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*The Relationship Between Agricultural Policy, the
Economy and Economic Policy on the National Level
in Different Economic Systems and at Varying Stages
of Economic Development: Concepts, Frictions
and Solutions: Western Industrialized Countries with
Market Economic Systems*

1. INTRODUCTION

The subject of this paper is the description, analysis and evaluation of inter-relationships between agricultural and economic policy in industrialized countries with market economies under the specific economic and agricultural conditions of those countries. Its central hypothesis is that, subject to similar policy objectives, the dimension and structure of farm policy is determined by the specific economic and agricultural conditions prevailing in a country. In this context, “by dimension and structure of farm policy” is understood the volume and the composition of government aid to the farm sector (budget outlays and farm price support by import restriction etc.).¹ If this proposition is accepted, that is that the shape of the farm policy in the countries under review² is not so much subject to manipulation of political decision-makers but a function of actual economic conditions, etc., it follows automatically that inconsistencies between farm and economic policies are a systematic (structural) concomitance of market economies. It follows furthermore that the application of specific instruments by decision-makers in order to achieve the overall economic policy objectives – such as full employment, price stability, growth, etc. does have impacts on the specific economic conditions for the farm sector. Those impacts do influence in reverse the shape of farm policy and, consequently, the type and degree of inconsistencies mentioned will affect, of course, the performance of the total economy and can theoretically be measured in terms of welfare losses which the economy has to sustain in comparison with an optimal policy resulting in a Pareto-like optimum.³

In fact, unlike “economists”, policy-makers do not intend to achieve Pareto optimality – even if they have all the information and instruments at hand necessary to achieve it. Such a political action would be in contrast to the basic principle of *political* decision-making: The policy-makers possibility function is not determined solely by the economic mechanisms. The policy-makers have to take into account a number of constraints, they cannot use any instrument that may be at hand,⁴ and they are often also limited in the extent to which they can use any particular instrument. Furthermore, their

* University of Göttingen, Federal Republic of Germany.

decisions are very often the result of compromises between strongly divergent views of various members of the decision-making institution, for instance with respect to long run against short run. In general, policy-makers do not intend to maximise social welfare but to maximise the sympathy of voters in order to be re-elected.⁵ This implies a specific choice of economic policy objectives not necessarily in line with the set of policy objectives of the economist. One reason is that the preference function of the policy-makers includes aims which are not directly related to the economy, such as individual freedom, international peace, etc. The resulting policy decisions therefore include some sacrifices of economic efficiency and will result in a possibility curve which will be lower than that of the economist. The actual policies will yield a lower level of collective well-being⁶ compared with an optimal policy.

Those actual divergencies between the actual performance of the economy and its welfare maximising state can in a more systematic view be described (a) in terms of *incompatible* objectives of economic (and farm) policy, (b) an *inconsistent* application of instruments, and (c) a lack of *conformity* between expected (planned) performance and the forthcoming results of policy measures. Nonconformity may be due to insufficient information about the future course of events inside and outside the economy, incomplete knowledge of the (side-)effects of instruments, insufficient harmonization of decisions due to decentralized institutions, etc.

After having defined some basic propositions and terms to be used here, we will systematize the objectives of economic and farm policies in the countries to be reviewed. In the same section we will further include a definition and description of the main policy instruments to be used in those countries in order to achieve the policy goals mentioned. Resulting inconsistencies between these instruments will be discussed next. In the following chapter we have to deduce factors affecting the specific types and structures of farm policies in various industrialized countries with market economic systems in order to detect the reasons for existing inconsistencies. Then we will identify some sources of nonconformities of policy measures. Some remarks will be made in this context concerning inconsistencies of farm and economic policies as a result of the foundation of the European Common Market. In the final section we will present some ideas concerning possible means of resolving prevailing nonconformities, and inconsistencies as well as incompatibilities of farm and economic policies.

2. A SYSTEM OF DEFINITIONS AND CLASSIFICATIONS

First we have to define the terms "Industrialized Countries" as well as "Market Economic Systems" because the specific definition will affect the type and number of countries to be included in this analysis. With the term "*industrialized country*" we denote a country *showing an absolute decline in the size of farm population*⁷ instead of using a specific level of gross national product per capita as a border line between industrialized (developed) countries and developing countries.⁸ Using this turning point in the trend of agricultural population (and/or labour force) towards an absolute decrease in

the size of farm population as the demarcation of industrialized countries, it will be demonstrated that *farm policies* of those countries are basically different from policies in countries beyond this line:⁹ Passing this turning point will, generally speaking, reshape farm policy towards a definite redistribution of income in favour of the farm sector instead of a redistribution of limited resources (land) between an increasing number of farmers (land reform).¹⁰ Consequently, classical land reform measures are not reviewed in our analysis. The term "*structural policy*" is limited to measures increasing productivity of resources within the farm sector by increasing factor (land) endowment of (decreasing) farm labour input.¹¹

Economic policy in our context describes the process by which the decision-maker — executive (government) as well as legislative power (parliament) — decides on the relative importance of certain objectives, and, if necessary, uses instruments or institutional changes in the attempt to obtain those objectives.¹² According to this definition, *farm policy* must be regarded as a subsystem of economic policy (which itself has to be regarded as a subsystem of overall policy) pursuing specific targets and applying specific instruments which idealistically are compatible and consistent with economic policy. Both, economic as well as farm policy, will be executed within a certain framework of institutional arrangements (economic order) which will determine the character of the mechanism by which the decisions of economic agents will be coordinated as well as those decisions which will be subordinated to the objectives of the political decision-making body.¹³ Within a market economy, the coordinating process will be fulfilled by the price mechanism; subordination will be approached by incentives and disincentives (gains and losses) due to changes in policy instruments used by decision-makers such as fiscal and monetary policy, etc. By market economic system in our context we refer only to economic systems of the latter type, sometimes called social market economies or organized capitalism, contrary to free (liberal) market economies (pure capitalistic systems) excluding subordinating mechanism on one side and centrally planned economies using imperative measure of subordination¹⁴ on the other side — although the borderline between various economic systems in reality is blurred (mixed economies).

By the definitions given above, countries included in our analysis are North America (United States of America, Canada), Australia, New Zealand, Western, Northern and Southern Europe (excluding Albania) and Japan.¹⁵ A further distinction between North America and Australia and the other countries mentioned has to be made according to the prevailing land-man-ratio:¹⁶ The first mentioned New World-countries show an extremely wide land-man-ratio compared with the second group of Old World-countries. Within this group of countries we have to distinguish between Southern European countries (except Italy) and Western European countries, because of fundamental differences with respect to the stage of economic development and the institutional organization of farm policy (development plans). As is pretty evident, different land-man-ratios will determine the structure of farm policies, especially the magnitude and shape of the structural policy as well as the magnitude of price policy. This will be discussed in detail in Section 3.

Economic as well as farm policy has further to be defined as a system of policy objectives (aims, goals), policy instruments of various types (means) which are used or changed by policy-makers within the given institutional and/or functional constraints in order to achieve economic (farm) policy goals if the prevailing performance (situation) of the economy diverges (or is expected to diverge) from the desired one. This definition of policy as a systematic interrelationship between goals, instruments and performance of the economy holds for varying periods of time (short, medium as well as long run) as well as for various subsectors of the economy such as farm policy etc.:¹⁷ The specific meaning of those ingredients of the policy system is changing with respect to the time period under review as well as to the specific subsector. Because our analysis is limited on the one hand to medium and, to a limited extent, to a short run period, and to economic policy in general and farm policy as a subsystem thereof, we need some further classifications. We use the term pure objectives — as economic proxies of political aims — in the sense that the existing economic and farm policy objectives can be translated in quantitative terms at least to a certain extent, although they are not quantified by decision-makers in any case. They can be divided in short-term and long-term objectives. *Quasi-objectives* are objectives which cannot be quantified (security of supply, promotion of international division of labour, regional distribution of income and resource allocation, conservation of national resources and environment, etc.). *Achievement* is the term used to describe the degree of attainment of an objective. Objectives can be achieved by policy-makers using *instruments of economic policy* which might be classified as fiscal, monetary, exchange rate and direct control instruments. Within farm policy, instruments are classified in this context as price (income) policy instruments, steering the level or the stability of input or output prices; structural policy instruments aimed to affect the allocation of resources within the farm sector and social policy instruments used to secure farm population against the risks of age, illness etc.¹⁸

Using the terms defined above, economic (farm) policy can be defined more precisely as an interdependent system of instruments used by decision-makers in order to achieve given objectives and quasi-objectives “at their best” by taking into account available informations concerning the specific economic situation, its likely future development, the main effects of possible instruments or objectives as well as the given institutional and political (ideological) constraints.¹⁹ Within this system, the given objectives will be achieved “best”, if the objectives of various subsystems of policy are totally compatible. This is normally not the case. *Incompatibility* may be the consequence of a specific economic situation (short run incompatibility), it can be structurally determined (medium run incompatibility) and may be due to the specific economic system (long run incompatibility). Each source of incompatibility, of course, requires a specific set of instruments. Consequently, the performance of an economy (or sector) with respect to the desired objectives will be further affected by the “constraints of the decision-making body”: their ability to use an optimal set of instruments, optimal in terms of timing, combination and volume. The actual choice of instruments refers to the

consistency or inconsistency of the instruments used. And finally, because in many cases the future change in a given situation as well as the future achievement of instruments in market economy can never be predicted as exactly as necessary, *nonconformities* between expected achievements and the actual outcome will occur. These nonconformities will again result in an inferior accomplishment of desired objectives.²⁰

3. THE OBJECTIVES OF ECONOMIC AND AGRICULTURAL POLICY: THE SOURCES OF INCOMPATIBILITIES

In this chapter we first try to enumerate, to define, and to evaluate the actual objectives (and quasi-objectives) of economic and agricultural policy in the countries under review. Next, we will describe the relationships between the economic and farm policy objectives and the sources of incompatibilities of these objectives. In the following chapter we have to discuss *measures* of economic and farm policies resulting in inconsistencies; then we have to debate instruments which might minimize inconsistencies and welfare losses involved. In the then following chapter we will systematize the interrelationships between various instruments and their combination, taking into account the specific economic as well as farm "situation" in order to detect the actual sources of prevailing inconsistencies and nonconformities of objectives and instruments as well.

