FOOD POLICY

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The Country Notes are :

Food Policy in the Federal Republic of Germany
Canada's Food Strategy
The Agro-Food Plan and the "Quadrifoglio" Act in Italy
Food Policy in Japan
Norwegian Food Policy

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PREFACE

1. The purpose of this report is to consider an integrated approach to policy making in the food-policy sector. It notes that there is a growing awareness in OECD countries of the need to view the whole range of activities relating to food as one system and to recognise the interdependencies of this system with the national and international economies. Thus food policy is viewed as a government strategy that provides a more comprehensive framework in which policy measures can be developed and assessed.

2. The report examines the development of the changes in policy relationships for the food economy(1) in OECD countries. While a number of issues are considered there are three main areas which would seem to be of particular importance: interrelationships among different sectors of the economy, transparency of policies, and the administrative and political framework within which policies are conceived and implemented.

3. Concerning interrelationships among different sectors, policies introduced in the food economy can have effects on other sectors of the economy and, perhaps even more importantly, policies directed primarily at other sectors or at the economy as a whole can have very marked effects on the food economy. The food policy approach is intended to help clarify this aspect of policy-making by considering the overall effects of policies.

4. Transparency is stressed as an important issue in this report, as has been the case with other recent OECD documents, especially in the field of positive adjustment policies.(2) It is suggested that a major principle should be the keeping of access to information about the nature and performance of Government policies as open as possible, especially when particular interest groups are involved. Regular review procedures, preparation of impact statements and thorough public sector accounts are relevant in this regard. It is also emphasized that Governments should aim for implementation of policies by means of measures which are framed in as straightforward

1) For a description of what is meant by "food economy" see paragraphs 1.5 and 2.18 of this report.
2) See in particular: OECD, The Case for Positive Adjustment Policies, Paris, June 1979, page 5, paragraph 8 (iii), pp. 66-67, paragraph 25 and pp. 90-93, paragraphs 37-43.

and simple a manner as possible and which are relatively easy to assess in cost-benefit terms; choice of instruments which have direct rather than indirect effects, for example, is important in this context.

5. Most important of all, in many ways, is the political and administrative framework within which food policy decisions are made and implemented. The food policy approach recognises that there are competing pressures exerted on policy makers and aims, by viewing the food economy as a whole, to avoid the undesirable consequences of a fragmented approach. It is suggested that one means of achieving this aim is to attempt to include a wider range of interests in the food policy making process, perhaps by the establishment of a formal procedure of some kind (as has already been attempted in some countries), together with explicit consideration of the overall costs and benefits of policies to be introduced. It is felt to be particularly important to avoid the introduction of narrow measures catering to special groups (as has all too often occurred in the past); amongst other things, such measures tend to entrench the claims of these special groups and can thereby give rise to a new set of pressures opposed to their removal (including a certain inertia from the bureaucracy itself).

6. In the light of the changing nature of the food economy and attitudes to food, as well as the severe doubts that often exist about the relevance of even the declared objectives of policy, and given the increasing complexity of interrelationships at the sectoral, national and international levels of the food economy, it is considered vital to question traditional approaches to food policy and argue that a re-appraisal, in a wider context, should take place. It is hoped that the issues explored in some detail in this report will assist in the achievement of such a re-appraisal.

I

INTRODUCTION - THE CONCEPT OF FOOD POLICY

1. Basic concepts

1.1 Work on the topics raised in this report on food policy began following a Meeting of the Committee for Agriculture at Ministerial level, on 9th and 10th February, 1978. Several documents prepared in the Secretariat were considered at subsequent Committee discussions. Work on the food economy is being pursued in two parallel activities - one in the area of food policy and the other in augmenting work that began in 1972 on food systems.(1) A report on the impact of multinational enterprises on national scientific and technological capacity within the Directorate for Science, Technology and Industry, considered many aspects of the industry, including its upstream and downstream relationships with agriculture and distribution respectively.

1.2 More and more, OECD countries are coming to view the whole range of activities relating to food as one system. However, at the policy level, the term "food policy" has been given different interpretations reflecting the dominant priorities of governments at different times. Before defining the concept of "food policy" as used in this report, it would be useful to clarify the meaning of various other terms used, and to consider some alternative interpretations of "food policy".

1.3 "Food" is used as a collective term for the end products that consumers buy to eat or drink. "Food" is considered not merely as a collection of inputs to satisfy human nutritional requirements, but

1) In 1972, food systems work began with studies on the structure and efficiency of the milk and beef chains. More recently, it has dealt with issues relating to the efficiency of food chains in general - i.e. price formation and margins for food products. Relevant documents include:

OECD Publications
- Changes in Processing and Distribution of Milk and Milk Products: A Challenge to Farmers
  . Volume 1 - France, the Netherlands, Switzerland (1973)
  . Volume 2 - Denmark, the United Kingdom, the United States, New Zealand; General Report (1974)
- Towards a More Efficient Beef Chain (1977)
- Structure, Performance and Prospects of the Beef Chain (1978)

Document for sale
- OECD Food margins analysis: aims, methods and uses, Paris, 1981.

also as possessing a multidimensional set of attributes satisfying a range of consumer demands; for example, taste, appearance, choice, novelty, convenience, entertainment, status and security.(1)

1.4 By contrast, products typically sold by farmers, like cattle and grain, are classified not as food, but as "commodities" or "industrial inputs", even though they may eventually be components of food. Although in many cases "food" and "commodity" items are physically identical (for example, fresh fruits and vegetables, eggs), they are defined as "commodities" at the farm gate level since they will mostly be transported, packaged and distributed before being bought by final consumers.

1.5 The "food economy" refers to the set of activities and relationships that interact to determine what, how much, by what method and for whom food is produced. The food economy is a sub-set of the overall national and international economy. This set of activities involves a complex set of operations and transformations of inputs which ultimately results in food being presented to consumers. The set of activities incorporated within the food economy may also be referred to as the "food system", "food chain" or "food sector"(2) and are broadly synonymous with each other.(3)

1.6 The concept of "food policy" has varied through time and between countries. Whilst it has rarely, if ever, comprised a sole objective, it has nevertheless reflected the dominant priorities and objectives of governments at various times. The following paragraphs in this chapter are intended to explain the concept of "food policy" as used in this report.

2. Historical overview since World War II

1.7 During World War II and in the years immediately following, a a dominant objective was to increase food supplies in order to achieve adequate levels of nutrition in a situation in which there was considerable pressure on economic resources.(4) In some countries it was not only the overall level of food supplies that was the object of expansion but also an acceptable distribution of those supplies amongst the population.

1) The multidimensional properties of commodities is an important aspect analysed in: K. Lancaster, A New Approach to Consumer Theory, Journal of Political Economy, Volume 74, 1966, pp. 132-157.
2) "Food system", "food chain" or "food sector" may be also termed "agro-food chain" or "agro-food sector".
3) In this report only brief reference is made to fish; whilst fish production and consumption are important in several OECD countries, a detailed examination of the fishing industry would require more consideration than can be attempted here.
4) It should be noted that the history of such policies goes back much earlier than World War II in many countries.

1.8 The expansion of food supplies was achieved by policies encouraging the expansion of domestic production and trade, whilst effective demand was expanded as a result of increases in incomes and, more directly, influenced by a variety of policies such as rationing, welfare programmes and food subsidies. However, during a period of time when exchange rates were fixed by international agreement, the achievement of an improvement in the current account of the balance of payments was frequently an important economic objective. The stimulation of exports and/or the restriction of imports of agricultural commodities was viewed as a means to avoid balance-of-payments deficits. In addition, the experience of war-time shortages emphasized the strategic objective of increasing domestic food supplies in many countries.

1.9 The favourable economic conditions facing OECD countries in the quarter century since World War II resulted in a steady increase in economic growth and standards of living which had important implications for the agricultural sector. The rate of agricultural expansion was facilitated by the application of technological developments largely generated outside the farm sector and by the gradual process of farm restructuring and enlargement. The rate of consumption of agricultural commodities in OECD countries tended to increase relatively slowly as a consequence of the slow rise in population growth, the relatively high per capita levels of food consumption and, in some countries, high price policies for the agricultural sector.

1.10 The resulting "adjustment problem" arose from the pressures on the agricultural sectors in some countries to become smaller in conjunction with the relative immobility of some resources employed in agriculture (because of their low opportunity costs), which in turn led to relatively low incomes compared to other sectors in the economy. Thus there was pressure to raise producer incomes voiced by politically powerful lobbies in some countries, to achieve a smooth adjustment of resources, and to maintain an acceptable rural-urban balance in society.(1) Here, "food policy" became identified with "farm policy". This objective frequently implied an expansion of domestic agriculture principally intended to achieve production level goals, thus contrasting with the earlier expansion in so far as that was principally intended to achieve consumption level goals. In a period of relative abundance of food supplies, the measures invariably involved a combination of export promotion and/or import restriction measures.

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1) The desire to maintain social balance between the urban and rural areas was an important element of farm policy in many countries resulting in special measures to specific types of farming and regions.

1.11 In the 1970s, factors such as the dismantling of the fixed exchange rate system and increased threats of protection created a radically different context for policy by comparison with earlier years. The economic problems that emerged, such as the sharp rise and instability in commodity prices in the early seventies, periodic increases in oil prices, the increase in rates of inflation and unemployment and the general slowdown in economic growth, were associated with a less certain international political climate. These developments placed great strain on international institutions which, as a consequence, were presented with greater challenges than in the more comfortable earlier period. Against this background, "food policy" became more closely identified with "food security" and with macro-economic policy implications of inflation. The political sensitivity of retail price increases and the significant food price component of retail price indices led many governments to attempt to hold down consumer food prices and thus, it was believed, retail prices.(1) Particularly for the food importing countries, increased self-sufficiency was given greater priority whilst, in general, a variety of subsidies and controls were employed with the aim of minimising consumer food price increases.

1.12 More gradually and over a long period of time developments in the food economy have added new dimensions to the concept of "food policy". One important group of developments concerns the use in food processing and manufacturing of a wide range of preserving techniques, additives and packaging materials. This development, together with chemical additives used in plant and livestock production in the agricultural sector, has contributed to increased concern and legislation relating to the safety of foods consumed. An important area of consumer protection legislation has developed in the areas of food labelling, weight control and advertising. The control of the conditions in which food is prepared and sold, in particular in the larger-scale continuous processes (food processing and manufacturing plants, institutional, airline and tourist catering), have added another area to post-war "food policy".

1.13 The general achievement of high standards of living - increased leisure and mobility, rather more sedentary life-styles, and adequate minimum levels of nutritional intake in OECD countries have led to some concern about the relationships between diet and disease. Although the evidence is not conclusive and is widely debated, particularly in medical journals, governments are becoming more sensitive to this aspect of "food policy", particularly if resource costs (and government finance) could be lowered with a healthier population.

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1) The relationship between food prices and inflation is examined, inter alia, in the work on food prices and margins being done within the Directorate for Agriculture, OECD.

Furthermore, technological developments and restructuring of agriculture in the process of economic development has led to more attention to the environmental and ecological aspects of production. The potential conflict between the use of resources to provide agricultural commodities and their use as a source of enjoyment for the urban and tourist population, together with greater concern for animal welfare, are becoming more important issues to an educated and affluent population.

1.14 Within the food economy, developments and relationships between its component parts have changed rapidly, with implications for contractual and bargaining relationships, the level and location of employment of labour and capital and responsiveness to changes in other parts of the system and to outside influences. The issues that arise from a consideration of the changing relationships within the food system and between it and the rest of the economy are fundamental to the wider concept of "food policy".

1.15 The discussion of the concepts of food policy considered above has been within the context of national economic and social policy. However, food policy can also be considered as an element in foreign policy. The export potential and import requirements for basic agricultural commodities of countries within the OECD and the overall net export potential of the OECD countries in major, basic agricultural commodities has resulted in agricultural trade being employed at times to further foreign policy goals. The reconstruction of Europe after the Second World War, food aid (and assistance in agricultural development) and economic sanctions involving restrictions on food exports are prime examples of this link. However, the use of export restrictions in pursuit of foreign policy goals dramatically emphasizes the potential costs involved to the exporting countries, and in particular to their producers.

1.16 The preceding discussion of some interpretations of "food policy" has emphasized the increasingly wide range of issues that can be considered within its ambit. It has also indicated that dominant issues in the past have largely determined the interpretation of food policy, and, by implication, acknowledges that different countries will express different orders of preferences for those dominant issues. Finally, whilst policy influences the economic environment in which consumers and producers make their decisions, changes in that environment will also influence the response of interest groups and policy makers. The process must be considered as a dynamic one in which there is continual interaction and re-action.

3. Food policy approach

1.17 The term "food policy" describes a balanced government strategy regarding the food economy, which takes account of the interrelationships within the food sector and between it and the rest of the national and international economy. In the interpretation given here, there are five major characteristics of the application of this strategy:

- it deals with the food economy as a whole;
- it recognises the systematic nature of the food chain, as well as the growth of links between the food sector and the rest of the national and international economy;
- it acknowledges that the pursuit of alternative goals generally involves trade-offs;
- it explicitly considers diverse interest groups in the policy-making process;
- it accepts that the ordering of priorities within food policy differs between countries and through time.

