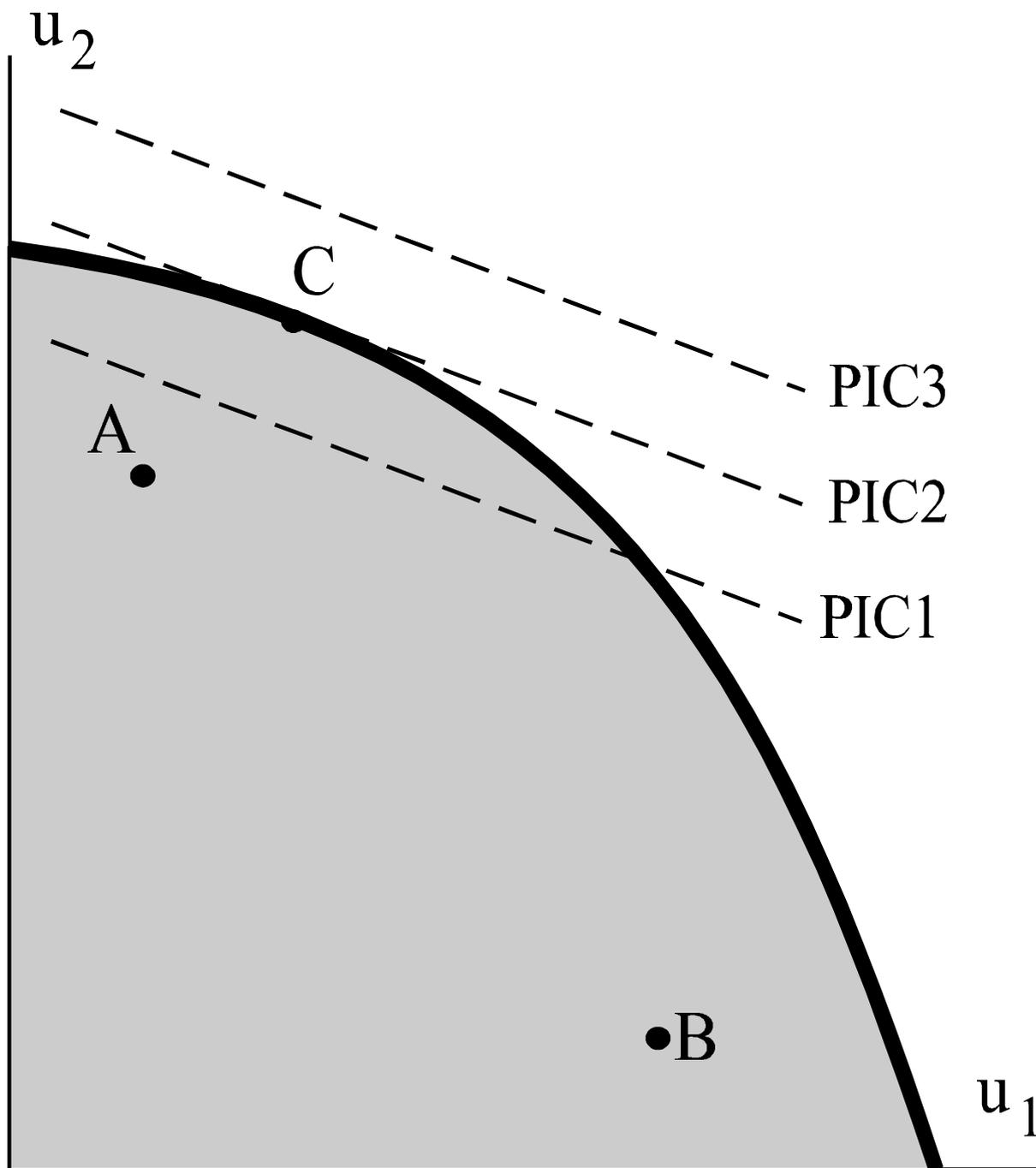


Figure 3. Government's maximization problem