Reviewing the economic policy of Western industrialized countries after World War II, its performances,²¹ the declared *price policy objectives*²² and actual use of instruments,²³ main efforts of governments seem to be directed towards the accomplishment of full employment and price stability in the short run, economic growth and redistribution of income in the long run. Of course, various countries under review differ as far as the priority of short and long run objectives, the specific numerical size of short and long run objectives, the volume, structure and nature of instruments, and the ratio between actual achievements and targets²⁴ — the achievement ratio — is concerned. Furthermore, the countries also differ in objectives, instruments and performance of economic policy with respect to various time periods (business cycles). In fact, the central issues in the economic policies of Western countries all over the time period after World War II have been the never ending struggle between full employment and price stability, these fundamental incompatibilities of economic policy. Each country under review has been more or less successful in steering the economy between the Scylla of inflation and the Charybdis of underemployment.²⁵ In the long run experience it must be accepted that the achievement ratio of price stability in all countries has deteriorated,²⁶ due to rather liberal application of restrictive measures in fiscal and monetary policy, finally resulting in unemployment, devaluation and, sometimes, monetary crisis for the time being.

Contrary to price stability and full employment, *economic growth* and income redistribution between persons, regions and sectors of the economies have never been subject to systematic applications of proper instruments nor subject to definite quantifications of objectives.²⁷ In Western industrialized

countries, especially the most developed countries, economic growth has been significantly lower since the Sixties compared with the Fifties. Factors explaining the lower growth rates are:

- (a) the fact that the relatively unproductive agricultural sector serves no longer as an important source of economic growth,
- (b) the rate of technological progress seems to decline,
- (c) growth is heavily criticized as an indicator of welfare,
- (d) institutional constraints hinder allocative efficiency.

It is possible that the increasing importance of the redistribution of income in favour of poor persons, regions and sectors affects the process of structural adjustment of the economy and, consequently, influences economic growth negatively. However, the actual redistribution of income in various countries of the Western world is difficult to measure and to evaluate, in most cases due to a lack of information.²⁸

All countries under review protect a number of industries to some degree. In the West, *protection* is used especially for old declining industries, such as coal and textiles. They are protected in the one case from the competition of other forms of fuel, in the other from foreign competition. The basic method of protection is by tariffs, though quotas still play some rôle especially in the United States. Another important source of protection is the various non-tariff barriers. Agriculture is, of course, the classical example for protection. Protection here is justified partly by the increasing desire to improve the security of the food supply as a quasi-objective of economic policy.²⁹

With respect to the subject of our analysis, as *quasi-objectives* of economic and farm policy relevant to agriculture and farm policy we would mention

- (a) the equilibrium of balance of payments (as an intermediate variable affecting price stability, employment and growth),
- (b) security of supply,
- (c) promotion of international division of labour (with its repercussion on stability and growth), and
- (d) protection of resources and environment.

In one or the other way, an achievement in favour of those objectives does affect the farm sector and/or farm policy. Nearly all countries mentioned have shown a fairly substantial gap between their balance-of-payments objectives and their actual achievements. Some countries had almost traditionally a deficit in their balance showing a worsening recently, whereas others still have a surplus, although a decreasing one. Others having had in earlier periods a positive balance, meanwhile experience a change towards a deficit.³⁰ The policy-makers endeavoured to influence the balance of payments by means of economic policy instruments especially by changes in the exchange rate. However, their efforts were very frequently inefficient due to various reasons. In some respect, farm policy directed towards export promotion for farm products somewhere did show a new strategic rôle within this context.³¹

Such a course of policy did have, or is expected to show, repercussion on the quasi-objective of *promotion of international trade*. Throughout the last

three decades, the pendulum has swung in favour of international division of labour after a protectionist period between the World Wars. Until the recent energy crisis with the consequences on inflation, employment and the balance of payments, the trend in industrialized countries was clearly in favour of an intensified division of labour. Protection of individual countries (with the important exception of agriculture) was gradually rolled back and world trade, especially that between industrialized countries, has risen rapidly for over twenty years.³² However, for the time being and very probably for the near future, the trend has changed towards more protectionism due to rising problems with the balance of payments in important industrialized countries, an import substitution policy in favour of more security of supply (of energy) and due to a policy for regaining full employment at the national level.³³

In summing up, economic policies of Western industrialized countries with market economies do show great similarities as far as the nature and, to a certain extent, the priority of their objectives and quasi-objectives are concerned. Characteristic differences during the last decades can be observed with respect to the quantitative dimension of those objectives and the achievement rates of the policy instruments used. This is especially relevant to price stability and full employment, the most important policy objectives leading to almost permanent and, currently, to the most serious incompatibilities within economic policy. Furthermore, realized rates of economic growth differed widely between various countries.

3.1. *Farm policy*

As is the case in general economic policy, Western industrialized economies show quite similar objectives in their agricultural policy, at least as far as the nature of the goals is concerned.³⁴ *Income policy* concerning redistribution of income in favour of the farm sector has had the highest priority compared with other agricultural policy aims. This is true although the objective of income policy in almost all agricultural laws or official proclamations concerning farm policy is not expressed in quantitative terms with respect to the desired level of income, the specific measurement of income, the farmers or farms to be included and/or the size of non farm income as a standard for income policy.³⁵ Consequently, it is rather difficult to find suitable quantifications of the prevailing income objective nor is it easy to measure the rate of achievement of the relevant policy.³⁶ Even if the income goals were expressed in quantitative terms it does not follow automatically that an official guarantee of a certain income level for farmers means incompatibility with other economic policy objectives, such as promotion of economic growth. Whether farm income policy is consistent with economic policy aiming towards maximizing growth depends on

- (a) the specific instruments used to achieve a satisfactory level of income in the farm sector,
- (b) the relevant effects of these instruments,
- (c) the prevailing conditions.

In the case of instruments increasing productivity, such as structural policy,

this may result in a remuneration of the production factors within the farm sector similar to the remuneration of factors in other sectors. But traditionally when we speak about income policy we do not mean structural policy. With income policy we traditionally mean instruments such as price policy, subsidies due to tariffs, input or output restricting quotas, transfer payments etc. These instruments result in a price level for the producer above the equilibrium. Although tariff levels, the size of import quotas or the amount of subsidies are not appropriate measures of income policy objectives – because these are instruments rather than objectives – the degree or amount of agricultural protection and its probable effects on misallocation of resources represents a measure of the degree of incompatibility of the objective income policy versus economic growth – to be quantified by cost-benefit analysis.³⁷ Of course, the reasoning behind cost-benefit analysis is based on the (neo-classical) assumption that equilibrium prices lead to an optimal allocation of resources, an assumption which sometimes is subject to doubts as far as the allocative function of the price mechanism in agriculture is concerned.³⁸ Cost-benefit analysis clearly shows that welfare losses due to protective measures differ strongly according to the specific instruments being used by various countries. Therefore the level of support quantified by nominal protection rates is a measurement inadequate for the quantification of misallocation of resources by farm price policy.³⁹

Income redistribution in favour of the farm sector by price policy measures, such as import restriction, is very often blamed as contrary to the objective of *price stability* within the economy. This problem arises specifically at times of inflationary processes in the economy as a whole if government tries to compensate the impact of inflation on farm income. However, the rate of increase of farm prices relative to the general price level does not indicate whether the agricultural income position really is affected by inflation, positively or negatively or, by the same token, is pushing inflation or contributing to more stability of the price level. This can only be judged with respect to agriculture's gains of productivity relative to those outside the farm sector. Provided that no additional income redistribution is attempted, price increases for farm products may well be consistent with the objective of price stability if the rises in prices are only compensating productivity gains smaller than those in the nonfarm sector and vice versa.⁴⁰ In fact, countries to be reviewed here, did differ to a large extent as far as the relation between inflationary price changes, productivity gains of agriculture and changes in the level of farm prices are concerned.⁴¹ Obviously, the contribution of agriculture to an anti-inflationary policy of government depends on a number of factors, such as the prevailing income objective, the specific supply-demand situation and the state of the balance of payments. For the Common Agriculture Policy of the European Economic Community it must be added that a common price policy for countries subject to widely differing rates of inflation the interdependence between general price level, productivity gains and farm price level is disturbed for various member countries.⁴²

This reasoning makes clear that increasing *productivity* by policy measures – such as structural policy in a rather broad sense⁴³ – is a rather important

objective of farm policy of most countries under review, even if this objective is not mentioned in farm legislation of some countries. This objective is compatible with the growth objective of economic policy and, as has been said already, with the objective concerning income redistribution towards the farm sector. Therefore, it is not surprising that various countries underline productivity gains as an important farm policy objective. They allocate a considerable fraction of the budget for instruments to change farm and input structure.⁴⁴ It has to be mentioned that the rates of increase of productivity given in national long term plans do not correspond very strongly with actual achievements.⁴⁵

Improved structural adjustments of, and within, the farm sector due to higher productivity of inputs result in a more efficient *allocation of resources* between sectors of an economy as well as within the farm sector. With respect to labour input, transfer of man-power to other sectors of the economy (showing higher marginal productivities) will not only increase gross national product⁴⁶ but also contribute to a higher degree of *employment* – provided that hidden unemployment in the farm sector is diminishing and the employment is not measured in terms of official statistics but in terms of effective employment. However, no contribution with respect to full employment will be achieved if the outflow of labour is only due to increased retirement of farmers as a consequence of “discontinuation schemes” being introduced in different types by almost all countries under review.⁴⁷

Most “official agricultural laws” of Western industrialized countries emphasize the farm policy (quasi-)objective of securing *domestic supply* of food “at reasonable prices for the consumer”.⁴⁸ Although no explanation is given as far as the level of consumer prices is concerned, the quasi-objective of security of supply in most cases seems to be only a camouflage for price policy – because the domestic supply of basic products in many countries under review permanently exceeds the minimum needed for emergency situations and, in some cases, even the total domestic demand.⁴⁹ Whatever the term “minimum required for emergency cases” quantitatively means, as far as I can see, only in Sweden has the degree of self-sufficiency by domestic supply been quantified. But in Sweden as in other countries actual production exceeds this level.⁵⁰ This in fact means that the objective of a minimum domestic production is in contradiction with the objective of reasonable consumer prices as world market prices are normally considerably lower than domestic prices. Welfare losses are the consequence of the misallocation of the resources implied.⁵¹