1.18 One of the most important features of this new understanding of food policy is that the food economy is considered as a whole. The areas it covers include not only agricultural production, but also the input industries supplying agriculture,(1) food processing and manufacturing, distribution and marketing, trade and consumption. This, in turn, implies the involvement of various ministries and departments with responsibilities relating to particular areas of the food system. Matters concerned with agricultural production are the responsibility of ministries or departments of agriculture; responsibilities for consumer protection are frequently split between ministries or departments of agriculture, health and commerce while food exports and imports may be the responsibility of ministries or departments of agriculture, customs, trade and health. In addition, ministries or departments of industry, employment and environment all have some interest in the food economy. Finally ministries or departments of economics and finance are concerned with the economic and financial implications of policies pursued. The fragmentation of responsibilities amongst ministries and departments concerned with the food

1) Although in principle the food economy includes the input industries supplying agriculture, because of the difficulties in obtaining comparative data this report does not go into very much detail on these sectors. Nevertheless, it should be noted that important influences may be exerted on the agricultural sector by industries such as the farm chemicals and machinery industries. It might also be noted that the Ad Hoc Group on Animal Feeding of the Committee for Agriculture is currently examining an extensive study on the animal feeding question.

economy encourages narrow and partial approaches to problems and inconsistencies between, for example, the trade orientated departments and the regulatory organisations or between ministries which side with the producers and those concerned with the consumer and the environment; moreover, there is strong competition for those resources from spending departments concerned only with their own areas of activity. The food policy approach is an attempt to view the food economy as a whole and thus assess the overall implications of policies.

1.19 Recognition of links between the component parts of the food economy leads naturally to recognition of similar links between the food economy and the rest of the national and international economy. Policies concerning the food economy are interwoven with policies relating to employment, regions, research and extension, finance and money, and trade. Consequently, policies relating to the food economy have a wider impact (insofar as they alter the allocation of resources within the economy) whilst, similarly, policies not directed at the food economy have an impact on that system also. Yet frequently it is only the most immediate and primary effects of policies that are considered.

1.20 Food policy involves a broad range of often conflicting goals within the food economy. In addition, as has been described earlier, food policy may be required to contribute to objectives of a macro-economic character outside the food economy. Further, one policy instrument may be asked to achieve a range of goals. Thus, for example, the manipulation of agricultural commodity prices may be employed to simultaneously seek to achieve: (a) adequate incomes for farm producers; (b) a level of domestic production sufficient for supply security; (c) a reasonable level of food prices to consumers; (d) balanced regional development; and (e) optimal resource allocation between different sectors. At the same time, governments may wish the food economy to maintain the quality of the rural environment, contribute to the balance of payments, maintain the health of the population and insure against emergencies through sufficient capacity for production and storage.

1.21 The food policy approach emphasizes both the interdependencies within the food economy and between it and the rest of the economy both at the policy level and in practice. It must therefore reflect the compromises implicit in the simultaneous pursuit of several objectives. The balances that are eventually struck reflect political priorities but judgements involving the effectiveness and the evaluation of the instruments employed require open consideration and debate.

1.22 The food policy approach recognises the competing views and claims imposed on policy-makers. However, by recognising those claims and setting them in the context of the food economy as a whole, some of the less desirable consequences of a fragmented approach may be

avoided. Experience suggests that when administrative responsibilities are fragmented, narrow measures tailored to the demands of particular groups tend to proliferate. One danger of narrow measures is that they tend to persist long after their original purpose has become irrelevant. This is because selective measures tend to entrench the claims of particular interest groups and thereby give rise to new pressures opposing their removal. Such pressures can arise both from the group to whose benefit the measures were first directed, and also from a bureaucratic tendency to maintain the administrative status quo. A further danger is that the unin ended secondary or indirect effects of one policy measure may lead to a new measure intended to compensate el ewhere. Far from restoring a balance, this leads to greater financial cost, more complex administration and increasingly difficult evaluation of cost-effectiveness. Thus the proliferation of individual interventions, each apparently quite minor, leads to a steady increase in interventions and in the number and size of distortions in the allocation of resources. In addition, uncertainty about whether the piece-meal removal of any one of the interacting interventions would lead to a net improvement, can itself hamper reform.

1.23 A number of important international aspects are central to the food policy approach and concern the OECD countries as a group. One well-established set of issues relates to the changing level and location of agricultural and food production both within and outside the OECD area and the implications of this for trade. In this connection it is noted that in most cases trade is in the form of the basic agricultural products, although there is an increasing trend towards trade in products with some degree of elaboration. Another set of issues concerns the instability of agricultural and food supplies and prices. Therefore governments have become increasingly interested in the functioning of international commodity markets and the international implications of domestic food policies. A general response to instability has been the increased levels of self-suffiency of major agricultural commodities which have resulted in severe pressures of oversupply in some markets and changes in the direction of the international allocation of agricultural resources. It must also be remembered that it is not only domestic producers and governments which influence these trade related questions but also that multi-national groups can play an important part in relation to changes in trade flows and the development of trade in agricultural commodities.

1.24 Moreover, the food policy approach also draws attention to the important linkages between the financial markets and the commodity markets and therefore between the various economic policies. The movement towards a system of flexible exchange rates in the presence of a well-integrated international capital market establishes

a direct link between monetary policy, exchange rates and trade. This linkage, together with the instability of monetary policy has been an important source of instability in international commodity markets in the 1970s. The adoption of the food policy approach at both the domestic and international levels may thus contribute to a greater mutual understanding and may highlight new avenues of co-operation.

1.25 The context in which agricultural and food policies are formulated is changing. Many of the changes appear to be pervasive and long-run in nature. These changes are considered in the following chapter, but may be summarised as the creation of an industrialised and commercialised food system, involving groups of specialists, producing a wide range of complex food-stuffs, closely integrated with the rest of the economy and to which agricultural production is contributing a decreasing share of value added. In this context it is sensible to develop an approach to policy formation that takes account not only of the present nature of the food system, but also of the implications of changes which are already occuring. This is an essential element in the food policy approach.

II

THE CHANGING NATURE OF THE FOOD ECONOMY

2.1 As discussed in the preceding chapter it is considered necessary for policy makers to take a broad view of the food system, having in mind the interdependencies of the various elements in that system and its changing nature. These factors are examined in some detail in the following paragraphs.

1. Interpreting data on the food economy

2.2 The food economies in OECD countries are constantly evolving but the available data are not sufficiently detailed to disclose many of the important developments such as the changing functions of the component sectors in the system and the range and quality of the goods produced.

2.3 Procedures for official data collection and classification have not always kept pace with the developments. Figures of annual sales of the food manufacturing sector, for example, may change due to changes in the types of products bought by consumers, or changes in the number or type of functions conducted by the firms or establishments from which statistics are collected.(1) A rise in the value of sales by food manufacturers might be due to a tendency for such businesses to undertake more of their own transport or warehousing than before. Such changes will not always be accompanied by a fundamental change in the food offered to consumers or in the type of processes to which farm products are subjected.

2.4 In the following paragraphs some available data are cited to help quantify a description of the food economies of OECD countries. However, the data should be interpreted as indicating only orders of magnitude and directions of change since in some cases they are not strictly comparable between countries and the comparisons may be

1) The entire output of firms or establishments is usually attributed, in official statistics, to the dominant activity conducted by them. Furthermore, the quality of output can alter without there being a change in its statistical classification.

influenced by the years chosen insofar as there are cyclical and year-to-year fluctuations in the variables.(1)

2. Importance of the food economy

i) Expenditure on food

2.5 Food is a major component of household expenditure in OECD countries. In 1977 expenditure on food, beverages and tobacco represented between one-quarter and one-third of private final consumption expenditure and between 12 and 18 per cent of GDP in many OECD countries, although in some countries the proportion was well outside this range. The average annual compound rate of growth in food product expenditure, measured at constant prices, between 1968 and 1977 was generally between 1.5 and 3.5 per cent in OECD countries, although it lies outside this range in several countries. In all countries the rate of growth of food expenditure over the review period has been less - in some countries significantly so - than the rate of growth of total private final consumers' expenditure (see Table 1). Expenditure on food products declined as a proportion of total expenditure in all OECD countries between 1968 and 1978.(2)

2.6 However, the figures in Table 1 do not include food products consumed in restaurants, cafes and hotels or institutional food consumption. Government expenditure on food products through such activities as school lunch programmes in the United States, Japan and the United Kingdom are also excluded. Because general services provided by governments differ over time and between countries, available statistics on private final consumption expenditure are strictly not comparable. This is significant in that the growth of consumption has probably been greatest in the areas currently excluded. However, over time, the development of "convenience foods" has resulted in a shift in functions away from households towards food businesses. Household functions involved in food preparation are not included in the statistics, whereas business functions are included. Therefore, some of the consumption expenditure on food products represents this transfer of function, as does part of the expenditure on those food products currently excluded from this category.

2.7 The data for private consumption expenditure by households includes indirect taxes and subsidies. As the incidence of taxes (especially on alcoholic beverages and tobacco) and of subsidies

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1) The data, of course, refer to variables and trends in those variables within a context which includes market forces and policy influences; the latter aspect should be particularly noted in, for example, trade data.
2) Reference years "1968" and "1978" in Table 1 are not quite accurate because of data limitations. See note (a) to Table 1.

(especially on food) varied between countries and over time, this must be borne in mind in any comparison of the figures.

ii) Employment

2.8 The food economy is an important source of employment. For OECD countries broadly comparable statistics are available for the agricultural and food, beverage and tobacco manufacturing sectors. (see Table 2.) Although the share of agricultural employment in civilian employment varies considerably between countries, over the period from 1968 to 1978 it fell significantly, as almost one quarter of the agricultural population in 1968 had left agriculture by 1978. In general, the share of employment in the manufacture of food, beverages and tobacco is much smaller than in agriculture; only a slight decline in numbers, employed in the whole OECD area occurred between 1968 and 1978 and, generally, less variation was shown in shares between countries compared to agricultural employment.(1)

2.9 In the United States in 1978, the four major components of the food economy employed 10.8 per cent of the total labour force.(2) Agriculture, forestry and fishing employed 3.4 million (3.3 per cent); processing of food and kindred products employed 1.7 million (1.6 per cent); retail food stores employed 2.1 million (2.0 per cent); and eating and drinking places employed 3.9 million (3.8 per cent). In Japan, approximately 13 million or nearly one-quarter of the total labour force was engaged in the production, processing, wholesaling and retailing of agricultural products and food in 1975. In 1976 the food processing industries accounted for 10.3 per cent of the labour force of manufacturing industry, and food retailers accounted for 36.1 per cent of the total labour force in the retail section.(3) In France, the food system employed 4.2 million, or 19 per cent of the total labour force in 1975, of which agriculture, forestry and fishing accounted for approximately 11 per cent.(4) In Germany, the labour force in agriculture, hunting, forestry and fishing (1.7 million) and in food processing, manufacturing and distribution (including restaurants) (2.3 million) together accounted for 16 per cent of total employed labour in 1976.(5) In the United Kingdom, the food economy, from upstream industries supplying the agricultural sector to the downstream sectors of hotels, restaurants, caterers and public houses employed some 3 million persons in 1978,

1) However, within the OECD area the employment trends varied between decreases of over 14 per cent in employment between 1968 and 1978 in Belgium, the Netherlands, Sweden and Switzerland to increases of over 20 per cent in Greece, Iceland, Spain and Turkey.
2) U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1978.
3) OECD, Food Policy in Japan, Paris 1981.
4) Joseph Klatzmann - L'agriculture française, Paris 1978, p. 52.
5) OECD, Food Policy in the Federal Republic of Germany, Paris, 1981.

Table 1

SHARE OF FOOD IN PRIVATE CONSUMPTION EXPENDITURE IN OECD COUNTRIES 1968 AND 1978

(Percentages)

Country(a)	Food, Beverages and Tobacco as a Proportion of Private Final Consumption Expenditure at Current Prices		Average Annual Growth in Food Expenditure at Constant Prices, (b)(c)	Average Annual Growth in Total Private Final Consumers' Expenditure at Constant Prices (b)(c)
(i)	1968 (ii)	1978 (iii)	(iv)	(v)
Canada	22.5	20.8	3.3(d) (1971)	4.7 (1971)
United States	18.7	16.3	1.3	3.6
Japan (1970 and 1978)	29.8	25.5	3.4(e)	5.6
Australia (1967 and 1977)	30.5	25.3	3.2(d) (1974/75)	4.1 (1974/75)
Austria (1967 and 1977)	36.4	26.8	2.3 (1964)	4.6 (1964)
Belgium	31.7	25.4	1.9 (1975)	4.1 (1975)
Denmark	31.4	27.5	0.6	2.9
Finland (1967 and 1977)	37.2	35.2	1.9	4.0
France (1970 and 1978)	27.1	23.1	2.0	4.7
Germany	32.1	26.5	2.6(f)	4.0
Greece	45.3	41.1	2.9	5.7
Iceland (1967 and 1973)	30.0	28.2	3.6 (1969)	6.5 (1969)
Ireland (1970 and 1976)	46.5	44.8	0.0	2.7
Italy (1970 and 1978)	39.0	34.6	1.6	2.6
Luxembourg (1970 and 1977)	28.1	23.6	1.1	n.a.
Netherlands	31.4	22.1	2.1(g) (1975)	4.2(g) (1975)
Norway	31.8	26.9	2.0 (1975)	3.8 (1975)
Portugal (1967 and 1976)	55.1	30.1	3.6 (1963)	8.1 (1963)
Spain (1970 and 1977)	36.9	33.8	3.9(e)	5.0
Sweden	29.5	26.5	0.8 (1975)	1.8 (1975)
Switzerland	32.4	28.3	2.3	2.7
United Kingdom (1967 and 1977)	34.5	31.9	0.2 (1975)	1.5 (1975)

n.a. Data not available.

a) Data for 1968 and 1978 unless otherwise indicated, calculated in national currencies.
b) Compound percentage growth rate over period shown in columns (ii) and (iii).
c) Constant 1970 prices unless otherwise indicated.
d) Food and non-alcoholic beverages.
e) Food, drink and tobacco.
f) Food and drink.
g) 1969 - 1978.