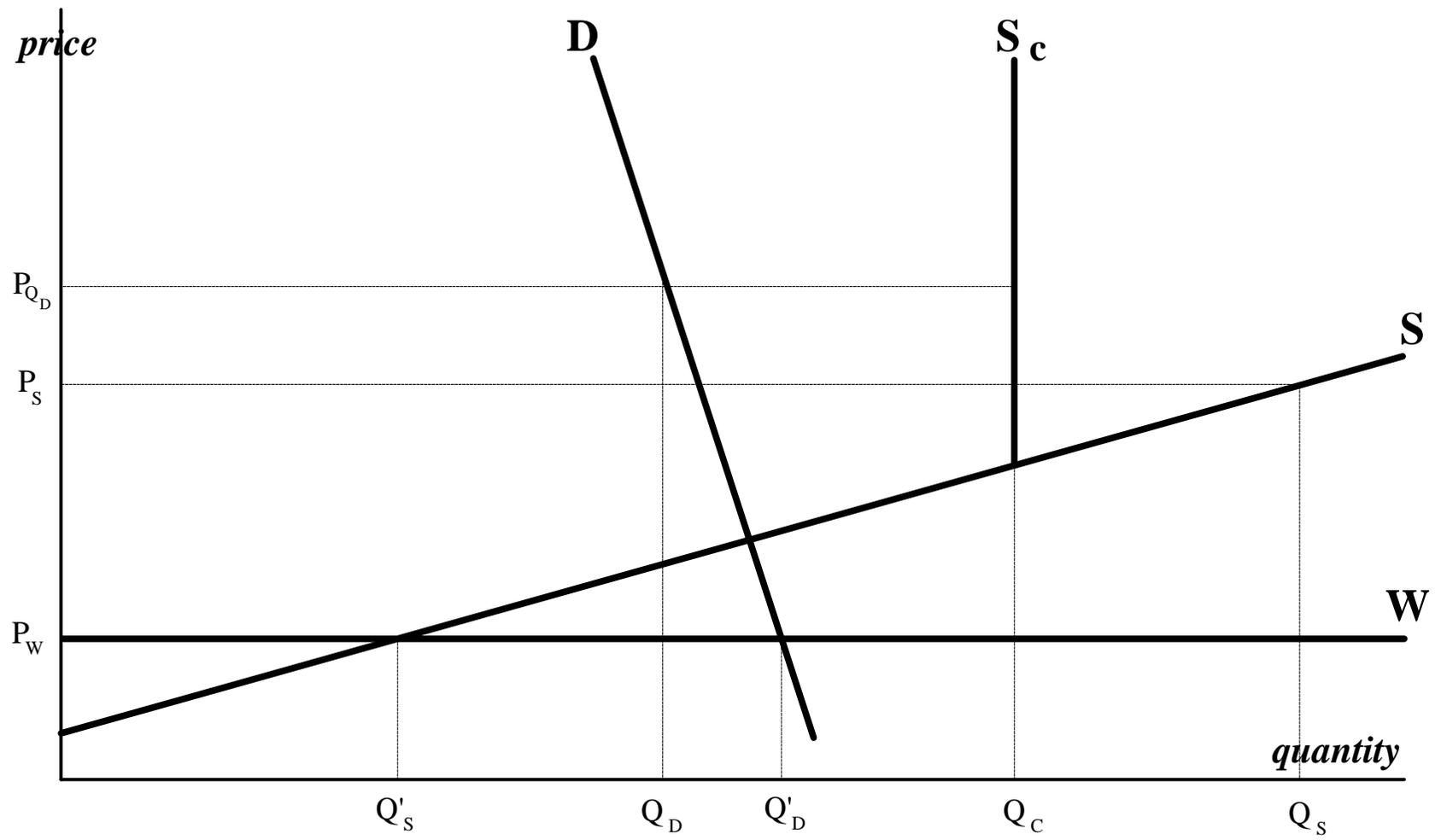


Figure 2. Austrian bread grains market