A more fundamental and important source of incompatibility between relevant farm policy objectives and the quasi-objective of *promotion of international trade* is bound to the impact of price policy on domestic production as described above. Price policy in industrialized countries of the West, as an instrument to increase producers’ income, stimulates production increases. These production increases tend to be higher than the increase in demand due to population growth and rising real income per caput requires. As a consequence, most countries under review show a rising rate of self sufficiency, resulting in a relative decline (with respect to domestic demand) in imports of

competing farm products.⁵² Thus the income objective of farm policy contradicts the quasi-objective of intensifying international trade with farm products. This negative effect of domestic farm policy on international trade is intensified by the repercussion of various import restricting measures being used by those countries. In general, those import tariffs, quotas, etc. very often result in relatively low prices on world markets being subject to aggravated price fluctuations due to irregular export subsidisation in addition.⁵³

Price policy directed towards stimulation of agricultural production is sometimes justified by decision-makers (and also farmers' organizations) as a measure towards *balance-of-payments-equilibrium* (where the balance of payments is in deficit).⁵⁴ Of course, this may be true in a purely statistical sense but, with respect to national welfare, import substitution seems to be only a second best solution of balance of payments problems. Import substitution results in losses of welfare of the own economy as well as of the export countries.⁵⁵ Consequently, price policy in the farm sector intended to counteract a negative balance of payments is, of course, not qualified to cure the fundamental reason for a balance-of-payments-disequilibrium. This cure only can be achieved by devaluation (in the short run) and by attacking inflation with fiscal and monetary policy measures.

A modern argument in defending income policy in Western industrialized countries nowadays stresses the (positive) *external effects* of agriculture not reflected in market prices. Those external effects are seen in *conservation of national resources*, environment, a specific structure of landscape and in impacts or urbanization, etc. Because the treatment, evaluation and measurement of external effects of the agricultural sector is a rather complex matter, not very deeply analysed, the interrelationships between various policy objectives and specific instruments and effects cannot be discussed in detail. It is supposed that, in general, these positive external effects resulting in social benefits higher than market prices are overestimated, especially by neglecting the social costs of farm production in terms of negative external effects. Therefore, to a certain extent this argument seems to be overemphasized. It is again a camouflage for a policy of high farm prices resulting in incompatibilities and inconsistencies of farm and economic policy.⁵⁶

In summarizing this section, it must be stated first, that the nature of given objectives in the field of economic and farm policy by themselves does not lead automatically to incompatibilities. In most cases, they seem to be compatible with each other. Incompatibilities of objectives in Western industrialized countries can only be detected if those objectives are expressed in quantitative terms and the effects and, especially, side-effects of instruments applied to achieve those objectives are considered. It must be remembered further that the nature and degree of prevailing incompatibilities between objectives of farm and economic policy are not only determined by the given structure of an economy (long run incompatibilities) which can only be solved by restricting the economy by relevant instruments or by adjusting the nature, and/or structure, of the preference function (objectives). Incompatibilities also can and do result from medium and short run conditions of the economy or the farm sector. These external conditions of the specific state of

the economy and the agricultural sector are changing over time and differ between the various countries under review. Consequently, a detailed and a more precise definition, description and quantification of incompatibilities of given policy objectives in these countries cannot be presented within our analysis.

4. THE FARM AND ECONOMIC POLICY INSTRUMENTS: THE SOURCES OF INCONSISTENCIES

As stated above, inconsistencies of a policy follow out of the effects a specific instrument has on another rather than the objective to which the specific instrument is aimed (side-effect). Inconsistencies can be the consequence of:

- (a) objectives which are unrealistic in a sense that they never can be achieved by any instruments available to decision-makers, that
- (b) instruments cannot be applied due to institutional and other constraints, that
- (c) instruments are insufficient with respect to their nature, timing, structure, intensity and combination and, finally, that
- (d) insufficient coordination by the decision-making bodies prevents an optimal use of the instruments available.

Again, in our analysis a discussion of all instruments being used by governments in countries under review in different periods of time is almost impossible. Therefore we will try first to systematise farm policy instruments. Then we will identify the principal inconsistencies resulting from the use of these instruments. In the following section we will provide a systematic view of applied farm policy instruments in Western countries as far as their volume and structure is concerned. This consideration results in the hypothesis that some common factors, such as the level of economic development or the degree of structural adjustment, determine the nature, volume and structure of the mix of policy instruments used in the farm sector. Inconsistencies of policies therefore can be more systematically deduced from these determinants of farm policy.

Traditionally, farm policy instruments are classified according to the purpose (objective) they are supposed to achieve. We distinguish between instruments with a prime effect on *income* (income policy instruments), on *productivity* (structural policy), on *social security* (social policy instruments aimed to secure farm population against specific risks of such as age, illness, accidents etc.) and *non-sector specific policies* which may affect the farm sector although they are not specific to the farm sector (regional policy, measures to improve factor mobility, labour market regulations to enhance technological progress, etc.).⁵⁷ We will, of course, restrict our analysis to the sector specific instruments, mentioned above, although it seems to be clear that non sector specific instruments may be as effective in promoting adjustment of agriculture as sector specific instruments.

Price policy instruments are used to increase stability of farm (and consumer) prices and/or to improve producer incomes in the longer run.

Stabilization of prices in general may be consistent with the relevant economic and farm policy objectives, although stabilization of producers' income will not necessarily be the consequence of a stabilized price. The welfare gains are subject to some doubt – especially if the impact of stabilized prices on producers' risk is neglected.⁵⁸ However, the inconsistency of income policy via price increasing instruments with respect to optimality of resource allocation (as an economic quasi-objective), economic growth and promotion of international division of labour, as well as price stability of the whole economy, seems to be evident. Resource allocation within the economy, the farm sector and between nations is disturbed, growth rates are depressed because of a reduced transfer of resources from agriculture to more efficient uses outside this sector and an impact on the level of consumer prices, are the most striking consequences implying welfare losses for the economy as a whole. The size of welfare losses of course depends on a number of factors, not only on the protection rate (the difference between internal prices and equilibrium prices). Factors to be mentioned here are the degree of employment (affecting the opportunity costs of factors restrained in agriculture by price policy) and the specific instrument used in order to protect farmers' income.

The losses of welfare are less by transfer payments (subsidies) compared with border protection by tariffs, import quotas etc. simply because a distortion of consumption is prevented by the application of subsidies,⁵⁹ even taking into account positive balance of payments effects of protection.

The inconsistencies of price policy used as an instrument to protect farmers' income can be reduced to a certain extent by substitution of price policy by structural policy instruments. Although shape, organization and management of various instruments in the field of structural improvements are different in countries under review,⁶⁰ they are all directed towards increasing efficiency of factor input, either by reallocation of resources within the farm sector or between sectors and/or promotion of technological progress in production and marketing. Such a reallocation of financial resources in favour of structural policy may also unburden price policy with respect to its output increasing effect. This leads us to the hypothesis that countries are forced to substitute price policy to an increasing extent by structural (and social) policy measures because the domestic supply of agricultural products is exceeding domestic demand (at increasing rates due to decreased growth of population and income as well as due to decreasing income elasticity of demand). This refers especially to those Western European countries (including Japan) with an extremely narrow land-man-ratio equivalent to a land intensive production, low labour productivity⁶¹ and a rather high protection rate of domestic production.⁶² Of course, the achievement rate of structural policy instruments not only depends on the specific shape, volume and nature of policy instruments, but is also determined by the relevant economic situations during various time periods and in the countries concerned. This will be discussed in more detail in the next section.

In general, the achievements of structural policy measures depend on their effects on opportunity costs of labour inputs in agriculture. If opportunity costs are relatively low, even high government subsidies for adjustment in

factor inputs – such as discontinuation schemes or retraining programs will result in rather low achievement rates.⁶³ As a consequence, structural effects will be highest in economically underdeveloped rural areas, worsening income distribution in agriculture. Therefore, a successful structural improvement only may be achieved by coordination of structural policy instruments and regional and infrastructural policy instruments, improving labour market conditions etc.⁶⁴ In many countries which are subject to great discrepancies in regional income and growth rates this link between structural policy for the farm sector and general economic and social policy is missing.⁶⁵

Since World War II all industrialized countries of the Western world have introduced and extended their system of social security for farmers, especially with respect to age, illness and accidents.⁶⁶ However, the specific systems of social policy in various countries differ, even more than structural policy measures, with respect to persons included, fees, rents, etc. In some countries, retirement schemes are part of the general social system, in others specific systems are introduced for farmers, sometimes combined with discontinuation schemes for farmers, etc. Because of the prevailing wide range of differences between those social policy instruments it is, of course, difficult to evaluate them with respect to their consistency with various farm and economic policy measures. All systems, at least contribute to an intergenerational income transfer, most systems to an intersectoral one as well, because the number of active farmers and, very often, their individual fees are relatively small compared with total and individual old age pensions.⁶⁷ In this case social policy is – more or less – a vehicle for redistribution of income. The degree of consistency with the income objective of economic and farm policy, of course, depends on the specific scheme of old age pension regulations. Because in many countries old age pension for farmers is not related to the income of farmers, the impact on intrasectoral income distribution is the subject of debate, especially because in many countries under review retirement schemes are combined with one form or the other of discontinuation rewards for older and/or smaller farmers.⁶⁸ Sometimes the specific pensions schemes for farmers reduces the intersectoral mobility of farmers, thus resulting in reduced productivity growth.⁶⁹

With respect to external effects of farm production on natural resources, environment and landscape, farm policy to an increasing extent is subject to specific instruments which subsidize agricultural production in certain areas (e.g. the hill farming program of the EEC). Such policies have an income redistributing effect. Again, the quantitative effects are difficult to estimate. They are dependent on size and structure of the instruments in use and the specific conditions prevailing. Consequently, the (negative) repercussion on resource allocation may be more or less strong.