Source: OECD, National Accounts of OECD Countries 1961 - 1978, Paris 1980; and National Sources.

representing 13 per cent of the total working population. Of that number, less than 0.7 million were directly employed in agriculture.(1)

2.10 Whilst overall employment in the food economy has generally declined over time mostly due to the large exodus from the agricultural sector but also due to concentration and rationalisation in post-farm sectors, the relative weight within the food system of agricultural employment has declined. Predictably the food system tends to be distributed more widely among various regions than many other industries and has generally increased in areas associated with leisure and travel (hotels, restaurants, clubs, airline catering, for example).(2). It is also a major source of female employment.

iii) Trade

2.11 Trade in agricultural and food products, as well as in products of the input supplying industries such as chemicals, machinery, technology and knowledge, is important both within the OECD area and between OECD countries and the rest of the world. The direction, volume and composition of trade is determined by the relative domestic production and consumption capacities and relative production costs, as well as the costs of transport and access to markets. In some countries, the share of agricultural and food exports in total gross exports is 40 to 50 per cent or higher (New Zealand, Iceland, Ireland and Turkey). Some countries have registered a large net export surplus of these products in recent years (United States, Canada, Australia, New Zealand and the Netherlands). Other countries are substantial net importers of these products, such as Japan, Germany Italy and the United Kingdom.

2.12 The relative importance of imports and exports of food products (Table 3) as measured by shares in final household consumption expenditure and in domestic food production varies widely between countries, but the data must be interpreted with great caution. The data refer to 1968 and 1978 and reflect not only the volume but also the prices, expressed in dollars at the respective rates of exchange in these two years. Further, the importance of the United States in world trade in feedstuffs is not shown in a measurement relating trade to domestic food production and consumption, and the large share for food trade in the domestic economy of the Netherlands reflects the importance of entrepôt trade in that country.

2.13 The major share of OECD agricultural and food trade is between Member countries. During the period 1964 - 1966, on average,

1) HMSO, Annual Abstract of Statistics 1980, London, 1980.
2) USDA, ERS, Market Structure of the Food Industries, Market Research Report No. 971, Washington, D.C., 1972, p. 5.

Table 2

EMPLOYMENT IN AGRICULTURE AND IN MANUFACTURE OF FOOD, BEVERAGES AND TOBACCO AS SHARE OF CIVILIAN EMPLOYMENT IN OECD COUNTRIES: 1968 AND 1978

Country(a)	Agricultural Employment(b)/ Civilian Employment		Employment in Manufacture of Food, Beverages and Tobacco(c)/Civilian Employment	
	1968 (Per cent)	1978 (Per cent)	1968 (Per cent)	1978 (Per cent)
Canada	8.6	5.7	2.7	2.0
United States	5.1	3.7	2.4	1.8
Japan	19.8	11.7	1.4	1.2
Australia	8.7	6.4	3.4	2.9
New Zealand	13.5	11.7	5.8 (1971)	5.6
Austria	19.9	10.9	3.0 (1969)	2.7
Belgium	5.5	3.2	3.4	2.5
Denmark	12.7	8.7	3.0	2.9
Finland	25.6	12.3	2.5	2.6
France	15.8	9.2	2.5 (1969)	2.3
Germany	9.9	6.5	3.1	2.8
Greece	44.5	27.3	1.4	1.9 (1978)
Iceland	18.8	13.5	9.1	11.4 (1977)
Ireland	29.4	22.2	4.6 (1971)	5.0 (1977)
Italy	23.0	15.5	2.1	1.9
Luxembourg	10.3	5.7	n.a.	n.a.
Netherlands	7.9	6.2	3.8 (1969)	3.1
Norway	15.4	8.7	3.6	2.9
Portugal	34.1	31.3	1.8	1.7 (1977)
Spain	29.3	20.2	2.7	3.2
Sweden	9.1	6.1	2.6 (1969)	2.1
Switzerland	9.5	7.6	2.1	1.8
Turkey	71.4	60.9	0.8 (1960)	1.0 (1976)
United Kingdom	3.5	2.7	3.1	2.7
OECD TOTAL	15.7 (44.9m)(d)	10.7 (33.9m)(d)	2.3 (6.8m)(d)	2.0 (6.7m)(d)

n.a. Data not available
a) Data for 1968 and 1978 unless otherwise indicated.
b) Employment in Agriculture, Hunting, Forestry and Fishing.
c) Wage earners and salaried employees only.
d) Calculated from employment data for the years and countries indicated.

Source: OECD, Labour Force Statistics, 1967 - 1978, Paris, 1980

57 per cent of imports and 73 per cent of exports of OECD countries of these products were between Member countries. In 1977, the respective shares were 60 and 73 per cent.(1)

2.14 Agricultural and food products with relatively high degrees of processing, including animal feed, accounted for 36 per cent of all food and agricultural imports and 38 per cent of exports in 1977.(2) The rate of increase in trade in these "processed" products did not differ much from that of all products between 1967 and 1977.

2.15 Clearly, in so far as there is increasing competitive pressure in domestic food markets, there will be incentives to increase exports. However, within the agricultural sector, the widespread protection given to domestic producers has resulted in a growth of output of some commodities that have not always been able to find commercial markets. Effective demand outside the OECD area is limited by levels of income in many countries and the availability of foreign exchange.

2.16 Since the early 1970s, the instability of exchange rates and the resultant uncertainty has had some effect on the pattern and volume of trade. Longer term changes in the relative levels of exchange rates also alter the profitability of exporting and importing. Within one economic grouping, the European Economic Community, the operation of "green" rates of exchange for agricultural trade which have, at times, differed from the rates in the rest of the economy have affected trade, particularly with third countries.

2.17 In the post-farm sectors multinational enterprise is an important element in the international food economy. The problems arising from overcapacity in the agricultural sectors in general in the OECD area are in some instances transmitted to the post-farm sectors where the protection afforded to the agricultural sector is extended downstream; it is the policy of many countries to increase the value added of their own agricultural output by escalating the tariffs on processed foods to ensure more domestic processing. Increasing food processing activities in developing countries are more and more an additional element to be taken into account and could add further problems in this situation.

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1) OECD, Annual Review of Agricultural Policies 1979, Paris, 1980.
2) These "processed" products include preserved products, preparations, dairy products (butter and cheese), sugar, chocolate, beverages, tobacco, animal and vegetable oils and fats and feedstuff for animals. They are products which have gone through relatively high degrees of processing, but the selection of the commodities is made arbitrarily.

Table 3

FOOD TRADE AND THE DOMESTIC FOOD SYSTEM(a) IN OECD COUNTRIES 1968 AND 1978

(Percentages)

Country(b)	Relative Importance of Imports(c)		Relative Importance of Exports(d)	
	1968	1978	1968	1978
Canada	10.3	14.8	16.7	20.4
United States	5.8	7.6 (1977)	5.8	10.9 (1977)
Japan	10.2 (1970)	9.2	2.3 (1970)	0.9
Australia	4.2 (1970)	5.4 (1977)	20.2 (1970)	22.6 (1977)
Austria	12.4	16.5 (1977)	4.3	6.0 (1977)
Belgium	27.1	41.6	18.6	33.2
Denmark	17.7	23.0	37.0	40.3
Finland	10.2 (1967)	12.1 (1977)	3.4 (1967)	5.8 (1977)
France	12.8 (1970)	18.0	12.5 (1970)	18.1
Germany	18.3	21.1	3.9	8.9
Greece	7.0	8.4	9.7	12.4
Iceland	19.4	19.9 (1973)	49.0	59.1 (1973)
Ireland	18.3 (1970)	23.7 (1976)	32.9 (1970)	44.1 (1976)
Italy	12.1 (1970)	18.7	5.3 (1970)	8.6
Netherlands	34.8	51.3	44.7	59.9
Norway	17.1	16.7	17.0	16.5
Portugal	10.1	14.1 (1976)	9.8	5.5 (1976)
Spain	8.0	10.0 (1977)	7.4	8.0 (1977)
Sweden	14.3	16.8	3.5	5.1
Switzerland	19.9	17.4	7.8	6.7
United Kingdom	22.0 (1967)	25.3 (1977)	4.8 (1967)	10.5 (1977)

a) The data on trade and domestic consumption used in the calculations of these figures are not directly comparable since they do not take account of different stages of processing and distribution. In addition the agricultural trade figures include feed as well as food. The figures in this Table therefore give only an approximation of the importance of "food" imports. The figures have been calculated from current prices expressed in US dollars at respective rates of exchange for the period indicated.

b) Data for 1968 and 1978 unless otherwise indicated at current prices.

c) The "relative importance of imports" is the ratio of imports of agricultural products (food and feed, SITC 0, 1, 22, 29 and 4) to Private Final Consumption Expenditure on food, beverages and tobacco.

d) The "relative importance of exports" is the ratio of exports of agricultural products (food and feed, SITC 0, 1, 22, 29 and 4) to "domestic food production" this term being taken as Private Final Consumption Expenditure on food, beverages and tobacco, less imports (SITC 0, 1, 22, 29 and 4) plus exports (SITC 0, 1, 22, 29 and 4).

Sources: OECD, National Accounts of OECD Countries 1950 - 1978, Volume I, Paris 1980. OECD National Accounts of OECD Countries 1961 - 1978, Volume II, Paris 1980. OECD, Statistics of Foreign Trade, Series B, Paris 1968 and 1978. National Sources.

3. Changes in the food economy

i) Relative share of sectors in the food economy

2.18 The food economy comprises a chain of participants broadly grouped as suppliers of inputs to the agricultural sector, agricultural producers, processors and manufacturers, distributors (including those engaged in transport, wholesale and retail trade and food services involved in final food preparation) and consumers. It should be noted that although this group identifies the successive links in the food chain, there are some "backward" linkages, for example, in the purchase by farmers of feedstuffs from downstream processors. Further, particularly between agricultural producers and processors, traders are an important group.

2.19 The value of processing, manufacturing and distribution in most OECD countries has tended to grow faster than that of agricultural production. Thus, the share received by agricultural producers from total consumer food expenditure and net value added in the food chain has declined. This tendency can be seen by comparing the importance of agricultural production with that of processing (Table 4). Between 1968 and 1978, the value added in the agricultural sector as a share of GDP has declined in almost all OECD countries, that share varying considerably between countries. In 1978, in 15 of the 22 countries shown, the share was less than 6 per cent. The value added in the manufacture of food, beverages and tobacco has tended to decline as a share of GDP, although in some countries there have been very slight increases over the same period. The range of shares varies much less compared to those in the agricultural sector and was, in general, between 2 and 5 per cent of GDP in 1978.

2.20 Available evidence suggests that the post-farm share of consumers' food expenditure has been rising over time, but that in many countries there has been only a slight upward trend in this share over the last decade. Whilst definitions differ between countries, in the United States, the post-farm share of the retail value of expenditures on domestic food products was 68 per cent in 1978, compared to the decade average of 67 per cent;(1) in Germany the post-farm share in consumer expenditures for food from domestic sources was 53 per cent 1977/78, compared to the average of 52 per cent over the period from 1970/71 to 1977/78;(2) in the United Kingdom, the cost of processing

1) These figures are based on expenditures in foodstores, away-from-home eating places and institutions for domestically produced farm foods and exclude the value of imported foods, seafoods, food furnished to military personnel and on-farm food consumption. USDA/ESCS, Developments in Marketing Spreads for Food Products in 1978, Agricultural Economic Report No. 420, Washington, D.C., 1979.

2) D. Manegold, The Behaviour of Prices and Margins of Selected Food Products in the Federal Republic of Germany, for the Seminar, Trends in Prices and Marketing Margins of Food Products: Economic Analysis and Policy Issues, OECD, Paris 2nd - 4th July, 1979.

Table 4

FOOD PRODUCTION IN THE NATIONAL ECONOMY IN OECD COUNTRIES, 1968 AND 1978

(Percentages)

Country(a)	Agriculture, Hunting and Fishing(b) Value Added as a Proportion of GDP		Manufacture of Food, Beverages and Tobacco: Value Added as a Proportion of GDP	
	1968	1978	1968	1978
Canada	3.4(d)	3.2(d)	3.0(c)	2.5(c)
United States	2.4(d)	2.6(d)	3.1	2.4
Japan	6.1(d) (1970)	4.8(d)	3.8 (1970)	3.3
Australia	8.7(d)	4.9(d) (1976)	n.a.	n.a.
New Zealand	11.7 (1971)	9.1 (1977)	6.7 (1971)	4.3 (1977)
Austria	7.0(d)	4.6(d) (1977)	5.8	4.3 (1977)
Belgium	4.3	2.4	6.2	4.8
Denmark	6.4	5.7 (1974)	4.4	3.7 (1974)
Finland	5.6 (1970)	4.1	3.2 (1970)	3.4
France	6.1 (1970)	4.3 (1977)	4.1 (1970)	4.2 (1977)
Germany	3.8	2.4 (1977)	6.0	4.5 (1976)
Greece	16.4	14.7	3.1	3.2
Italy	8.0 (1970)	7.0	4.6 (1970)	4.1
Luxembourg	3.8 (1970)	2.9 (1977)	3.4 (1970)	3.6 (1977)
Netherlands	6.5 (1969)	4.7 (1976)	5.1 (1965)	4.0 (1976)
Norway	5.3	4.7	3.6	2.0
Portugal	15.9	11.7 (1976)	3.6	3.5 (1976)
Spain	12.9	8.7 (1977)	3.5	2.6 (1977)
Sweden	2.7	2.1	2.6	2.4
Turkey	27.6	23.3	n.a.	n.a.
United Kingdom	2.6(d)	2.3(d)	3.6	3.3
Yugoslavia	17.9(d)	11.2(d)	3.2	3.8 (1973)

n.a. Data not available.

a) Data for 1968 and 1978 unless otherwise indicated, calculated in national currencies at current prices.
b) Agriculture, Hunting and Fishing comprises food and non-food products. Hence the proportions tend to overestimate the importance of farm produced food inputs in the national economy.
c) Manufacture of food, beverages and tobacco at 1971 prices converted to current prices with GDP deflator.
d) Agriculture, Hunting, Fishing and Forestry.

Source: OECD, National Accounts of OECD Countries 1961 - 1978, Paris 1980.

and distributing all food as a proportion of the value of total food expenditure was 52 per cent in 1975/76, the same as the average share for the previous decade;(1) in Japan, the post-farm share of final food consumption was estimated at 63 per cent in 1975 compared to 55 per cent in 1965;(2) in Switzerland, the post-farm share of total consumer expenditure on domestically produced farm food was 53 per cent in 1977, compared to an average share of 52 per cent over the previous decade.(3)(4)

2.21 Care must be exercised in the interpretation of the data. Apart from differences in definition and measurement, there are year to year fluctuations reflecting, in particular, the value of agricultural output. In addition, the farm : post-farm shares of food expenditure vary widely between different foods and the changing composition of consumption will influence the data. For example, the share of post-farm value in cereal and bakery products is much higher than for animal products, so a shift in consumption towards the latter group would tend to lower the overall post-farm share of food consumption expenditure. The relative shares are also influenced, of course, by policies towards the food economy that have an effect on prices at different stages of production, such as agricultural price support measures and price controls on final foods. Finally, the data are compiled by estimating the value of output (i.e. price x quantity) of the component parts of the food system. Competition between firms leading to increased productivity means that a given quantity of food costs less per unit at the post-farm stages of the food economy. Therefore, a lack of increase in the share of post-farm value added may be the result of dynamic, cost-reducing post-farm developments that are greater than in the farm sector.(5)

2.22 Within the total value of the post-farm sector in the United States, in 1977 27 per cent was associated with retailing charges, 26 per cent with processing, 24 per cent with away-from-home eating, 15 per cent with wholesaling and 8 per cent with inter-city transportation. Since 1967, processing charges have grown slower than retailing and other distribution costs. In Japan, between 1965 and

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1) G. Huston, The Behaviour of Prices and Margins of Selected Food Products in the United Kingdom, for the Seminar, ibid.
2) Input-Output Tables for 1975, Ministry of Agriculture, Forestry and Fisheries and ten other Ministries, Japan.
3) R. Senti, The Behaviour of Prices and Margins of Selected Food Products in Switzerland, for the Seminar, ibid.
4) The farm: post-farm shares of expenditure include the revenue accruing to input suppliers to the farm sector and therefore overestimate the direct farm share of that expenditure. The United Kingdom and Japanese data relate to food of both domestic and imported origin.
5) When domestic agricultural and food prices differ from their international opportunity costs as a result of domestic programmes and trade controls, the relative shares are affected.

1975, of total expenditure on final food consumption, the combined share of agricultural and fisheries output declined from 44.9 to 37.0 per cent, processing costs fell from 25.6 to 22.0 per cent, while marketing and distribution costs rose from 22.7 to 26.4 per cent and services by restaurants etc., from 6.8 to 14.6 per cent.(1)

2.23 It is unlikely that the evidence presented here is significantly different for other OECD countries in terms of the direction of the trends. In brief, what it indicates is that an increasing proportion of non-food elements (in the nutritional sense) both of a physical and of a service nature are being consumed in association with a given quantity of food.

ii) Structure of enterprises

2.24 The size of enterprises participating in the food economy and the degree of concentration varies widely both between and within different sectors of the economy and between different countries. A number of variables may be used as alternative yardsticks to measure "size of enterprise", based on inputs employed or output produced, the choice depending on the purpose of the measurement. With regard to the food economy and, in particular, food policy, it is important to know, for example, what are the bargaining positions between the various sectors of the food economy (and between them and the other sectors of the economy), what are the income generating capacities for participants in the various sectors of the food economy and what degree of flexibility (i.e. response to change) do the various sectors of the food economy possess.

2.25 Agricultural production in OECD countries comprises a variety of business units of different sizes in terms of inputs and outputs, reflecting the relative natural endowment (and costs) of resources, the type of agricultural production, historical and legal forms of inheritance and ownership, as well as the political and economic environment in which they function. Generally, as business units, they are becoming fewer and larger, the private, family farm is most typical, employment per unit is small relative to other economic sectors and hired labour constitutes the minor share of the total labour force. Intensive, capital- (rather than land-) based production in poultry, pig and cattle feed-lot production and in horticulture has grown significantly in the past, and whilst accounting for a small part of total production, is likely to continue to grow in the future. With regard to the distribution of total production a smaller proportion of enterprises account for a larger part of that production. Despite the considerable advances in the application of "science" to farming, the family unit still appears in most countries to meet the

1) Ministry of Agriculture, Forestry and Fisheries, Japan, op. cit.

needs of production and the subtelties and vagaries of nature better than a more "industrial" type of organisation.

2.26 The fishing industry is important in several OECD countries and is also dominated by a large (but decreasing) number of small firms, engaged in the last remaining major area of "ranching"; however, production may be increasingly supplemented with the greater certainty provided by fish farming. Broadly speaking the contribution to nutrition of fishing, and, to a much lesser extent, of fish farming, involves quantities which are too small to have a significant influence on food products coming from agriculture. Moreover, the fish market is complex in itself and is linked only somewhat indirectly to the markets for meat. However, when taking a regional approach, or when looking at certain countries like Portugal, Iceland or Japan, there is a need to take fish into account when considering food policies in any detail.

2.27 There is a strong international trade in sea products but it is difficult to do more than get a rough idea of the overall quantity and value of this trade due to the wide ranging differences in the type of fish and fish product being traded and the consequent problems of aggregation. However, it can be said that broadly about half of total fish production is exported and that, so far, this has had only very limited effects on agricultural trade. The new Law of the Sea might bring about some changes but this would happen only slowly and nothing definite can be said at the present time.

2.28 The food processing and manufacturing industries display a wide range of organisational types and sizes. They include the specialised craftsmen-butchers, bakers and confectioners - involved in both small-scale and specialised production and retailing as well as the regional, national and international companies, often producing a wide range of food and non-food products. In this sector both private, co-operative and public forms of ownership exist. The number of units is becoming fewer and larger, and in parts of the food sector in some countries a few firms control a significant share of the market (sugar, beverages, breakfast cereals, bread(1), oils and fats are prominent examples). The difference between OECD countries in the size and concentration of these food firms is quite significant: the largest and most

1) The concentration in the bread industry varies considerably between countries; in the United States and United Kingdom it is heavily concentrated whereas elsewhere, in Continental Europe in particular, it is very fragmented. In Germany, industrial bakeries account for only 20 per cent of total production for example.

concentrated firms are based in the United States and the United Kingdom.(1)

2.29 The data assembled in the report on the Food Industry prepared by the OECD Directorate for Science, Technology and Industry (see page nine) show that in two surveys(2) of the food industry in 1974, about 50 per cent of the largest food firms (by turnover) were based in the United States, and about 20 per cent in the United Kingdom, with other countries accounting for much smaller proportions of the totals. The average size, by employment, of food processing establishments is largest in the United Kingdom, including the average size for establishments employing over 50 employees. In the early 1970s in Germany 4.4 per cent of enterprises (with over 500 employees) employed 46.2 per cent of all employees, in France the figures were 5 and 46 per cent and in the United Kingdom (1968), they were 4.3 and 82.8 per cent respectively.

2.30 Measures of concentration differ between countries and may not give an accurate reflection of the degree of concentration as a result of differences in the groupings employed and the geographical coverage considered. The wider the definitional and geographical grouping, the lower will be the concentration ratio. Nevertheless, available evidence suggests that in the food industry, the overall level of concentration(3) in EEC countries is highest in the United Kingdom and Denmark (between 40 and 50 per cent)(4) followed by Ireland (about 20 per cent) and lowest in Germany, France and Italy (below 10 per cent). In the United States between 1958 and 1972, the share of value added by firms categorised as "ologopolistic" increased from 59 to 69 per cent. In Australia and Canada, the evidence also suggests an oligopolistic structure.

2.31 The food retailing sector has witnessed a rapid shift away from the traditional, labour-using specialist food stores and open-air markets towards the supermarket and general food store and increasingly the intrusion of large food retailers into non-food products and vice-versa. The competitive pressures exerted by the supermarkets have frequently led independent retailers to form various associations

1) Productivity between countries is not possible to compare accurately; in a study comparing the United Kingdom and Germany, increase in total factor productivity from 1954 to 1972 in food, drink and tobacco was 0.4 per cent a year in the United Kingdom, 4.7 per cent a year in Germany: for all manufacturing, the respective figures were 1.5 and 2.6 per cent a year, NEDC/UK: The United Kingdom and West German Manufacturing Industry 1954 - 1972, (1976).
2) One survey was based on the 100 largest agro-food processing firms, the other was based on the 170 largest food, processing, distribution and mass catering firms.
3) The share of the 4 largest firms in the total turnover for each sector, for the late 1960s or early 1970s.
4) More recent data for the United Kingdom provided by the United Kingdom authorities, give a lower ratio of 34 per cent.

to take advantage of large-scale buying and merchandising. In some countries consumers' co-operatives are important in the retailing sector. Again, as with the food processing and manufacturing sectors, local, regional, national and, more recently, international enterprises co-exist in the retail sector. The largest food retailing firms, in terms of turnover, are similar in size to the food processing firms in many OECD countries, and the number of enterprises, (particularly of the smaller units) are falling whilst the average size is increasing, thus raising the overall concentration ratios.(1)

2.32 In the food service sector, the size of establishment varies from the small, specialist to the large, heterogeneous restaurant and canteen and industrial caterer. Located near points of demand rather than sources of supply, producing non-durable products and required to provide a frequent service, they are numerous and widely dispersed according to the particular distribution of population at any point in time. The degree of competitiveness is usually high in this sector.(2) Within this sector it is possible to identify two markets - that for functional and quick food service that is standardized and utilises the newer technologies (microwave ovens; pre-packed, portion-controlled, deep-frozen composite dishes) and that for leisure, entertainment and gastronomy that is more traditional and individual.

2.33 An important sector coming between the sectors described above is that of transport and distribution.(3) The competitive pressures emanating from the retail sector, both in terms of prices of food and of availability and range of foods, have led to significant developments in distribution. This sector comprises all forms of transport, public and private, owned or utilised by food manufacturers and retailers, and incorporates a wide range of sizes of business. The development of large, bulk delivery lorries, utilising mechanical handling equipment, operating to closely integrated schedules has benefitted from, and in some cases has determined, the location, size and concentration of the sectors it links. In many cases the food processors, manufacturers and retailers operate their own transport network in order to maximise the security, frequency and efficiency of their supplies.

2.34 The economic linkages between the sectors in the food economy differ between countries and have changed over time. In general, the agricultural sector tends to buy its inputs from and sell its

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1) In Germany, 3 per cent of food retailers account for two-thirds of sales.
2) In some cases there is a monopoly element, for example in on-train, motorway or airline food service.
3) Distribution in this context is used in a narrower sense than defined in paragraph 2.18. Hence it refers to transportation and stocking of food between the sectors of agriculture, food processing and retailing.

output to markets that consist of larger, more concentrated units than are typical in its own sector. In addition, technological developments outside the agricultural sector (for example in machinery, chemicals, seeds and animal breeds) and developments in food consumption patterns have exerted important influences on the agricultural sector. However, a variety of more formal linkages have developed over time between agriculture and its adjacent sectors. Of those linkages, one of the most established forms, particularly in Western Europe, has been of farmer co-operatives. In some countries, for example in Denmark, there is a very well developed co-operative tradition. Co-operatives enable farmers to jointly purchase (or hire) inputs and to market or further process agricultural output, thus both improving the bargaining situation of farmers and increasing the value added of the agricultural sector. In general, co-operatives are significant where the size of farm business is relatively small and where regional production is relatively homogeneous. A more recent, but important form of linkage has been in the development of production contracts between farmers and food processors. These contracts have been significant for vegetables, fruit, sugar, pigs and poultry. Food processors benefit from the consistency and timing of supplies at agreed prices; farmers benefit from the certainty of a market and, in some cases, the provision of the required variable production inputs. However, the reliance on one market outlet, whilst reducing the farmers' risks may equally reduce their flexibility in decision-making. Apart from these forms of vertical linkages, there are also some cases of food and non-food enterprises (for example, insurance and trust companies) and foreign investment in agricultural production.

2.35 Between the food processing and retailing sectors vertical and horizontal contractual relationships are also significant. Retailers market many food products under their own labels, determining the conditions and quality of the production as well as negotiating favourable price discounts for many food products. Ownership by food companies in non-food areas and vice-versa, as well as vertical integration between food retailers and manufacturers is quite significant in many OECD countries, often involving multinational enterprises.