It is the nature, size and specific shape of various farm policy instruments which determine extent and type of inconsistencies between farm policy and economic policy. The most important inconsistencies are due to income increasing instruments of price policy – although specific instruments are different with respect to various countries, time period and nature of the instrument – and may exist as far as domestic and international allocation of

resources, economic growth and intrasectoral income distribution are concerned. Welfare losses involved seem to be extensive, although they are determined to a certain extent by the conditions of the economy as a whole. Structural policy instruments, if well suited (optimal) to the existing conditions of the economy and the farm sector, may reduce the welfare losses of income policy. This may also be the case with respect to social policy measures in agriculture, although welfare gains may be modest in most of the countries under review. As said already, the effects and side effects of various measures depend to a great extent on the specific (external) economic and agricultural conditions prevailing in the specific country and time period under review. This interrelationship between the state of the economy, policy instruments and given objectives, resulting sometimes in low or negative achievement rates due to nonconformities of instruments, will be discussed next.

5. THE REPERCUSSIONS OF THE STATE OF THE ECONOMY ON ACHIEVEMENT RATES: THE SOURCES OF NONCONFORMITIES OF POLICY INSTRUMENTS

By 'state of economy' we mean in this context

- (a) the rate of inflation,
- (b) the degree of employment,
- (c) the extent of interregional disequilibrium with respect to economic activities and growth,
- (d) the rate of economic growth,
- (e) the balance of payments.

It is well known that industrialized countries in the West have achieved the relevant objectives to widely different degrees and that their achievements have been different at different time periods.⁷⁰ Therefore, only a systematic view on various types of nonconformities can be given here. The fact must also be stressed that the specific state of the economy described and measured by the relevant performances of the economy is the consequence of internal and external policy instruments, such as fiscal, monetary policy, etc. applied by national and international decision-making bodies. These effects, of course, cannot be discussed here.

Inflation, a permanent and, for the time being, accelerated attendant of economic growth of all countries — although at different strength — affects the farm sector especially with respect to the rise of most input prices. Rising input prices will be transferred to producers and consumers either by the (free) price mechanism or by political decisions on administered prices, thus resulting in additional pushes applied to the general price level. In fact, the impact of inflation on the farm sector is rather complicated and it depends on prevailing conditions (such as the decision on farm price level) whether agriculture is a loser or a winner with respect to its position in the struggle for income distribution within inflationary processes.⁷¹ At least, inflation affects income distribution within the sector.⁷² If inflation results in a worsening of the balance of payment, sometimes governments are likely to stimulate farm

production by raising farm prices in order to substitute for imports of food. On the other side, policy measures to counteract inflation have tended towards rather small increases if farm prices are determined by administrative decision. However, no general and definite answer to the question concerning the impact of inflation on agriculture and the consequence on farm policy seems to be possible. Further analysis is necessary.

In contrast, the degree of *unemployment* in the economy directly and indirectly effects agriculture. Unemployment will result in a smaller increase of demand of farm products due to a depressed rise of incomes, and, even more important, a decline in off-farm jobs available for farmers.⁷³ This will lead to a smaller outflow of labour, resulting in a relative decline of income in the farm sector. This is especially relevant for the farm sector because overall unemployment in the economy means extremely high unemployment in rural areas distant from urban-industrialized centers of activity.⁷⁴ In the longer run, structural adjustment of, and within, the farm sector is reduced. This can be observed in countries showing permanently high rates of unemployment. Again, regional disequilibrium in adjustment is extended and the effectiveness of instruments for structural policy are hampered because of lack of job opportunities outside agriculture. This interdependence between unemployment and the nature, direction and speed of adjustment of the farm sector is increasing in its importance because decreasing growth rates of demand for farm products and the rapid rise of labour productivity within agriculture require a relative increase in labour transfer from the farm to other sectors of the economy. The rate at which labour leaves the agricultural sector, either through migration or through part-time employment, is highly responsive to the level and changes in unemployment. If labour input adjustment is restricted by unemployment in the non-farm labour force, pressure for higher producer prices will occur in order to achieve an income level comparable with non-farm income. The possible consequences have been discussed earlier.

Similar interrelationships between employment and structural adjustment as discussed above can be observed with respect to *regional discrepancies* in income, employment and growth. Because such regional imbalances do exist within various industrialized countries, although to different degrees,⁷⁵ the speed and direction of the adjustment process of agriculture in various regions differs to a large extent, even if the overall economy is sometimes growing at impressive rates. Low income, low productivity farms are concentrated in underdeveloped rural areas in contrast to urban industrial regions being locations of efficient, big and fastly growing farms. Rapid growth in the non-farm sector of a nation is a necessary but not a sufficient condition to overcome the regional, occupational, age (and racial) dimensions of poverty in the farm sector because interregional mobility is much too restricted.⁷⁶ This problem of interregional discrepancies in income and growth of the farm sector can only be solved by increasing efforts with respect to regional policy. Most of the countries under review have recognized this imbalances resulting in inconsistencies within farm as well as economic policies, and have increased financial support for regional policy instruments. However, the decline in employment and economic growth since the energy crisis has

affected negatively the achievement rates in creating new job opportunities in underdeveloped rural areas.

The reasoning with respect to regional disequilibrium in labour markets above seems to be a further demonstration for the fact that rapid *economic growth* is a prerequisite for an adjustment of the farm sector without social unrest and tensions. Rather constant and high growth rates generate increasing demand for farm products, favourable conditions for transfer of labour to outside agriculture, high mobility on the land market, a stimulation for introduction of productivity increasing technological progress, low effectiveness of price and income policy measures on misallocation of resources (because of a strong competition from outside of agriculture and wide variety of individual choices between many alternative activities, etc.).⁷⁷ In fact, actual growth achieved by various countries did differ widely with respect to the size of growth rates, and the strength and length of business cycles disturbing the adjustment process of agriculture.⁷⁸ The present economic crisis demonstrates dramatically the interdependencies of agricultural adjustment process and economic growth and stability. These interrelationships also could be observed with respect to differences in the size and stability of economic growth in different countries of the Western world — although a number of additional factors have influenced this relationship. And there is still another aspect of economic growth. Because all countries to be reviewed did subsidize their farm sector by fiscal policy measures of one or the other type, growing economies were able to support increasing financial burdens of farm support because of rising tax resources and fast growing volumes of state budgets. As a consequence of this, almost in all industrialized countries of the Western world the government budget outlays for agriculture have increased absolutely (in real terms) throughout the period since World War II (and very often relative to total government budget and agriculture's net national product, etc.) although the share of agriculture in the national income, labour force, population etc. has rapidly declined. The reason for this astonishing phenomenon will be discussed in the following section.

Negative economic growth or even economic stagnation have (and will) effect agriculture negatively and probably to a greater degree than non agricultural sectors. Under such conditions, inconsistencies and nonconformities will consequently be increased, resulting in economic instability, social tensions and negative impact on international trade and, consequently, welfare. Those indicators represent the present situation in Western industrialized countries, of course, with varying magnitude. The solution of such difficulties and problems must be seen in regaining economic growth and stability, even the instruments to achieve these objectives seem to be less efficient than they were in earlier periods because of institutional constraints, a lack of confidence in the future, increased dependence on international division of labour etc. With respect to the latter, increasing imbalance of payments of some economies have resulted in measures to stimulate domestic farm production in order to substitute imports and to promote export of farm products. This, of course, may contribute to increases of farm income and therefore to the achievement of the income objective of policy. However, it must be doubted

that those (short run) positive effects will be greater than implied welfare losses because of declining international trade leading to declining rate of economic growth, again sharpening inconsistencies of farm policy. At least in the medium run, such a policy will increase nonconformities of policy measures. Policy has to be changed later or earlier because implicit welfare losses cannot be borne any longer by the economies.

6. THE PROCESS OF SHAPING FARM POLICY IN WESTERN INDUSTRIALIZED COUNTRIES: TOWARDS AN ECONOMIC THEORY OF AGRICULTURAL POLICY

Until now, we have tried to systematize the main sources of incompatibilities, inconsistencies and nonconformities determining the interrelationships between objectives, instruments and the prevailing economic situation with respect to economic and farm policies in various industrialized countries of the Western world. However, this review may stimulate the impression that each country may be subject to inconsistencies, incompatibilities and nonconformities of the types described above without any systematic relationships between the type of conflicts mentioned and the state of economic development, the degree of structural adjustment of the farm sector, and the supply of farm products respectively to the demand of various countries. This remark leads immediately to the question whether farm policy may be determined systematically by specific conditions of agriculture determined by the levels of economic development and other relevant factors. The reasoning may be as follows: We do know that adjustment of the farm sector to changing economic and social conditions is determined by specific factors such as population growth, income and price elasticity of demand, productivity growth of factor inputs and demand for parity income for factors used in agriculture. These factors which effect in a projectable course the adjustment of the farm sector are indicated by the share of agriculture in national product, total population and labour force being a function of the absolute level of income per caput etc.⁷⁹ It may be further hypothesized also that policy and its changes over time are determined by the degree of adjustment of the farm sector to the prevailing state of the economy – provided that pure and quasi-objectives of farm and economic policy have not been changed fundamentally.

Of course, such a theory postulating that policy objectives and instruments are determined mainly by economic conditions is contradicting the hypothesis according to which policy decisions in a democracy are dictated by the political power of various groups in the society. Although we admit that the political theory of economic policy has been elaborated and refined in a number of aspects, especially within the context of the so-called “New Political Economy”⁸⁰ since Schumpeter’s and Down’s fundamental contributions,⁸¹ with respect to farm policy formulation and implementation we have basic reservations. These reservations are mainly based on the paradox which obviously exists between the rise in the volume of farm support and the rapidly declining farm population.⁸²

6.1. *The basic hypothesis*

We will attempt to solve this contradiction by showing that economic progress requires specific structural adjustment of a farm sector of an economy being subject to intensification due to advancements in economic growth. Assuming, as stated above, no radical change in policy objectives, farm policy measures used to achieve given goals have to be (a) intensified and (b) structurally adjusted according to the prevailing state of economic growth. It follows immediately that inconsistencies and incompatibilities between means and ends of farm versus economic policy are determined by the extent, nature and structure of farm policy instruments, being a function of the state of adjustment of the farm sector. Of course, this hypothesis has to be modified according to specific conditions of the countries under review due to differences in farm structure determined by historical development, etc. Such an economically based theory of farm policy enables us to analyze our issue more systematically as far as policy conflicts are concerned.

In this context, we will first discuss the problem involved by measuring shape, extent and structure of farm policy measures. Second, we will describe the underlying theory of adjustment to economic growth of (a) the farm sector and (b) the farm policy mix and its repercussion on concepts, conflicts, frictions and solutions of the relationships between agricultural and economic policy on the national level at varying stages of economic development in Western industrialized countries.