2.36 These linkages within the food economy may be viewed as the response of the various parts of that economy to their relative bargaining positions. Thus, in some cases, a weak bargaining position has been compensated by, for example, co-operative enterprise whilst in other cases a strong bargaining position has enabled a sector to become a dominant force vis-à-vis its adjacent sectors. Of course, the presence of government intervention, particularly in price policy and other matters, has exercised an important influence on the balance of bargaining in the food economy. A further important aspect of these linkages relates to their effect in transmitting information

(market signals) through the food economy, and determining what, how and where food is produced. More specifically, the range of foods, the degree of specialisation by enterprise and standardization are influenced by the efficiency of the transmission process.

iii) Consumption patterns

2.37 The most important observation regarding the overall level of food consumption per person in OECD countries is that, in general, the average measured daily intake of calories and other nutrients is more than adequate to meet minimum nutritional requirements as estimated, for example, by the United Nations. Further, average calorie intake per head does not vary significantly between OECD countries(1) and any changes that have been taking place have been towards a reduction rather than an increase in calorie intake.

2.38 The long term trend has been, however, for the intake of calories and other nutrients to be increasingly derived from the indirect consumption of vegetable sources through animal products.(2) There are quite significant differences in both the absolute levels of proteins and fats derived from animal and vegetable sources and in their relative shares in total intake between OECD countries. In 1977 only Japan, Italy, Portugal and Turkey (1975), derived the greater share of protein intake per person from vegetable sources. In absolute terms, the level of animal protein intake in Italy was virtually indentical to that of Spain, but the vegetable protein intake was much lower in Spain than in Italy. Not only levels of disposable income per head, but also the local agricultural environment and cultural patterns are determinants of the animal-vegetable consumption patterns.(3)

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1) At present levels of economic development, differences in calorie intake per head in OECD countries are probably less closely related to differences in income than to differences in age structures, work patterns and lifestyles, cultures and body structures. In fact, the cheaper foods include some of the highest calories per unit of expenditure, thus the cost of food is not a constraint in general in the acquisition of calories in OECD countries.
2) Available nutrient data express the disappearance only, and do not take account of waste during handling and preparation of food in the household, what is left over and discharged with garbage nor what is used for pet food. On the other hand, available figures do not include the nutrient intake (notably carbohydrates) from alcohol, the contribution of which to calorie intake is important in some OECD countries. However, the general conclusion of little change in overall per capita calorie intake in OECD countries is probably unchanged even with the allowance for these factors.
3) Fish is a relatively important source of food in the Scandinavian and Mediterranean countries and in Japan - in recent years it has contributed very variable shares to consumption, although the long-run trend appears to indicate a fairly stable intake per head

2.39 A similar pattern emerges with regard to the sources of fats. There has been a long term tendency for the share of calories derived from fats to increase. In Japan, Italy, Portugal and Spain the proportions of fats derived from animal and vegetable sources where similar in 1977; in Turkey, the vegetable share was twice that of the animal share. However noting the developments over the 1970s period in OECD countries, in general it would appear that consumption of fats per head has stabilized, and that there are converging trends in animal vegetable shares - in general countries with low levels of total fat intake (and low animal shares of fat) are increasing fat intake particularly from animal sources, whilst the converse is true of those countries with high levels of total fat intake (and high animal shares of fat).

2.40 With regard to carbohydrates there has been both a decrease in their overall contribution to calorie intake, and a shift within sources of carbohydrates from cereals and starchy roots (especially potatoes) towards sugars and alcohol. However the available data on sugars suggests that whilst there were general increases in the 1950s and 1960s, by 1977 the consumption per head was stabilizing. The range of consumption levels of sugar per head varies significantly between countries, by as much as a factor of 2:1 between the highest and lowest consuming countries.

2.41 The data referred to in this section are crude averages, and conceal ranges of nutrient intakes amongst groups within the population. Although there are groups who are malnourished in the sense of consuming inadequate levels of some nutrients, the focus of attention in OECD countries has been on those groups who are malnourished in the sense of consuming excess levels of certain food, in particular, sugar, alcohol and animal fats, according to some medical evidence.

2.42 Few agricultural commodities can be (or are chosen to be) consumed directly as food. The oldest processes of transformation, through cooking, drying and fermentation, have led, in turn, to the sophisticated application of biochemical and engineering techniques that have increased both the range of food products available and the preservation of the nutrients contained therein. These processes have increasingly passed from the farm and consumer to the food processing and manufacturing sectors, and thus, at the present time only a small fraction of food consumption requirements are satisfied exclusively by agricultural production. In the United States, the share is only some 8 per cent; in Western Europe it is estimated between 20 and 30 per cent. Although the available data cannot adequately identify the degree of processing, there is little doubt that food processing and manufacturing have become more complex over time.

2.43 Developments in food processing and manufacturing, as well as relatively cheaper transportation have vastly increased the range of foods available and consumed by consumers in OECD countries. In the generic sense it is difficult to identify any "new" foods, but in the economic sense such foods as instant coffee, frozen peas or soyabased meat replacement dishes possess a range of attributes that distinguish them within their generic grouping. In addition, existing foods now have a wider geographical and social mobility by virtue of preservation, transportation, movements of people and enterprises and the role of the media within the context of increasing economic development and lower real consumer cost.(1)

2.44 The developments described above mean that an increased share of non-food elements are consumed in food products. In turn, there is increasing consumption of foods that incorporate more services in the final stages of consumption. In the United States, for example, in 1978, 35 per cent of total food expenditures (excluding alcohol) were for away-from-home eating. In 1960, the share was 26 per cent.(2) In Germany, the share of away-from-home expenditure is currently about 20 per cent of total food expenditure; it is forecast that it could reach a share of 40 per cent in 1985.(3) In Japan, in the period since 1970, away-from-home eating has witnessed the fastest growth of all categories of food expenditure, although the share in total food expenditures in 1977 was only 13.0 per cent.(4)

2.45 The away-from-home food expenditure, by incorporating more services than food purchased for home consumption, means that the farm value share is much smaller in the former category. In the United States, in 1978, the share of farm value in away-from-home food expenditures was 19 per cent, compared to 39 per cent for food consumed at home.(5) Available data also indicate important changes in the distribution of expenditure within away-from-home consumption. In the United States traditional restaurants, cafeterias, work canteens, schools and hotels have declined in relative importance (together, their share declined from 60.4 per cent in 1965 to 54.7 per cent in 1975). Refreshment places, including fast-food outlets, have shown a relative increase (from 10.5 to 26.3 per cent over the same period).(6) Sales at fast food outlets increased by 305 per cent, in real terms, over the period 1963 to 1978.(7)

1) The production and consumption of alternative foods (such as soya for meat and alternative sweeteners to sugar) has not only been influenced by trend factors (for example, nutritional preferences) but also by cyclical and policy developments affecting relative prices.
2) USDA, National Food Review, Washington, Autumn 1979.
3) OECD, Food Policy in the Federal Republic of Germany, Paris, 1981
4) OECD, Food Policy in Japan, Paris, 1981.
5) USDA/ESCS, Developments in Marketing Spreads for Food Products in 1978, Report No. 420, Washington 1979.
6) USDA, National Food Review, Washington, January 1978.
7) USDA, National Food Review, Washington, Autumn, 1979.

2.46 In many OECD countries, institutional food service in works canteens, schools and hospitals is important, frequently provided by industrial contract caterers; in the whole OECD area, airline catering has expanded in line with the growth in passenger traffic.

2.47 Finally, in many OECD countries, the consumption of so-called "health foods" - those with few or no chemical additives, little or no extraction of nutrients from the base raw materials, and incorporating, for example, low levels of chlorestorol, saturated fats and sugar has increased over time. In addition, foods produced by food processors and manufacturers for dietary purposes (with added fibre, non-sugar sweeteners, low levels of chlorestorol and fat) have increased the range of foods available, this latter group not necessarily utilising only "natural" agricultural base materials.(1)

4. Sources of change in the food economy

2.48 The development of the food economy, as discussed in the preceding section, has been influenced by broad changes in the social and economic environment and in government policies. Before discussing these factors it may be useful to underline the following general points relating to development of the food economy:

- the food economy has become a smaller part of the overall economy and within the food economy the agricultural sector accounts for an increasingly smaller share of employment and value added;
- as a consequence, the non-food components have increased relative to the food components; in basic nutritional terms there have been only slow increases in per capita intakes, which are unlikely to increase in the future;
- there has been an increasing variety of foods available to OECD consumers and some internationalisation of consumption patterns. However, regional and national "eating patterns" are still important;
- the market structures of the component parts of the food economies include a variety of forms and bargaining situations, varying from the competitive to the monopolistic (including the monopoly elements resulting from government intervention). The general trend has been towards fewer and larger enterprises, with a large share of output accounted for by a few enterprises in some sectors and countries;

1) In many OECD countries, direct farm-to-consumer sales are important for some foods (e.g. fruits, vegetables and eggs) particularly where it is believed that they are cheaper, fresher and more "naturally" produced. However, the concern for food safety has limited this form of marketing for some products (e.g. milk and milk products).

- by virtue of the increasing specialisation within the food economy, the "distance" from raw material producer to consumer has lengthened, "distance" in this context being spatial, temporal, and psychological: there is probably decreasing identity between farmers and food processors (so that food processing and manufacturing are no longer the "national" extension of farming) and greater remoteness between farmers and consumers, although in some countries strong co-operative movements which are involved in later stages of the production chain may counteract this trend;
- food is becoming less a group of commodities consumed for their nutritional attributes: novelty, status, entertainment as well as convenience, reliability and safety have become part of the range of currently required attributes;
- the food economy comprises an inter-related set of activities and is continually in the process of change; the direction of change (but not the magnitude or timing) is similar throughout the OECD area.

2.49 The following section looks at the economic and social factors that influenced the above developments in the past decade and which are likely to be important influences in the future for the food economies in OECD countries. It is noted that in this field at the present time it is not always possible to substantiate explanations with reliable statistics, let alone quantify the inter-relationships involved.

i) Demographic change

- Size and age structure

2.50 Per capita consumption and population in the OECD area grew slowly over the last decade and are forecast to grow more slowly in the coming decades, according to United Nations' estimates. However, the actual and projected rates of population growth vary widely between OECD countries. In general, the countries of Western Europe register the lowest growth rates, followed by North America and with the highest regional growth rates in Oceania. By country, United Nations' projections between 1975 and 2000 vary from a 5 per cent decrease for Germany to a more than 80 per cent increase for Turkey. Therefore, whilst a consequence of the general slowing of population growth will be an increase in the age structure of the population and thus some change in the per capita consumption of calories and of different foods, these effects will not be universal in all OECD countries and, in turn, create different implications and priorities for food policies.

- Mobility, location and lifestyle

2.51 A number of other demographic factors can have some effect on per capita consumption of various foods, although the more significant effects are likely to be in the regional distribution of food consumption. The increasing mobility of the population accounts for the growth of tourist and airline catering; the movement of population away from the large urban centres to sub-urban and semi-rural locations in particular influences the location of retail stores and food service outlets; changes towards a more sedentary lifestyle, particularly in types of work, reduces the per capita consumption of calories. In addition, changes in the racial mix of the population, through migration and differential birth and death rates, affects the consumption of food. It is estimated that in the United States, changes in the overall demographic characteristics(1) in the 1990s will have a negative effect on per capita consumption of milk, pork, fats and oils, vegetables, bakery products, sugar and sweeteners and soft drinks and a positive effect on the per capita consumption of cheese, poultry, fish, eggs, fruit, coffee and tea.(2)

ii) Economic change

2.52 In the quarter century since the end of the Second World War, OECD countries in general experienced a period of almost continuous economic growth. The effects on the food economy have been several. Tracing those effects from the demand side, the increase in real personal disposable income led to changes in the composition of diets, reflected mostly by the switch from vegetable to animal sources of foodstuffs. But, in addition, as incomes have grown the incremental increases in food consumption have grown at a slower rate. In other words, the income elasticity of demand for most foods is relatively low, and in some countries for some foods it is negative. Therefore, within the food economy, the combination of slow growth in per capita demand, coupled with a relatively slow growth in population has resulted in increased pressure on the resources employed in the food economy - increasing the degree of competition. The enterprises in the food economy were thus faced, and continue to be faced, with the alternatives of improving efficiency (and lowering unit costs); diversification of product range and markets; remaining in the food economy and accepting lower returns on resources than elsewhere; transferring resources to activities providing higher

1) Increase in adult population, decrease in household size, decrease in White/Black ratio, increase in proportion of people living in the South and West, increase in sub-urban locations. The projections were made on the basis of the 1965 - 1966 USDA Food Consumption Survey.
2) USDA, National Food Review, Washington, Autumn, 1979.

returns; or persuading governments to subsidise the various parts of the food economy. The various sectors in the food economy have responded in different ways. But if there are too many resources in a sector relative to the demands for them, returns to those resources will be depressed below returns to the use of those resources elsewhere unless the rest of the economy is persuaded to subsidise them in their existing use.

2.53 In virtually all sectors of the food economy these demand pressures have resulted in rationalisation, concentration, oligopolisation and a reduction in the overall level of resource use and the substitution of capital for labour and land. In virtually all sectors there has been diversification of resource use - in agriculture through part-time farming, including for example the use of land for leisure purposes;(1) in food processing and manufacturing through the creation and advertising of new food products, and in expansion into non-food areas; in food retailing in terms of spatial competition and, again, selling of non-food products; in the post-farm sectors generally, in some export of capital and development of multinational enterprises.(2) Whilst the post-farm sectors tend to operate in markets that are more monopolistic than in the farm sector, production contracts with processors, the formation of co-operatives and marketing boards as well as price and takeover guarantees, have restored some of the bargaining powers of the farm sector and enabled it to capture some extra value added.

2.54 The increase in real disposable incomes in OECD countries has increased the range of goods and services available for consumption. This has meant that the cost of time in terms of its alternative uses has risen. Therefore, economies have been made in the uses of time which provide the lowest incremental value. As food is consumed frequently, the household time expenditure in preparation has traditionally been a major part of the total, and the food consumption time frequently a much smaller part. Therefore, the consumption of convenience food and the acquisition of household technology have together greatly reduced the time on household food preparation.(3) The development of convenience foods and household technology has

1) OECD, Part-time Farming in OECD Countries, General Report Paris, 1978.
2) The degree of overseas investment and multinationality of food companies based in OECD countries varies. The United States and United Kingdom are the principal countries of origin of well developed multinational food companies; most of the subsidiaries of OECD based companies are within the OECD area, but, outside the OECD, subsidiaries of United States companies tend to be in Latin America and those of European origin in Africa and Asia.
3) Further, the shift from vegetable to livestock products reduces the "mass" of a quantity of food required to provide a quantum of nutrients. Totally vegetarian (vegan) diets are much more time consuming in actual consumption than omniverious diets.

been both stimulated by and has enabled more women to work for greater proportions of their lives. The pervasive effects of this rise in the value of time is fundamental to explaining changes in the food economy and in population that have both been facilitated by higher economic growth and have contributed to it.(1)

iii) Technological change

2.55 The economic developments indicated in the previous section both generated and were partly generated by technological developments. The competitive environment of the food economy has provided the incentive for the adoption of new technology which, in turn, has generated further competitive pressures throughout the market.

2.56 As in other sectors there have been two general sets of technological developments relevant to the food economies of OECD countries. There are the new technological developments introduced by the leading enterprises in the food economy and there is the diffusion of existing technological developments. However, it should be noted, that the adoption of new technologies is not always necessary for economic survival, which ultimately depends on the relative endowment of resources and consequent relative costs. A labour saving, capital using development may be technically efficient but economically wasteful in a country in which labour is relatively cheap compared to capital.

2.57 There is evidence that throughout the food economy there is potential for the better application of existing technologies, that the rate of new technological development is continuing unabated and that the food economy has, in general, adopted technologies that have been developed outside its own economy. In the agricultural sector there has been rapid technological progress, particularly in the development of new varieties and strains of vegetables and animals and the consequent application of new chemicals and machinery. In addition, developments in the understanding of biological processes have improved animal feeding and vegetable growing processes. The intensification of production and improved farm management have contributed to increased output. The demands of the processing industry for standardized, uniform and timely raw materials have been a major influence in some of these developments. In the future, developments such as hydroponics in vegetable production, fish farming, genetic engineering and the production of single-cell protein could become important in a changing economic and social climate.

1) For more detailed analysis of the issue of the value of time see: G.S. Becker, "A Theory of the Allocation of Time", Economic Journal, Vol. 75, 1965, pp 493 to 517.

2.58 In the food processing and manufacturing sector, the basic aim is to convert raw materials into forms that are safe, palatable and storable over a period of time. The traditional techniques of heating, drying and fermenting, canning (still the most widely used process) and freezing have been supplemented by newer techniques of dehydration, stabilization and separation, involving both chemical and physical methods. In addition, the development of new packaging materials have led inter alia to the production of meal portions that may be sold direct to the consumer for reheating and serving. The industry has also produced foods made from combinations of animal, vegetable and chemical material, such as meat analogues, as well as artificial sweeteners and of new sweeteners based on agricultural raw materials (for example, isoglucose from maize or wheat). The available techniques and materials, together with the competitive economic environment have led to the expansion of novelty and snack foods and the increase in the range of breakfast cereals, based on conventional raw materials. In many cases the processes are automated and continuous, but important constraints operate in the form of legislation relating to additives and composition of foods and the reliability and seasonality of raw materials.

2.59 Technological developments in the dairy sector promise to have far-reaching effects in the future, particularly given the widespread involvement of OECD countries in the dairy chain. The provision of "long-life" (ultra-heat-treated) and reconstitute milk could significantly influence the location of milk production and open trade possibilities that would lead to strong pressures on policy-makers to either encourage or resist these developments.

2.60 In the transport sector containerisation and bulk delivery, mechanical handling, and re-organisation in the location of warehouses and the introduction of computerisation, have led to more integrated delivery systems and economies in stock-holding. In relation to agriculture, for example, the bulk collection of milk for dairies in some countries has made collection from small outlying farms uneconomical and affected the size and location of dairies. In Ireland, for example, there has been a 50 per cent decrease in the number of dairies between 1970 and 1976, and the average intake per dairy has risen almost 300 per cent. In relation to food retailing, delivery schedules are more closely related to the patterns of throughput in stores.

2.61 In the food retailing sector, computerised techniques have reduced the average levels of stocks carried per store and are revolutionising customer checkouts and payments. As labour cost is a high proportion of food retailing and distribution, many of the developments are intended to reduce that part of cost. In turn, the growth of large stores, in relatively uncongested locations near

population centres, has enabled the fuller use of cost-reducing and computerised techniques. In addition, the introduction of shrink-wrapping techniques has resulted in some shift in the sales of fresh foods (for example, meat) from specialised butchers to grocery stores and supermarkets. The potential for economising on routine clerical and other service operations by computerisation is large. Nevertheless, the range of consumer preferences still ensures the survival of small specialised or general stores that provide a particular quality of goods, service, location and opening times.

2.62 Some of the most important technological changes have applied to the food service and household parts of the food economy. Freezers, micro-wave ovens, electric food preparation machinery, dish-washing machinery and timing systems have greatly increased in households over the post-war period, particularly in those countries with the highest incomes. This has facilitated the transfer of food preparation to the food processing and manufacturing sectors, has economised on household space and time and enabled female participation in the labour force to increase. Whilst this technology is energy dependent in production and use, the overall effect has reduced some energy inefficient consumption at the household level.

iv) Nutritional preferences

2.63 The relatively high levels and sources of calorie intake associated with greater affluence, highlighted by some medical evidence and data on morbidity, has increased concern over diet. The range of food products catering to this concern has grown rapidly in recent years, even encroaching on traditional gastronomic areas.(1) In the same way, concern over various food additives has led to both a commercial and a legislative response.

2.64 The factors that account for the changes in time-saving food consumption patterns are not inconsistent with increasing demand for both simpler "health" foods and "quality" at home or away-from-home food consumption. These special categories of demand represent specific preferences within a wide range of food preferences. Further, the marginal valuation relative to cost of "quality" food preparation is increased when it is less frequent, and is also providing an entertainment function.

1) Great caution must be exercised in the interpretation of medical evidence and data on morbidity partly insofar as evidence may be based on animal or small human control groups, partly because of the wide range of human metabolisms and structures, partly because the decrease in deaths from infant and childhood infections and epidemics as well as the average longer life and the decrease in birth rates automatically "increase" the proportion and absolute number of deaths from degenerative diseases and accidents. The medical evidence seems best to support the conclusion that a wide variety of inter-related factors in different countries account for country differences in incidences of disease and death of which diet is only one.

2.65 The relatively smaller influence on overall food consumption in OECD countries from income and population growth will result in a relatively greater influence of preferences for the non-nutritional elements in the future. Therefore, the attention to packaging, novelty, convenience and advertising are likely to exercise an enhanced role in food consumption patterns.

v) Information

2.66 In recent decades the growth of the media, consumer education, temporary and permanent migrations of people and technical conferences and computerisation have resulted in a rapid increase in the range and volume of information available to producers and consumers. This has resulted in some internationalisation of production and consumption in terms of processes, techniques and choices of food available. This trend has been particularly important for soft drinks, fast foods and some convenience foods. The available market for many of these standardized foods has widened, encouraging larger outputs, multinationality, lower costs and some displacement of existing foods and outlets. But, in addition, it has also added to the range of foods available, as the products have become more familiar and acceptable.(1) However, although the lack of available knowledge is rarely a constraint in any OECD country on developments of techniques within the food system, the application of these techniques may be constrained by lack of adequate infrastructure, natural conditions and low incomes in some areas. Finally, the computerisation of information systems has provided, and is likely to provide, increasingly improved control throughout the food chain, with important implications for storage, wastage, scheduling and therefore resource use and costs. It may be noted that modern, precision control systems, while producing a uniform, mass produced product, increase the possibilities of incorporating differences in "secondary characteristics" in products (for example, more or less sweetening).

5. Conclusions

2.67 The preceding review of changes in the food economies logically suggests that attention should be directed towards the future and the policies that will be needed. The obvious starting point is to assume a broad continuation of the developments discussed in this chapter. These overwhelmingly emphasize the continuing shift in the economic relationships within the food economy and between it and the rest of the economy, and the adjustments in resource uses that are the consequences of these shifting relationships. These past

1) Although the introduction of "regional" or "national" foods in other localities may well involve some distortion from the original product.

developments took place within a generally favourable economic context, whereas a future characterised by relatively high energy costs, slower rates of economic growth and increased political and economic uncertainty, would create a fundamentally different policy context.

2.68 The preceding description and analysis of the food economy emphasizes two important points relevant to policy and gives added weight to the broad, food policy approach:

- the interdependencies within the food economy and between it and the rest of the national and international economy mean that policies directed at one part have increasingly important implications elsewhere and can conflict with objectives pursued elsewhere in the food and economic system;
- the changing size and structure of the food economy as a result of technical, economic and social change means that conventional assumptions regarding the problems and their solutions needs to be fundamentally re-examined and evaluated.

III

INTERDEPENDENCE AND POLICY

1. Policy relationships

3.1 The interdependence of the various elements in the food economy, between the food economy and the economy in general, and between national economies in the international context provides a fundamental reason for taking a broad view of policy-making in relation to food. The wide-ranging consequences of policy measures directed at individual components of the food economy require attention. Problems resulting from narrowly focused approaches are underlined by specific examples of conflicts that can arise.

3.2 The developments outlined in the last chapter imply changes in the distribution of income between all the component parts. The actual or expected changes in the costs and benefits as a consequence of changes in the economy lead, in turn, to adjustment responses on the part of the various participants. This is a continuous, dynamic process to which policy must relate. In general, policy alters the distribution of costs and benefits within an economy and between national economies. And, just as there is interdependence between the component parts of the food economy, so also is there interdependence between the various policies and continual adjustment as a response to the effects of those policies.

3.3 The success in achieving policy goals - in the sense that one particular policy is adopted rather than another - depends on a range of factors that differ between countries. It is important to recognise these differences because they throw light on the possibilities of and the limitations to alternative policies and the trade-offs implied in different countries. The following factors are considered important in this context:

- the relative size of economic groups within economy, particularly in terms of numbers of people;
- the organisational efficiency of economic groups in terms of the homogeneity of objectives, intra-group communication, access to policy-makers; and the political importance of economic groups within the given political system;

- the importance and influence of information, particularly generated by the media;
- the role and interests of the administration in the choice of policy;
- the perceived importance of an economic group in terms of national security.

3.4 But, equally of importance in this context, and this has been referred to in Chapter I, a variety of goals exist at any point of time and therefore the choice of policies involves compromises and trade-offs. In addition, whilst policies may be directed towards a particular economic group, there are invariably secondary effects on other groups, which, in turn, may generate counter-acting policies.

2. Policy areas

i) Agricultural policy

3.5 Agricultural policy probably ranges first in the various policy areas that must be considered in the development and implementation of food policy. It is a general term given to a set of policies covering a wide area including, for example, production and price policy, structural policy, agricultural research and education (or extension) policy and marketing policy. Closely related policies, which can be considered within the area of agricultural policy, are rural development policy, environmental policy, taxation, inheritance and farm credit policy and legislation relating to farm labour. The objectives relating to the agricultural sector are frequently many and various and commonly include:

- adequate and stable supply of farm products and food for domestic use (food security);
- increased productivity and efficiency in farm production and marketing;
- adequate incomes to farmers, comparable to non-farm sectors;
- reasonable prices to consumers for food products;
- the maintenance of a satisfactory urban-regional balance and the preservation of the countryside;
- a contribution to macro-economic objectives relating to economic growth, balance of payments, inflation and employment.(1)

3.6 In all OECD countries production and price policies are major areas of agricultural policy in relation to the achievement of

1) For a more detailed discussion of policy objectives in OECD Member countries, see Review of Agricultural Policies, General Survey, OECD, Paris 1975, pp. 19-30.

the objectives listed above. Price support instruments have been the most commonly used and economically important measures, although the actual mechanisms vary by commodity and country.(1) Depending on the mechanisms, the costs of price support have been borne by consumers, taxpayers or, in relation to the domestic economy, by foreigners.

3.7 Structural policy concerns the size and physical conditions of farms; its major aspect lies in resource adjustment in order to improve productivity and efficiency. It focuses on those parts of the farm sector that are most vulnerable to competitive pressures and to which the burdens of adjustment are most severe. Therefore, a variety of incentives have been employed to guide and facilitate resource adjustment in line with stated objectives.

3.8 Agricultural research and education policy is also intended to improve the productivity and efficiency of farming and carries a potentially very high longer-term impact on orientation of output and of structures. Marketing policy is directed towards improving the quality of farm products sold and the marketing channels for farmers: partly this is an information function, partly it involves the establishment of purchasing enterprises, including marketing boards and co-operatives. A variety of other policies are concerned with defining the conditions and environment of farm practice or to give further financial advantages to farmers by way of differential taxation or credit rates.

ii) International dimensions of agricultural policy

3.9 There are important international dimensions to agricultural policy, with significant implications for relations between OECD countries and between them and the rest of the world. These matters are not only affected by Government action but can also be strongly influenced by the activities of international trading companies and multinational corporations.