6.2. *Measuring the shape, volume and structure of farm policy measures*

The farm sector of the countries to be reviewed is supported by measures of two fundamentally different types.

First, agricultural support by measures influencing directly the supply of farm products such as import restriction, domestic supply control, etc. These instruments act as vehicles for transferring income from consumers to producers directly via higher market prices.

Second, farm support by a great number of fiscal policy measures such as subsidies for inputs, farm products, direct transfer payments, structural reform and social policy measures, etc. These income transfers are direct government expenditures for agriculture, financed by internal revenue, etc. Total farm support therefore can be measured by aggregation of both basic types of support measures, taking into consideration double counting⁸³ and tax concessions for taxing at preferential rates and similar privileges of the farm sector not included in budget outlays. It is quite obvious that to quantify total farm support a number of problems have to be solved:

- lack of statistical data,
- general aggregation problems,
- quantification of protection rates,
- incidence of subsidies.

These problems are discussed below. With respect to government expenditures (budget outlays) for agriculture the most striking difficulties are,⁸⁴ first, government aid to the farm sector is represented by budget outlays of the

national Department of Agriculture. But agriculture is benefiting also from expenditures by other departments (such as the departments of commerce, traffic, social affairs, etc.) so that budget outlays of the Department of Agriculture do not represent the total fiscal expenditures for the farm sector. On the other side, budget expenditures of the Department of Agriculture are favouring other sectors of the economy – forestry and fishing, etc. Further, some governments are decentralized (federal states). Thus expenditures of communities, states and the central government have to be aggregated. Next, in various countries, agriculture is subject to special tax regulations, so that different types of tax exemptions should be included. However, in only a few countries, such as West Germany, official or private estimates of the volume of the relevant tax exemption are available. Very often tax exemptions are nothing else than income subsidies to farmers. Furthermore, it must be stressed that various types of budget outlays for agriculture favour the farm sector to a quite different degree. This varying incidence effect of transfer payments has the consequence that expenditures only represent gross instead of net transfers to agriculture.

In summarizing, it must be said that aggregated government expenditures for agriculture as shown by official statistics give only a rough picture of fiscal aid to the farm sector. Of course, more scientific investigations and analysis of this type of farm policy represented by fiscal instruments is urgently needed – especially because those budget outlays are of increasing importance, absolutely as well as relative to transfers of income by price policy, in most countries under review. That fiscal aid to agriculture has been a rather neglected area of research by agricultural economists probably can be explained by the fact that in the United States this specific type of government support does play a rather minor, however, rising rôle. Because research in agricultural economies is to a large extent dominated, or at least strongly influenced by US economists, this line of research is neglected also by economists in other parts of the world.

As has been said already, fiscal measures favouring the farm sector can be seen as a complement to or a substitute for income generating farm price policy measures mentioned first. Because price policy measurements vary to a considerable degree relative to the importance of fiscal policy measures between the countries and time periods being reviewed, the volume of price policy should be quantified, so that a comparison (and aggregation) for inter-country and intertemporal comparative analysis would be possible. It is obvious that an exact quantification of border protection by import quotas, tariffs, levies etc. resulting in higher producer prices is, theoretically as well as empirically, a difficult task.⁸⁵ The best and most objective measurement is, of course, given by the concept of the “Effective Rate of Protection” referring to the impact of protection on the relative value added of supported goods.⁸⁶ However, there are many difficult problems in measuring the effective rate of protection, so that the available data are rather limited. For our purposes we need an indicator which represents the level and change of price support relative to financial transfer payments. For this purpose it is sufficient to quantify the effects of protection on producer prices and income by calculating

“Nominal Gross Protection” of agriculture. Nominal gross protection is calculated in this analysis by multiplying the difference between the relevant index of domestic farm producer prices and the index of import prices (cif) of farm products which are substitutes for domestic goods by the volume of domestic farm production. The relative difference between domestic and import prices is based on calculations of absolute differences (nominal protection rate) at representative time periods. For international comparisons, the absolute figures of nominal gross protection expressed in national currency units have been converted into US-Dollars of 1970 in order to prevent disturbances due to revaluation of national currencies. As far as possible, double counting has been avoided.

6.3. *The results*

Some statistical results are given in the Appendix for a number of Western industrialized countries with market economies. The econometric analysis cannot be repeated here because of lack of space. The results have been published elsewhere.⁸⁷ Furthermore, only a rough summary of results will be given as follows, without discussion of details.

For Western industrialized countries, as far as data were available and manageable, we can observe that since World War II government expenditures supporting the farm sector increased absolutely, even if inflationary rises of the price level are taken into account.⁸⁸ The rates of increases are different with respect to country and time period reviewed. Rising government supports to agriculture cannot be explained by the displacement effect of Peacock and Wiseman,⁸⁹ because the rise of budget expenditures was not limited to the immediate post war period. For most countries expenditures increased also with respect to:

- (a) agriculture's contribution to national income,
- (b) gross revenue of agriculture, and
- (c) total government budget expenditure.

Bearing in mind that agriculture in all countries was subject to a tremendous process of structural adjustment all over the post-war-period, budget expenditures for agriculture also increased, of course, per unit of farm output, per unit of labour and land. However, great differences between various countries can be observed with respect to all indexes of budget outlays relative to all indicators mentioned here. In principle, the analysis shows that

(a) in countries of the New World relative expenditures are less than in the countries of the Old World,

(b) within the latter group of countries government expenditures are relatively small in countries economically less developed than in countries showing high income per capita,

(c) expenditures increase more over time where economic growth is stronger than in countries with a relative modest rise in per-caput-income.

Concerning the level of nominal gross protection of the farm sector and its change over time, as measured according to the method described above, the

following summarized results can be given. For almost all countries, the volume of gross protection has increased since World War II. The rise of protection was due mainly to increases of domestic farm production with respect to domestic consumption not so much due to increases in domestic prices relative to world market prices.⁹⁰ Nominal gross protection has increased, similar to government expenditures, with respect to (a) domestic product of agriculture, (b) total gross product of agriculture as well as (c) per unit of gross product, land and labour input in the long run. However, the *rates* of growth of gross protection measured in absolute as well as relative terms are less than those of government expenditures of almost all countries analysed. Price and income supports by border protection are less important than government expenditures in the more developed countries of the Old World, compared with less developed countries in the Old World and countries in the New World. Over time, nominal protection is declining relative to government expenditures in all countries. Border protection is generally more excessive in less developed countries of the Old World and for countries in the New World, although gross protection per unit of output and, especially, input is higher in the latter group of countries compared with the industrialized countries of the New World and the more developed countries of the Old World. In other words, economic growth results in a structural change of farm support towards fiscal policy substituting, as well as complementing, border protection. Both measures lead to an expansion of the total volume of farm support, although agriculture is a declining sector.

Increasing financial support of agriculture by budget expenditures is also subject to structural changes. The most striking changes occurred in those countries where agriculture is subject to a specific social security system (South and West Europe).⁹¹ For these countries the share of government expenditure for social policy measures in the field of agriculture has increased rather rapidly. Because instruments aimed to improve the farm structure are very often also linked with social policy measures, to a rising degree, budget expenditures for structural improvements as a share of total budget outlay is in many countries decreasing, although absolutely it is rising. A large share of expenditures is still for structural improvements. No definite trend with respect to measures to increase farm income directly by subsidies for farm products, farm producers and/or inputs could be observed. Obviously, the share (and level) of government expenditures for structural policy depends on the degree of structural adjustment of the farm sector with respect to the state of economic development. The New World-countries are better off than the countries of the Old World, as demonstrated by figures of land-man-ratio, concentration of income and farm sizes etc. and their changes over time.

6.4. Interpretation of results: the hypothesis of farm policy formation

Changes over time in the volume and structure of agricultural support by border protection and by fiscal policy within the process of economic growth and, consequently, differences between Western industrialized countries with market economic order, are to be explained as follows: Economic growth is synonymous with changes in the structure of the relevant economy. Agriculture

is, as we all know, the case in point as far as its relative declining position within an economy is concerned; low income elasticities of demand for food, low rates of population growth, changing relative factor prices result in strong pressures on the farm sector's relative income, a need for adjustment (reallocation of resources) and, consequently, a squeeze on farm labour to leave agriculture. What is even more important in our context is that these pressures on income, for structural adjustment and on labour outflow are the stronger (a) the higher are the growth rates of the economy and/or (b) the higher the level of economic development already reached. This is due to a falling income elasticity of demand and declining population growth as well to increasing opportunity costs for agriculture. With respect to farm policy directed towards stability or improvements in personal income distribution between agriculture and non farm sectors, the volume of income transfer has to be increased and/or the adjustment of the farm sector has to be accelerated. Assuming that public expenditures for restructuring the farm sector are rising because costs for transferring most (labour) input are increasing over time, total government expenditures are rising more than proportional. Consequently, countries which are relatively less developed are characterized by a smaller volume of farm support compared with more developed countries. Furthermore, the structure of farm support in countries mentioned first is dominated by income transfer via measures directly affecting producer prices; in these developed countries government expenditures for agriculture are more important than income generating instruments of the type mentioned. Of course, further modifications of this simple hypothesis must be made in order to explain the most striking differences between agricultural support by countries in the New World compared with those of the Old one.

However, the observed rise in aggregated volume of support of the declining farm sector (as well as difference between countries) can, at least partly, be explained by different levels of economic growth. However, this hypothesis is unable to explain discrepancies in the volume and structure of farm support between (highly developed) countries of the New World and those of the Old World (including Japan) and, to a certain extent, differences existing between countries belonging to the latter group. Therefore, factors besides the level of economic development must be taken into consideration, such as (a) the relative degree of structural adjustment and changes thereof over time, (b) the prevailing degree of self-sufficiency and its changes over time and (c) the specific character of the prevailing market economy.

Regarding (a), the degree of structural adjustment in relation to the prevailing economic conditions may be measured by income per unit of input, excluding income transfers (net national income at factor cost.⁹² This, of course, is a function of factor endowment of farms, factor productivity and (equilibrium) price relationship. A substitutive measurement for structural adjustment may be the land-man-ratio in various countries with respect to international comparisons.⁹³ The differences between New and Old World-countries are well known and they are reflected in the relative volume of farm support. The rate of changes of the indexes representing adjustment relative to income outside agriculture may determine growth-rates of the volume of farm support.