3.10 OECD Member countries are aiming generally at the expansion of trade to reap greater benefits of international specialisation. At the same time in most countries there is a tendency to increase output and exports, and decrease imports, of both agricultural commodities and processed foods. This is against a background of a relatively slow increase in aggregate food demand in the OECD area,

1) The OECD Review of Agricultural Policies documents and examines policies in OECD countries.

but a growing food deficit in the less developed countries.(1) This deficit, coupled with the broad economic problems of the developing countries leads to a very significant non-commercial trade in food products (food aid etc.) which has an important influence on the agricultural policies of OECD countries. There is also a significant potential demand for food in these countries which would only be realised if economic conditions were improved. The objectives of policy in the developing area include the achievement of food security, the stability of supplies and prices, the contribution of agricultural and food trade to the balance of payments, both by importing and exporting countries and the predictability of import flows to complement variations in domestic supplies. In addition, the wider interests of balanced world development in the long-term and the provision of emergency food supplies in the short-term are important objectives for OECD countries.

3.11 The domestic and international dimensions of agricultural policy incorporate a wide range of objectives and measures and at the interface they inevitably highlight the conflict that arise in attempting to simultaneously achieve these objectives. Trade measures aimed at increasing exports and restricting imports often result in higher domestic prices (which in turn encourage greater output) and may achieve domestic objectives related to farm incomes, the security of supplies and the balance of payments; however, the international allocation of resources and the level and direction of trade may also be distorted. It is also noted that, whilst the increasing of domestic food supplies through policy measures may supplement necessary world stocks available for food aid, the long-term aim of increasing output in developing countries may be impaired.

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1) - The FAO has recently estimated that the net cereal deficits for the main importing developing countries (accounting for 98 per cent of total developing country population excluding China) will rise from an average of 50 million tons in the mid 1970s to 115 million tons in 1990 and 180 million tons by 2000 on the basis of trends: see FAO Agriculture: Toward 2000, Twentieth Session, 10th - 29th November, 1979 Rome C79/24 July 1979.

- For the food deficit members of 36 developing countries, the International Food Policy Research Institute projected that by 1990, on long-term trends, there would be between 57 and 139 million tons deficit in staple food; see IFPRI, Food Needs of Developing Countries: Projections of Production and Consumption to 1990, Research Report No. 3 Washington DC 1977.

- In the report Facing the Future (OECD Paris 1979) OECD has estimated that the potential food supply situation in developing countries up to the year 2000 is unfavourable and that many countries would have to double or even treble grain production by that time to meet demand from domestic resources. Furthermore, even given such increases the projected average food energy intake for the non-OPEC developing market economies is insufficient to ensure adequate nutrition for the poor if wide income disparities persist.

3.12 Further, the international agricultural and food markets constitute a small part of total sources of supplies for most food commodities. Therefore, a relatively small change in the demand from or supply to that market will have a relatively large effect on prices and, in turn, incomes to those supplying the international market. Therefore, if policy isolates domestic agricultural and food markets from the international market and uses the latter as a residual market - supplying to it or demanding from it to achieve domestic objectives - then the achievement of domestic price stability can be at the expense of stability in international markets.(1)

iii) Consumer and social policy

- Consumer cost of food

3.13 All policies have consumer aspects, which have various affects on different groups in society. The issue of the cost of food to all or groups of consumers has been an important aspect of food policy in many countries. During the period in the early 1970s, when world agricultural prices increased rapidly and steeply at a time of high inflation and slowing economic growth, there was general concern amongst consumers regarding the price of food, particularly in relation to the inflationary process.

3.14 Over a longer period, some OECD countries with relatively small agricultural populations and sectors and with an "urban bias" in economic and political structures have tended to favour policies that result in relatively low food costs to consumers.(2) As the cost of food is a larger share of the expenditure of low income groups, policies directed towards lowering the cost of food to these groups have operated in many OECD countries. A variety of instruments have been employed in connection with this aspect of consumer policy. Most basically, policies directed at obtaining supplies of food at lowest prices have been adopted together with non-market price support to farmers in order to avoid a conflict between achieving low prices to consumers and high receipts to farmers. Various forms of deficiency payments, where the difference between lower consumer prices and higher receipts to farmers is paid from taxation, together with a liberal food import policy come within this area. However, whilst deficiency payments support farm output without increasing consumer food prices the financial support to incremental output from taxation can be an implicit export subsidy.

1) See OECD, The Instability of Agricultural Commodity Markets, Paris, 1980.
2) The net agricultural and food exporting countries, where there might be a "rural bias" economically and/or politically, are able to produce relatively cheap agricultural commodities, reflecting their comparative agricultural advantage.

3.15 Consumer subsidies can contribute to nutritional improvement and encourage consumption of certain foods. This aspect has played an important part in the social policy of many OECD countries, particularly in fulfilling the objective of greater equality in standards of living amongst the population. But such programmes often derive some of their political support from producers who are anxious to expand their markets or improve their income.

- Safety of food

3.16 Food safety is a focus of consumer policy that is likely to have an increasingly important effect on the food system. The original concern was to ensure that foods consumed did not pose an immediate health risk, therefore regulations for the conditions in which animals were slaughtered, dairies operated, food was canned and bottled, sold and prepared have a long history in many countries. Many of the technological developments in the food system - refrigeration, heat treatments, vacuum packing, and preservatives, for example, have greatly increased the safety of foods, many of which were adopted for commercial reasons.

3.17 But food production and preparation is becoming more complex. The wide use of ranges of additives - colourings, flavourings, stabilizers, preservatives - often of chemical origin - has led to increasing concern over, in particular, the long-term effect of these additives. Further, the use of chemicals in the agricultural sector, the intensive rearing of some animals, the long periods of preservation of some foods and the specialisation in certain areas of food preparation have added new risks.

3.18 The regulations regarding these areas of safety vary between countries, although there are some developments in international standardization (for example, in the European Economic Community, and Codex Alimentarius commission). But for many processes and additives, the health risks are not yet fully known. And the imposition of regulations on inputs or processes used to convert inputs can have the effect of redefining the industrial process. The change in process may increase the real costs of production and transformation. When, for example, the additive DES (an additive that improved feed conversion rates) was prohibited in cattle feeding rations, feed conversion became less efficient.(1)

1) Concern has been expressed regarding various preservatives (such as nitrites) and sweeteners (saccharin) in food processing, which could similarly lead to changes in production methods, with cost implications.

- Consumer information

3.19 One of the most frequent activities of government in the consumer area has been its efforts to improve consumer information about food with the objective of maintaining and improving consumer sovereignty - the ability of consumers to choose how they spend their incomes. Pressure for government intervention has arisen from a variety of consumer pressure groups, parliamentarians and the media as the proliferation of products and forms being offered has made it more difficult for individual consumers to evaluate the quality, quantity and relative prices of goods on sale.

3.20 Action ranges from nutritional labelling and unit pricing, clear definitions of size, descriptions on packages, and information on available prices, diets and menu planning. Again, this is an area in which computerisation creates great potential benefits in the rapid dissemination of information and calculation.

- Nutritional policy

3.21 An important and growing area of policy is related to diet. In the past, the objective was to enable the population to consume adequate quantities of nutrients. Today, one objective is to reduce the quantities of certain nutrients, which relate in particular to reductions in consumption of foods high in animal fats, sugar and alcohol and increases in consumption of fibre; fruits and vegetable. Many government health departments and much medical opinion concurs in these recommendations, although the quantities indicated vary between these opinions. To some extent, the range of products now available and the recent evidence on food consumption patterns suggests that the information regarding diet is having some positive effect.(1) However, it does draw further attention to the conflict between policies increasing the output of some agricultural commodities and the recommendations for decreasing consumption of these same commodities.

iv) Economic policy

3.22 The food economy is part of the wider national and international economy. Therefore policies of a macro-economic nature have important implications for the food economy and, as has been pointed out, the food economy has been required to meet various macro-economic objectives.

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1) Both Norway and Canada have attempted to incorporate nutritional objectives within their agricultural and food policies; it is too early to establish the effect on the basis of food consumption and pathological data.

- Economic management

3.23 Monetary and fiscal policy are the major policy areas concerned with economic management, intended to achieve a variety of objectives: economic growth, full employment, low inflation and balance of payments equilibrium, with varying degrees of equity between regional and social groups. However, the important linkages, both domestically and internationally between monetary policy, exchange rates and commodity markets in the presence of a well-integrated capital market raises fundamental and significant questions relating to the independence of national policy (and the conventional wisdom regarding the causes and effects of economic phenomena), the stability of policy and markets and the consequences for future international economic relations.

3.24 These relationships have become much clearer in the 1970s during the period associated with flexible exchange rates and the international movement of capital arising from the rise in oil prices. The agricultural and food sectors have been increasingly affected by these changes as they have become more interdependent with the rest of the economy and with economic policies. For example, a change in domestic monetary policy will have an effect on interest rates, the exchange rate and the rate of inflation; a change in the exchange rate can alter the flow of trade; a change in interest rates will affect the profitability of stock-holding which, in turn, has repercussions on the volume of trade. These effects will have most significance on world markets when they emanate from the largest economy and agricultural exporter in the OECD area (i.e. the United States). Therefore, an extra dimension is added to the instability that is a traditional feature of agricultural production and trade.

3.25 Changes in the rate of economic growth and of employment have an important effect on the agricultural sector: the relatively high rates of economic growth and employment opportunities in many OECD countries in the post Second World War period both attracted agricultural labour outflows and, in turn, stimulated further growth. The rate of outmigration from agriculture in recent years has been quite sensitive to the overall level of unemployment. The more integrated the agricultural sector is with the rest of the national and international economies, the more sensitive will it be to such economic changes, compared, for example to a more self-sufficient, subsistence agriculture which, at the cost of low incomes, is more resiliant to external changes.

3.26 Foods generally have low income elasticities of demand, and therefore would be expected to experience a smaller fluctuation in demand with fluctuations in incomes. However, a slowdown in economic growth increases the competitive pressures on the food economy and shifts demands towards lower priced foods. The high personal

investment in houses, cars and other consumer durables in OECD countries, and the expectations of steadily rising standards of living may have a greater impact on the distribution and level of consumer food expenditure in a recessionary economy because it is relatively easier to change food expenditure than investment in consumer durables.

- Industrial policy

3.27 One of the important elements of industrial policy relates to the area of competition. In general, in OECD countries, competition is viewed as a desirable market form. This does not mean that there is unfettered competition; in general, the expression of competitive behaviour is limited.

3.28 The nature and degree of competition is significantly influenced by the operation of price policy in the food economy. Price guarantees for agricultural commodities exercise a determining effect on the profitability of alternative commodities, locations and methods of production as well as marketing strategies and product development; the prices paid by food processlrs will, in turn, influence production decisions in that sector. Clearly, the price paid by processors will be relatively higher or lower depending on whether farm price support is by a market export or deficiency payment system. Price controls directed at the processing and retail sectors will, again, affect the competitive environment.

3.29 With the rapid development of modern retailing methods, in many countries there was a variety of legislation which supported small shopkeepers against competition from larger firms. Such legislation included differences in taxation, mandatory trading hours, resale price maintenance and limits on the expansion of new stores. However, many of these restrictions were later removed(1) in the face of the strong consumer preferences for the development of large stores.

3.30 The United States has long standing statutes prohibiting anti-competitive business combinations and behaviour. These laws have been frequently applied in the food industries and large firms must consider the competitive impacts of their actions before they are taken. During the mid-1960s, consent decrees were obtained by the Federal Trade Commission against several of the leading food chains which severely limited their merger activities. Prior to this, mergers contributed to a significant amount of the growth of the leading food retailing firms.

3.31 In much of Europe, governments and the general public have looked more favourably on recent structural and related developments

1) OECD, Food Marketing and Economic Growth, Paris, 1970.

in the food industry. Some countries have given positive support to structural modernisation. Such plans have had certain features similar to the programmes initiated in the farm sector and have envisaged fewer, but larger and more efficient enterprises in such sectors as slaughtering, dairy processing and food retailing. Incentives given to the enterprises have included credit facilities and tax exemptions. Development of the food industry is often considered essential since it will respond to the new trends in food demand, provide a wider choice, better quality and greater convenience. Nevertheless, for example in the United Kingdom, there have been frequent investigations into pricing practices, particularly of food manufacturers and large retailers (especially in the bread industry, which is highly concentrated); the opinions expressed varied between large-scale enterprises and competition as the preferred means of maintaining low prices.