Regarding (b), the degree of self sufficiency as a numerical expression of the relation between domestic food production and consumption of home produced food determines further the volume and the structure of farm support measures. Surpluses of farm products, especially in countries having low degrees of structural adjustment, exert a restrictive pressure on farm price policies due to increasing financial burdens (export subsidies, etc.). This, of course, refers to changes in farm prices over time. Substitutive instruments, such as structural and social policy measures and direct income transfer payments, combined with output restricting provisions, do replace partly – or, at least complement – price policy.

Regarding (c), countries under review have been characterized as market economies being subject to fiscal and monetary policy instruments in order to subordinate individual economic activity to overall policy objectives. However, various countries are more or less tolerant as far as the demarcation line between individual and collective responsibility for actions to counteract unsatisfying situations.⁹⁴ In other words, some governments are less sensitive with respect to the use of policy instruments to cure undesired developments than others,⁹⁵ the latter trusting more to individual capacity for adaption. This means in our context that the extent to which farm policy measures are used is partly determined by the philosophy behind government interventions. In general, Old-World-countries seem to be more liberal at the present time than the other countries being reviewed. Of course, such differences are difficult to quantify.

6.5. *The policy implications involved*

If our analysis is correct that the shape, structure and changes of farm policy are mainly determined by:

- (a) the state of economic development,
- (b) the degree of structural adjustment of the farm sector,
- (c) the degree of self sufficiency of domestic food supply,
- (d) changes of these factors over time.

the certain implications seem to be evident.

First, given a great similarity of preference functions of decision-makers in Western industrialized countries, the degrees of freedom for manipulating the farm policy mix are rather restricted. This may be, among others, an explanation for the fact that the stress put by economists on the welfare losses of prevailing farm policies is rather unsuccessful in convincing governments to modify basically present policies.⁹⁶ This, of course, is a reformulation of Lindbloms⁹⁷ theory of “a disjointed incrementalism” which is pursued by decision-makers, only approaching “a piecemeal social engineering” (Popper).⁹⁸ Second, if our proposition holds, then the dimension, type and structure of policy conflicts with regard to inconsistencies, incompatibilities, and nonconformities described above can be located systematically in relation to the basic factors underlying relevant situations. Finally, possible solutions of those conflicts can be developed and transformed more systematically and in advance into relevant political actions. Those actions, of course, should not

only consider solution of conflicts within and between national farm and economic policy objectives and achievements but also possible and foreseeable conflicts at the international level. Although, for the time being, various countries of the Western World are seeking those solutions by some returns to mercantilistic types of economic policy – the Common Agricultural Policy being a case in point – international coordination of farm policy of various countries is needed more than before. In any case the best conditions to achieve those goals will be provided if economic growth, full employment and price stability are regained. Such a course of future economic development will be the best presupposition for a more efficient, internationally coordinated, farm policy.

APPENDIX

TABLE 1. *Farm support by government expenditures for agriculture, selected industrialized countries with market economies, 1950-1974*

Period	Gross Domestic Product (GDP)			Government Expenditures (GE)				
	Total	Agriculture		Total		For Agriculture		
		Absolute	In % of GDP	Absolute	In % of GDP	Absolute	In % of	
							GE	GDP agriculture
France (Bill. of Francs)								
1955/59	271.54	25.45	9.4	59.30	10.4	1.83	3.1	7.2
1960/64	372.71	31.57	8.5	80.10	12.1	4.52	5.6	14.3
1965/69	590.91	40.01	6.8	128.50	17.0	10.04	7.8	25.1
1970/74	875.81	55.12	6.3	209.50	21.1	18.56	8.8	33.6
Federal Republic of Germany (Bill. of German Marks)								
1950/54	132.36	12.34	9.4	39.82	30.0	0.55	1.4	4.5
1955/59	218.27	15.36	7.1	65.11	29.7	2.21	3.3	14.2
1960/64	360.76	18.37	5.1	111.94	29.8	4.24	3.9	22.9
1964/69	519.44	20.92	4.0	155.43	30.0	6.53	4.1	30.4
1970/74	841.67	24.45	2.9	252.56	29.9	8.61	3.4	35.2
United Kingdom (Mill. of Pounds Sterling)								
1955/59	19211	848	4.4	5259	27.3	238	4.5	28.0
1960/64	22212	969	4.4	11034	49.6	287	2.6	29.5
1965/69	40006	1121	2.8	17141	42.7	242	1.4	21.6
1970/74	59811	1522	2.5	26398	44.1	357	1.4	23.4

TABLE 1.

Period	Gross Domestic Product (GDP)			Government Expenditures (GE)				
	Total	Agriculture		Total		For Agriculture		
		Absolute	In % of GDP	Absolute	In % of GDP	Absolute	In % of	
							GE	GDP agriculture
United States of America (Bill. of Dollar)								
1950/54	283.7	18.5	6.5	58.23	20.5	1.99	3.4	10.8
1955/59	363.1	16.6	4.6	78.08	21.5	3.36	6.9	20.2
1960/64	459.9	18.1	3.9	105.35	22.9	6.73	6.4	37.1
1965/69	663.1	22.5	3.4	154.94	23.4	7.64	4.9	33.4
1970/74	961.9	32.0	3.3	230.96	24.0	9.48	4.1	29.6
Japan (Bill. of Yen)								
1960	15873	2105	13.3	1765	11.1	139	7.9	6.6
1965	31480	3165	10.1	3745	11.9	346	9.2	10.9
1970	69268	4689	6.8	8213	11.9	883	10.8	18.8
1973	111004	6048	5.5	14284	12.9	1314	9.2	21.7
Australia (Mill. of Australian Dollar)								
1970	32702	2039	6.2	6121	18.7	357	5.8	17.4
Canada (Mill. of Canadian Dollar)								
1970	86151	3203	3.7	15500	18.0	348.6	2.2	10.9

TABLE 1.

Period	Gross Domestic Product (GDP)			Government Expenditures (GE)				
	Total	Agriculture		Total		For Agriculture		
		Absolute	In % of GDP	Absolute	In % of GDP	Absolute	In % of	
							GE	GDP agriculture
Belgium (Mill. of Francs)								
1970	1283.1	49.5	3.9	311.4	24.3	8.1	2.6	16.2
Finland (Mill. of Markas)								
1970	43592	5408	12.4	14800	34.0	953	6.4	17.6
Italy (Bill. of Lires)								
1970	57903	5072	8.7	18926	32.7	2279	12.0	44.9
Ireland (Mill. of Pounds Sterling)								
1970	1621.3	232.5	14.3	610.0	37.6	94.2	15.7	40.1
Netherlands (Mill. of Guilder)								
1971	129650	6990	5.3	30300	23.3	1135	3.7	16.2
Spain (Bill. of Pesetas)								
1970	2264.1	280.3	12.4	429.7	19.0	42.8	10.0	15.2
Sweden (Bill. of Kronor)								
1970	170112	6353	3.7	69745	41.0	8060	11.6	12.7

Sources: National Statistics

TABLE 2. *Distribution of farm support according to policy instruments, Federal Republic of Germany, France and United Kingdom, 1955–1974*

Period	Aggregated farm support ¹	Thereof in percent					
		Income Transfer by		Social policy ⁴	Structural policy ⁵	Education and training	Tax exemption ⁶
		Border protection ²	Direct transfer ³				
Federal Republic of Germany (Mill. of German Marks)							
1955/59	6464	61.7	17.9	—	15.1	1.1	5.1
1960/64	10956	64.6	15.6	1.5	20.6	1.0	6.7
1965/69	15824	53.1	15.2	4.5	18.9	0.9	7.3
1970/74	22331	52.5	16.6	6.5	15.1	0.3	9.1
France (Mill. of Francs)							
1955/59	6010	69.5	16.0	3.3	10.7	0.5	n.a.
1960/64	11990	62.2	18.4	7.8	10.7	1.0	n.a.
1965/69	22501	55.4	16.0	15.5	11.3	1.7	n.a.
1970/74	33733	45.0	20.0	23.1	10.8	1.1	n.a.
United Kingdom (Mill. of Pounds Sterling)							
1955/59	414.4	42.7	52.9	n.a.	4.4	n.a.	n.a.
1960/64	504.8	43.2	50.1	n.a.	5.7	n.a.	n.a.
1965/69	474.2	48.9	45.4	n.a.	5.7	n.a.	n.a.
1970/74	635.5	43.9	43.5	n.a.	12.6	n.a.	n.a.

¹ Government expenditures and gross nominal protection.² By import quotas, levies and import duties.³ By subsidies of output (deficiency payments) and input.

⁴ By social security systems specified to agriculture; this is not the case as far as the U.K. is concerned.

⁵ Factor productivity increasing government programs.

⁶ Official estimates for West Germany. — For detailed information see text.

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NOTES

¹ For a more detailed system of farm support measures see: R. W. Howarth, *Agricultural Support in Western Europe*. The Institute of Economic Affairs (Research Monograph 25, London 1971, p. 11, with respect to structural policy: OECD, *Structural Reform Measures in Agriculture* (Agricultural Policy Reports). Paris 1972.

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³ See O. Gulbrandsen and A. Lindbeck, *The Economics of the Agricultural Sector*. Stockholm 1973, and U. Koester und S. Tangermann, *Alternativen der Agrarpolitik*. (Landwirtschaft-Angewandte Wissenschaft, H. 182). Münster-Hiltrup 1976. T. E. Josling, *Agricultural Policies in Developed Countries: A Review*. *Journal of Agricultural Economics*, Vol. 25 (1974), p. 237.

⁴ See E. S. Kirschen (Ed.), *Economic Policies Compared, West and East*. (Vol. 1, *General Theory*). Amsterdam and Oxford 1974, p. 31. — E. S. Kirschen et al., *Economic Policy in our Time* (Vol. 1, *General Theory*). Amsterdam 1964, passim. — For a theoretical treatment see A. E. Bryson and Yu-Chi-Ho, *Applied Optimal Control*. Waltham, Toronto, London 1969.

⁵ A. Downs, *An Economic Theory of Democracy*. New York 1957. For more modern development in the field of the New Political Economy see B. S. Frey, Eine Einschätzung der Neuen Politischen Ökonomie der 70er Jahre. *Zeitschrift für die gesamte Staatswissenschaft*, Bd. 131 (1975), pp. 697–718, and literature quoted.

⁶ See T. E. Josling *op. cit.* and references quoted.

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⁹ See F. Dovring, *op. cit.*

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¹² See E. S. Kirschen (Ed.), *op. cit.* — T. E. Josling, *op. cit.*

¹³ Th. Pütz, *Grundlagen der theoretischen Wirtschaftspolitik*. Stuttgart 1971, p. 17.

¹⁴ G. N. Halm, *Economic Systems. A Comparative Analysis*. London, New York, Sidney, Toronto 1968. — G. Hedtkamp, *Wirtschaftssysteme. Theorie und Vergleich*. München 1974.

¹⁵ Compare: FAO, *Production Yearbook*. Rome.

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¹⁷ K. Müller-Heine, *Agrarpolitische Ziele und ihre Einordnung in den gesamtwirtschaftlichen Zielkomplex*. Göttingen 1972. — F. Mehler, *Ziel-Mittel-Konflikte als Problem der Wirtschaftspolitik* (Volkswirtschaftliche Schriften, H. 149). Berlin 1970.

¹⁸ G. Schmitt und H. v. Witzke, *Ziel- und Mittelkonflikte sektorspezifischer Systeme sozialer Sicherung. Das Beispiel der landwirtschaftlichen Sozialpolitik in der Bundesrepublik Deutschland* (Sozialpolitische Schriften, H. 37). Berlin 1975.

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- ²³ P. Baumgarten and W. Mückl, *op. cit.*
- ²⁴ E. S. Kirschen (Ed.), *op. cit.*
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- ²⁶ E. S. Kirschen (Ed.), *op. cit.*
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- ²⁸ E. S. Kirschen (Ed.), *op. cit.* — A. -H. Boyne, Changes in Income Distribution in Agriculture. *Journal of Farm Economics*, Vol. 47 (1965).
- ²⁹ D. G. Johnson, *World Agriculture in Disarray*. London 1973. — OECD, *Agricultural Policies in 1966. — Europe, North America and Japan*. Paris 1966. — W. M. Corden, *The Theory of Protection*. Oxford 1971. — J. P. Mackintosh, The Problems of Agricultural Policies. *Journal of Agricultural Economics*, Vol. 21 (1970), Agricultural Protection in US Agriculture. *American Journal of Agricultural Economics*, Vol. 53 (1971).
- ³⁰ E. S. Kirschen (Ed.), *op. cit.*
- ³¹ This will be discussed in the following chapter.
- ³² GATT, International Trade. var. issues.
- ³³ GATT, *op. cit.*
- ³⁴ This chapter is mainly based on a number of publications of OECD and FAO on agricultural policy of member-states, especially: OECD, *Trends in Agricultural Policies since 1955*. Paris 1961. — OECD, *op. cit.* — OECD, *Agricultural Policy Reports of various member states*, Paris 1973, 1974, 1975.
- ³⁵ For more detailed information see the systematization of countries given by OECD according to (a) defined income objectives comparable to given levels of non farm income (West Germany, Sweden), (b) rather well defined groups of farms subject to income redistribution without exact standards (Austria, Benelux, France, United Kingdom), (c) to restricting relevant definitions to instruments to be used in order to increase income (price policy: USA; improvement of efficiency: EEC, Canada, Denmark, Ireland) and (d) income objectives are not mentioned but implicit achievements of instruments (Mediterranean countries).
- ³⁶ Few countries (Germany, France, Netherlands, Sweden and EEC) regularly publish records on the income position of agriculture, sometimes as a consequence of prevailing legislation.
- ³⁷ See references quoted in note 3.
- ³⁸ Although there are quite a number of "Theories Explaining the Persistence of low Resource Returns" (by L. G. Tweeten, *American Journal of Agricultural Economics*, Vol. 51 (1969), the hypotheses that opportunity costs of main production factors in agriculture are less than their "equilibrium prices" has been accepted by most farm economists. This theory therefore may explain disequilibrium in production factor inputs and factor income prevailing even under conditions of polypolistic market structure. D. E. Hathaway, *Government and Agriculture*. New York and Toronto 1968. — G. Schmitt, *Landwirtschaft in der Marktwirtschaft: Das Dilemma der Agrarpolitik*. In: D. Cassel *et al.* (Hrsg.), *25 Jahre Marktwirtschaft in der Bundesrepublik Deutschland*. Stuttgart 1972. — A. Hanau, *Landwirtschaft in der sozialen Marktwirtschaft*. *Agrarwirtschaft*, Jg. 7 (1958), pp. 1–27.
- ³⁹ For more details see the following chapter.
- ⁴⁰ U. Koester, *Sektorale Preisentwicklung und Geldwertstabilität*. Meisenheim (1974).
- ⁴¹ D. Manegold, Analyse der landwirtschaftlichen Gesamtrechnung des EUROSTAT — 1974. *Agrarwirtschaft*, Jg. 25 (1976), pp. 74–84.
- ⁴² T. Heidhues und S. Tangermann, Der Einfluß von wirtschaftlichem Wachstum, Inflation und Währungspolitik auf die Landwirtschaft unter EWG-Bedingungen. *Agrarwirtschaft*, Jg. 21 (1972), pp. 173–182. — S. Tangermann, *Gemeinsame Agrarpolitik und nationale Wirtschaftspolitik in der EWG*. Tübingen 1974. — L. Kersten und D. Manegold, Aktuelle Fragen der Gemeinsamen Agrarpolitik. *Agrarwirtschaft*, Jg. 25 (1976), pp. 130–139.
- ⁴³ R. Hedtke, *op. cit.*
- ⁴⁴ OECD, *Structural Reform . . .*, *op. cit.*

⁴⁵ E. S. Kirschen (Ed.), *op. cit.*

⁴⁶ Scientific attempts to measure the contribution of structural adjustment to national income are numerous. See among others: OECD, *Agriculture and Economic Growth*. Paris 1965. — E. F. Denison, *The Sources of Economic Growth in the United States and the Alternatives before us*. New York 1962.

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⁴⁸ OECD, *Structural Reform . . .*, *op. cit.*

⁴⁹ See OECD-publication quoted in note 29.

⁵⁰ OECD, *Agricultural Policy in Sweden* (Agricultural Policy Reports). Paris 1975.

⁵¹ A. Henze, Die Sicherstellung der nationalen Güterversorgung (*Sonderheft 48 der Agrarwirtschaft*). Hannover 1972.

⁵² See OECD-Country Reports and relevant statistics of the EEC.

⁵³ FAO, *An Inquiry into the Problems of Agricultural Price Stabilization and Support Prices*. Rome 1960.

⁵⁴ T. Josling, Agriculture and Import Saving: A Cautionary Note. In: *Agriculture and Import Saving* (H. Samuel Occasional Paper No. 5). London 1970.

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⁵⁶ See E. J. Mishan, Welfare Criteria for External Effects. *American Economic Review*, Vol. 51 (1961).

⁵⁷ See for a detailed discussion: V. W. Ruttan, Agricultural Policy in an Affluent Society. *Journal of Farm Economics*, Vol. 48 (1966), pp. 1100–1120, and references made.

⁵⁸ J. Bieri and A. Schmitz, Market Intermediaries and Price Instability: Some Welfare Implications. *American Journal of Agricultural Economics*, Vol. 56 (1974), pp. 280–285, and references quoted.

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⁶⁰ For an almost complete description of relevant measures see: OECD, *Structural Reform . . .*, *op. cit.*

⁶¹ Y. Hayami and V. W. Ruttan, *op. cit.*

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⁶⁷ Kommission der Europäischen Gemeinschaften, *Die Finanzierung der sozialen Sicherheit in der Landwirtschaft* (Reihe Sozialpolitik 20). Brüssel 1970.

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⁶⁹ G. Schmitt und H. v. Witzke, *op. cit.*

⁷⁰ E. S. Kirschen (Ed.), *op. cit.*

⁷¹ See S. Tangermann, *op. cit.*, and references made.

⁷² A. Henze, Inflationsursachen und gesamtwirtschaftlich-strukturelle sowie agrarstrukturelle Inflationswirkungen. *Berichte über Landwirtschaft*, Bd. 52 (1972), pp. 81–102. — C. Thoroe, *Inflation und sektorale Einkommensverteilung unter besonderer Berücksichtigung der Landwirtschaft*. Ph.D. Thesis, Kiel 1974.

⁷³ E. Guth, Analyse des Marktes für landwirtschaftliche Arbeitskräfte (*Sonderheft 52 der Agrarwirtschaft*). Hannover 1973.

⁷⁴ V. W. Ruttan, *op. cit.*, and references quoted.

⁷⁵ See D. Biehl *et al.*, *Bestimmungsgründe des regionalen Entwicklungspotentials* (Kieler Studien 133). Tübingen 1975.

⁷⁶ V. W. Ruttan, *op. cit.*

⁷⁷ V. W. Ruttan, *op. cit.*

⁷⁸ E. S. Kirschen (Ed.), *op. cit.*

⁷⁹ This theory of agriculture adjustment is generally accepted since A. G. B. Fisher's, C. Clark's, J. Fourastié's and T. W. Schulze's fundamental research.

⁸⁰ See especially: B. S. Frey, *Entwicklung und Stand der Ökonomischen Theorie der Politik*. In: H. -P. Widmeier (Ed.), *Politische Ökonomie im Wohlfahrtsstaat*. Frankfurt 1974.

⁸¹ J. A. Schumpeter, *Capitalism, Socialism and Democracy*. New York 1942. — A. Downs, *op. cit.*

⁸² P. Bernholz, *Die Machtkonkurrenz der Verbände im Rahmen des politischen Entscheidungssystems*. In: *Macht und ökonomisches Gesetz* (Schriften des Vereins für Socialpolitik, Bd. 74). Berlin 1973. — With respect to the controversy on determination of government policy by mainly political theories versus economic factors, in the field of fiscal policy. There is a strong support of the latter position. See: H. C. Recktenwald, *Staatwirtschaft in säkularer Sicht (Hamburger Jahrbuch für Wirtschafts und Gesellschaftspolitik, Bd. 15)*, Tübingen 1970, pp. 119–138, and references quoted.

⁸³ In many countries minimum prices for farm products are guaranteed to farmers by a system of buffer stocks, export subsidies etc. These measures automatically result in an increase of domestic prices relative to world market prices. Adding relevant government expenditures for buffer stocks to border protection measured in terms of nominal protection would mean, of course, to count the extent of farm support price twice.

⁸⁴ For a more detailed discussion see: H. -G. Schlotter, *Die finanz und außenhandelspolitische Landwirtschaftsförderung in der Bundesrepublik Deutschland. Ausmaß, Struktur und künftige Möglichkeiten*. Hannover 1964.

⁸⁵ See R. W. Howarth, *op. cit.*, R. Dardis and E. W. Learn, *Measures of the Degree and Cost of Economic Protection of Agriculture in Selected Countries* USDA, ERS, Bull. No. 1384, Washington D.C. 1967. — G. Neidlinger, *op. cit.*

⁸⁶ W. M. Corden, *op. cit.*

⁸⁷ P. Schmidt and G. Schmitt, *Auf dem Wege zu einer positiven ökonomischen Theorie der Agrarpolitik. Berichte über Landwirtschaft*, Bd. 52 (1974), pp. 521–546. — P. Schmidt, *Bestimmungsfaktoren staatlicher Agrarpolitik in Marktwirtschaften*, Ph.D. Thesis, Göttingen 1975.

⁸⁸ For many countries an explicit price index of government expenditures is not available, most often consumer price index has to be used for deflation of nominal budget outlays.

⁸⁹ See A. Peacock and J. Wiseman, *The Growth of Public Expenditures in the United Kingdom*. Princeton 1961.

⁹⁰ See References quoted in note 85.

⁹¹ Very likely, in countries where farmers are integrated in the general social security system, similar intersectoral transfers on income could be observed. This is simply due to the decline of the number of still active farmers relative to already retired farmers. However, no statistics are available to prove this hypothesis. Of course, the volume of income transfer probably is smaller than in countries with special systems for farmers. In the latter cases, farmers very often are privileged as against non farm population.

⁹² Difficulties in measuring national income at factor cost per unit of labor input (in international comparisons) are due to statistical differences in labour input figures.

⁹³ See F. Dovring, *op. cit.*

⁹⁴ In this line: P. Mosley, *Towards a "Satisficing" Theory of Economic Policy*. *The Economic Journal*, Vol. 86 (1976), pp. 59–72.

⁹⁵ Cases in point are the tolerance with respect to inflation and the extent of social security systems in various countries. A crude measurement may be the share of government expenditures on national income (see Table 1 of Appendix).

⁹⁶ See G. D. Hathaway, *op. cit.*; B. Talbott and D. F. Hadwiger, *The Policy Process in American Agriculture*. San Francisco 1968. R. S. Kirkendall, *Social Scientists and Farm Politics in the Age of Roosevelt*. Columbia 1966. — G. Schmitt, *Zum Verhältnis der Agrarökonomik zur Agrarpolitik. Agrarwirtschaft*, Jg. 21 (1972), pp. 213–220.

⁹⁷ D. Braybrooke and Ch. F. Linblom, *A Strategy of Decision. Policy Evaluation as a Social Process*. London 1963.

⁹⁸ K. Popper, *The Poverty of Historicism*. New York 1961.

DISCUSSION OPENING — R. W. M. Johnson, *New Zealand*

I would like to re-state certain aspects of the argument and draw some conclusions which I think are warranted from the paper in front of us.

The political objective is stated as getting re-elected — we read the phrase “maximise the sympathy of voters”.

Economic growth is considered desirable as it meets political objectives — this can be roughly paraphrased as “giving something to everybody”.

The problem arises because of unequal growth in the different sectors. Different sectors grow at different rates and so do different parts of the same sector such as mountain regions and so on. Backward growth is not unique to the agricultural sector but is typical of it.

Governments take action to correct the resulting imbalances as political objectives set a value on the quantity of votes and not maximum growth of income.

This seems to be a summary of the main features of the argument presented. Now the most important manifestation of these economic forces is the movement of mobile resources out of agriculture — especially the labour resource. We see policies designed to aid movement, such as retirement schemes and structural programmes, and income programmes to alleviate its effects!

As I see it, one result of these policies, and not a cause of them, is a general tendency to increase national self-sufficiency in agricultural products beyond levels which comparative advantage would indicate as appropriate. This has great implications for trade in agricultural products, especially in third countries such as New Zealand.

The question that should be asked in my opinion is whether the adaptation of the agricultural sector to modern needs could have been achieved by other methods? Have the measures adopted slowed down or increased the rate of migration out of agriculture? Would this have happened anyway? And in the end would the social costs of letting it happen be any greater than those brought about by the present policies? For the countries concerned I believe the policies actually adopted have probably minimised social costs — but for the community at large I believe we are worse off.

DISCUSSION OPENING — John J. Scully, *Commission of the European Communities*.

I would like to make a number of comments, some rather general, some more specific, on some of the issues raised by Prof. Schmitt in his very exhaustive treatment of his subject.

In discussing the implications of farm policy for agricultural development it is necessary not to lose sight of the fact that agriculture is an extremely diverse economic sector. It is diverse

- in terms of the economic climate in which farmers operate
- in terms of topography, soil fertility, geography and climate
- in terms of farm units of varying shapes and sizes
- in terms of farmers and farm workers of differing physical and mental abilities.

The diversity of the sector explains in a very real way why farmers as a group, in any country or region, can never respond in a uniform manner to the needs of economic growth and development. In these circumstances, it is not too difficult to explain the apparent lack of conformity between the desired and the realised results of policy measures.

Insofar as incompatible objectives of economic and farm policy are concerned, one is tempted to ask to what extent is this incompatibility due to the lack of the necessary integration of agricultural planning and general economic planning. There is of course a political dimension, in the broader sense of the term, to this problem. To some extent one could say that a basic reason for the incompatibility lies in the failure of the relevant Government Ministries or other planning agencies to co-ordinate their respective measures of development policy within the framework of one national programme embracing the various sectors of the economy.

In the narrower sense of the political dimension, there is the apparent reluctance of decision-makers to look to the longer term rather than to the shorter term in seeking solutions to fundamental problems of development, greater political kudos being realised through the use of temporary short-term palliatives. In the long term they often tend to compound problems still further rather than to provide worthwhile solutions to them.

Within agricultural policy itself this political dimension is often apparent in the conflict existing between price policy and structural policy insofar as attempts to improve the income situation of farmers through progressive increases in farm prices in the short term tend to restrict the possibilities available for structural reform in the long term.

Even more fundamentally, in a number of Western European Countries certain aspects of land tenure, which are supported by existing national legislative arrangements, are a direct impediment to the implementation of realistic policies of structural reform. There are, for example, certain inheritance laws which permit the division of farms among heirs during the process of farm transfer within generations; there are estate duties which represent a substantial financial burden for farm heirs and which in extreme cases may lead to the disintegration of highly capitalised farms at the end of the family life cycle; there is the undue dependence on the occupier-ownership of land as the basic tenure system which is encouraged by the land laws of certain countries, and which is decidedly "anti-structure" in character, particularly in the current era of rapidly inflating land prices. There are many other such inconsistencies which could be mentioned in addition.

I am not quite as optimistic as Professor Schmitt regarding what he describes as "the tremendous process of structural adjustment" which has taken place in West European agriculture since World War II. Granted there has been a significant level of structural reform during this period. However, the available statistics show that currently some 50 per cent of farms in the European Communities are still less than 20 hectares in area. Between 1960 and 1970 the average increase in farm size was less than 3 hectares. During the same period, the average annual rate of land mobility for farm enlargement was no more than 0.7 per cent, and it is largely the farms over 20 hectares which have increased in size. This structural change has taken place mainly through the normal operation of the land market rather than through the implementation of official reform policies. Furthermore, in the original Community of the Six, young people left the land at an average rate of 9 per cent per year between 1968 and 1973. As a result the farm population is getting progressively older, accentuating further the basic structural problem of agriculture.

In conclusion, I would subscribe to Professor Schmitt's central hypothesis that, subject to quite similar policy objectives, the dimension and structure of farm policy is determined by the specific economic and agricultural conditions prevailing in the country. Obviously, in a period of sustained economic growth the agricultural problem becomes easier to solve in countries where the level of development is such as to facilitate agricultural adjustment. For countries lower down in the development scale, however — and there are still some of these in Western Europe — the solution to the agricultural problem is not all that easy. In such cases, where rural regions still represent important seats of political power, agricultural policy will, at least in the short term, be influenced to some extent by political as opposed to economic considerations. Unfortunately, this is one of the realities of the situation which cannot easily be wished away.

RAPPORTEUR'S REPORT — Hans van Miltenburg, *Netherlands*

The discussions that followed Johnson and Scully's opening statements could be summarised along the following lines. Until recently much emphasis in the analysis of agricultural policy has been given to categorising the goals and the way of financing this policy, rather than on stressing the volume of the expenditure involved. There was a wide-ranging discussion, and numerous valid points were made. For instance, concerning the costs of agricultural policy, attention was given to the relation between price policy and structural reform measures. One discussant argued that the reconstruction of agriculture should be realised on the basis of prices which have to be deduced from the level of the production costs of farm products in the new situation. He also recommended a transitional system of direct income payments. Another considered that support to agricultural policy should be related to social policy. The need of a structural approach to agricultural policy was also

stressed and the view expressed that in the EEC market too much attention is given to the short term.

In the longer run the major problems are not price and income policy, but the problems involved in the competitive demands for land and energy. With high unemployment the real costs of agricultural policy are only slightly lower with direct payments than with price support.

As a consequence of the source of incompatibilities, inconsistencies and non-conformities, which Professor Schmitt summarised in his paper, perhaps more attention should be paid to the process of model-building itself.

The fact that the conceptualisation of models is often done without the involvement of the most important decision-makers and the more established economists frustrates the application of models, even though existing techniques have the potential for progress in agricultural policy. This might be solved to a certain degree by using relatively simple techniques and by paying more attention to the process of model-building as such.

The development of the so-called dynamic approach, as applied to several different fields by the MIT team of J. Forrester and the experience of the Michigan team in Korea and Nigeria, could underline this.