3.32 Differences in the levels of government assistance offered for individual sectors is another aspect of industrial policy which can have important implications for agriculture and the food economy in general. In Australia, for example, which until recently (like Canada, New Zealand and some other countries) followed a manufacturing policy based on import replacement, agricultural exporters have argued that the preferential treatment offered in that country to certain manufacturers through tariffs and other import restrictions has imposed an indirect tax on farmers and has thereby created inequities and prevented the agricultural sector from contributing as much as it could to national income. Indeed, some observers have argued that on "tariff compensation" grounds, Australian agriculture should receive off-setting subsidies.(1)

3.33 Finally, another area of importance within the context of industrial policy concerns the location of industry. Many food manufacturing establishments are based close to sources of domestic or imported supplies of raw materials and are important sources of employment in some regions. Changes in the structure of food demand and raw material supply will therefore have important implications in various localities.

v) Energy policy

3.34 The issue of energy and energy policy has rapidly increased in importance in the 1970s. The rise in the price of energy has had a number of direct cost effects on the food economy and has started to influence the composition and location of agricultural and food

1) See for example, Stuart Harris "Tariff Compensation: Sufficient Justification for Assistance to Australian Agriculture? Australian Journal of Agricultural Economics, 19(3), December, 1975, pp. 131-145.

production. These changes raise issues of adjustment in the food economy. But, in addition, the possibility of energy production from biomass (for example, maize), has important implications for the type and location of agricultural production and competition between energy and food production. The indirect effects of the rise in energy prices on economic growth will affect the relative demand for foods; an important policy implication follows from the balance of payments effect: the deterioration in OECD current accounts provides an extra incentive to increasing agricultural and food self-sufficiency by reducing imports and increasing exports.

vi) International policy

3.35 Reference has been made on several occasions in this report to the international aspects of the food economy and food policy. There is, however, no in-depth analysis of either international food economy problems and policy issues (e.g. the impact of multinational enterprises in the food sector) or of international food policy. These problems might merit some follow-up analysis at an appropriate time. The use of trade sanctions and preferences in pursuit of foreign policy goals has become a central issue in the 1970s; the discussions and negotiations concerned with international commodity price stabilisation, stocks of staple foods for emergency use and international trade liberalisation (GATT, OECD and United Nations' agencies) have taken on a greater importance in the uncertain economic and political climate of the 1970s. The issues of agricultural trade policy are inextricably linked with the pattern of world agricultural production and levels of nutrition and are a fundamental element in international relations.

vii) Other policies

3.36 Other policies have implications for the food economy; these differ between countries and over time. Employment policy affects all parts of the food system as a result of social security, minimum wage, safety and unemployment legislation; in many countries the preservation of existing employment is an important objective. Transport policy, in so far as it determines the sizes and types of vehicles and legislation regarding vehicle operation, directly affects the cost of food distribution: in many countries a major share of transportation is in connection with the food sector. Education policy, in a wider sense than indicated in the discussion of agricultural policy, has a pervasive influence throughout the economy, both in its role in economic growth (particularly with regard to social mobility) and in its information and expectations - creating functions.

3.37 Finally, as a function of rising standards of living and more information, policies towards the Environment, the urban-rural

balance, tourism, town and country planning take on a relevance that is less a luxury than in the past. These are potentially areas of growing importance: once people consume adequate levels of nutrients, the concern with many of these aspects becomes more important (that is, the net benefits to be derived from improvements in these areas). Thus, for example, the concern with intensive farming methods and the attractiveness of the countryside. However, the implication of fulfilling some of the "ecological" objectives is often to increase the costs of food production. In many countries, there are strict controls on agricultural pollution and the preservation of "areas of natural beauty". With regard to the alternative use of the countryside as a source of food and of leisure, it should be noted that the areas of greatest scenic beauty tend to be those of least agricultural potential, so they provide an extra source of income which could relieve farm policy, to some extent, of expenditure in those cases.

3.38 This review of policies relevant to the food economies in OECD countries has indicated the extensive range of these policies; in fact, no major area of policy is excluded. This is, of course, not unique to the food economy. In addition it has been shown in many instances that the achievement of one objective may be at the expense of the simultaneous achievement of objectives elsewhere: this is, of course, a well-known consequence in an economy in which there are scarce resources relative to the demands on them. But it is not only the range of policies relating to the food economy, nor the multiplicity of objectives within the overall policy context that are the major emphasis of the food policy approach. In the next chapter it is argued that it is desirable that policy-making be more open or transparent, with the intention that this should facilitate the adoption of policies that are more appropriate, consistent and simple. Whilst we are concerned with food policy, this does not mean that these suggestions are any less relevant to policy-making elsewhere in the economy. However, the importance of agriculture and food in the economy, and the extensive government involvement already present in relation to agriculture and food, make it a sector highly suited to this approach.

IV

FOOD POLICY

1. The case for food policy

4.1 Food Policy is a strategy that views the food economy and policies relating to it in an integrated way and in a braod economic and political context. It explicitly recognises that there are choices to be made concerning the use of available resources at any point in time and that there are often secondary effects of policies. It also recognises the need to look further ahead than the immediate future, towards the medium-term, when framing policies and avoid the narrow ad hoc measures aimed mainly at short-term crises that have all too often been introduced in the past. In this final chapter it is argued that on the basis of the discussion in the previous chapters of this report on the issues that are likely to be important in the future, the food policy approach can provide a valuable framework for improved policy-making.

4.2 In chapter II the changing nature of the food economies in OECD countries was described and analysed. Amongst other things, it was noted that in relation to some countries at least, it is important to remember the place of the fishing industry when considering food policy. In general, although there are different levels in the development of the food economies from one country to another, there is increasing interdependence between the component parts in each food economy and between the food economy and the rest of the national and international economy. The OECD food economies have become more industrialised, whilst production methods and consumption patterns have become more international.

4.3 In chapter III the wide range of policies relevant to the food economy were indicated and it was emphasized that the national and international food economies are increasingly sensitive to policies adopted in other spheres of the economy and that if a country pursues policies favouring one sector in the food economy it nearly always imposes costs on other economic sectors in that country and probably in other countries as well.

4.4 The interdependencies within the food economies and in policies are likely to become more significant in the future and it is the purpose of the food policy approach to take account of this broader context for policy-making. It was pointed out in chapter II that farm units tend to buy inputs from the sell output to business units that operate in more concentrated markets, not common in the agricultural sector. Therefore the agricultural sector is vulnerable to shocks and pressures emanating both from the adjacent sectors, from outside the food economy and from the inherent instability of agricultural production itself. This vulnerability of the agricultural sector has, of course, been one of the reasons why governments have intervened in its support and why more voluntary arrangements, such as co-operatives, have been an important market feature in many OECD countries. But it is precisely because the food policy approach takes a broader view that the relative position of agriculture - its problems, potential solutions and adjustment to these problems may be more fully appreciated. As a result the role of policy may be viewed as allowing for the balanced development of the agricultural sector, by compensating for its weakest points, within the framework of market forces.

4.5 In connection with the above point, the food policy approach allows for the balanced consideration of the interests of both producers and consumers domestically and internationally. The most fundamental objective of food policy is the provision of an adequate and nutritious diet for the population. As the food economy becomes more interdependent and the complexity of food production increases (partly due to the growing importance of food processing and manufacturing) the achievement of this objective implies a wide consideration of all of the sectors within the food economy.

4.6 The case for the food policy approach therefore rests on the recognition of these interdependencies, the need for more transparency in the operation of all the sectors of the food economy and the need to balance the many interests that are involved. In the following section the areas and issues of probable importance in the coming decades are discussed with the implication that an appreciation of this broader context can result in better policy.

4.7 Given the wide spectrum of food policy, many aspects still require further consideration and deeper reflection at all levels, both national and international.

2. The emerging policy context

4.8 Whilst many of the policy issues in the food economy that have arisen in the past are likely to continue into the foreseeable future, the order of priorities and the economic and political climate are changing.

i) Economic growth and adjustment

4.9 Throughout this report the adjustment of the various sectors of the food economy to changing pressures has been stressed as a central issue for policy. In the post-war period to the early 1970s, the favourable economic and political situation both facilitated the adjustment process, and the consequential re-allocation of resources was itself beneficial to economic growth. However, the adjustment process has worked differently in the various sectors of the food economy as a result of the differing influence of policy.

4.10 The issue of adjustment has become more important as a result of economic developments in recent years, which have changed relative prices, cost structures and patterns of demand. Adjustment to these changes has been rendered more difficult by slow growth, high unemployment and longer-run trends which have increased fixed costs. At the same time, failure to adjust sacrifices some potential economic growth. In this situation there is a danger of a "vicious circle" of low growth-resistance to adjustment. There are always pressures on Governments to cushion the impact of changes by selective measures but, over time, there is likely to be a deterioration in the trade-off between short-term benefits from such measures and their costs.

4.11 It is often difficult for national governments to shift away from the defensive action of propping-up weak sectors unless overall demand is rising and/or new production prospects are emerging fast enough to provide alternative employment. Equally, however, a shift away from defensive policies is necessary, along with appropriate macro-economic policies, to ensure sustained growth. Typically, therefore, maintaining economic health during periods of generally slack demand or productivity growth involves hard choices. These problems were closely discussed at the recent meeting of the OECD Ministerial Council.(1)

4.12 It is important that these principles relating to positive adjustment should be applied to the food economy, given its vital place in the overall economic situation of Member countries. They underline that Governments, when framing policies for the food economy, should take full account of general economic considerations. However, the structure of the food economy is quite different in the individual OECD Member states and measures concerning the food business strongly depend on the overall orientation of economic policy. It is, therefore, difficult to generalise about the OECD food economy, especially with regard to the economic performance of this sector and its progress in relation to adjustment.

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1) A detailed account of the Ministerial Council's discussions and agreements is given in the OECD Observer, Special Supplement on OECD Ministerial Council, Paris, 3rd - 4th June, 1980.

ii) Trade and the security of supplies

4.13 Both within the OECD area and between OECD countries and the rest of the world the volume of trade in agricultural and food products has increased over time. In general, the expansion of trade is an important objective of the OECD countries. However, the economic problems arising in the 1970s have put strains on the whole international trading system as countries have been concerned to protect domestic output and employment, particularly during a period of economic recession. In the agricultural and food trading area there were additional strains as a result of the inherent uncertainties in agricultural production and the changing balance of supply and demand in world markets which can quickly alter the trading situation facing OECD countries. Recently, the slow growth of food demand, aggravated by the economic recession, has created increased pressure on governments to adopt policies which resist adjustment in their domestic food sectors. What this can mean is that some of the burden of adjustment could be transferred from the domestic economy to the world market.

4.14 The balance of supply and demand in agricultural and food markets in the future is uncertain, and thus also the pressure for protective trade measures. It is noted, however, that most recent projections foresee considerable growth in demand for major food products, in the medium-term at least and that this could make adjustment easier in domestic agricultural and food sectors. It is important to stress, however, that if these projections are not realised, there could be a danger of many countries adopting competitive agricultural policies to improve trade balances that could be collectively incompatible and negative in their impact on economic growth.

4.15 Besides slow growth in food demand, would market instability may be another source of pressure on Governments to adopt negative policies in the food economy.(1) It has been observed in this report that the instability in world agricultural commodity markets can be generated from the instability in monetary policy, transmitted via flexible exchange rates in the presence of a well-integrated capital market. Furthermore, balance of payments problems have arisen as a result of the transfer of financial capital arising from the rise in oil prices. In effect, during the 1970s there has been a marked increase in the level of economic and political uncertainty worldwide. One response by some OECD countries has been to attempt to improve the levels of self-sufficiency in food supplies, in other words to reduce the uncertainty in one important economic sector.

1) See, OECD, The Instability of Agricultural Commodity Markets, Paris, 1980.

4.16 The issues raised above, stemming from these new pressures on Governments to resist the adjustment process, threaten to undermine many of the foundations on which trading relations between OECD countries have been based.

iii) International relations and foreign policy

4.17 The issues discussed above are central to the relations between OECD countries. But there are two other important areas concerning the relations between OECD and non-OECD countries which, in addition, have intra-OECD implications.

4.18 Firstly, the relations between the OECD countries and the developing world include an important food and agricultural component. Reference has been made in this report to the projected growing cereal deficit of the developing countries, and to the objective in many developing countries to expand their processing activities in the food sector. Therefore policies both in the OECD and developing countries towards the food sectors determining price levels and trade flows, and towards multinational enterprise activities, can have significant effects on the international allocation of resources in these sectors. But, in addition, similar policies towards the industrial sectors have important implications for the food sector in that they affect the levels of national income and the capacity for trade: amongst other things, for example, a protectionist policy towards the industrial sector in one country can reduce the ability of other countries to purchase its agricultural exports. One question which arises in this context is the inconsistency which can be recognised in cases where assistance is provided by OECD countries towards development of agriculture in developing countries on the one hand but adequate market access for the agricultural products of those countries is denied on the other hand.

4.19 Secondly, reference has been made in this report to the use of trade measures to pursue foreign policy objectives. On one level it is doubtful whether food trade sanctions (or preferences) can achieve the various intended effects because, firstly, there is rarely a monopoly source of supplies that can be effectively manipulated and, secondly, there is no simple linkage between the change in trade flows and the behaviour of foreigners' policies. But on another - and more fundamental - level such policies are highly disruptive to the integration through trade that has been achieved so far. They add an extra element of uncertainty into an area that is inherently uncertain by virtue of its reliance on national factors and thus reduce confidence in the trading system. In addition to the extra costs of uncertainty, such policies involve more direct costs for the sanctions-imposing countries.

iv) Energy

4.20 The prospect of a relatively slow economic growth in the immediate future and hightened political and economic uncertainty, associated with the problems of world energy supplies, raises issues of crucial importance to OECD countries. The political economy of energy will occupy a dominant position in economic and political developments in the foreseeable future. According to the recent OECD Meeting of Experts (May 1980), the food economy, from the production of fertilizers to the preparation of foodstuffs(1) accounts for between 15 and 20 per cent of the final energy used in OECD countries. There are wide variations, however, in energy requirements according to different food chains and the different sectors within the food economy which, in turn, imply different regional use patterns. Energy price rises raise several important policy issues for the food economy relating to energy conservation and biomass sources of energy supply, the various adjustments implied between sectors of the food economy, regions and countries, and the effects on international trade. Clearly, the pervasiveness of the implications of the energy question throughout the OECD economies adds further emphasis to the necessity of viewing the policy issues within the overall policy context.

v) New technologies

4.21 Technological change is increasingly important in the food economy and promises to exert an even greater impact in the future as a result of computerisation - cheaply and widely available through the micro-processor revolution - and bio-technology. The changes, to which reference has been given in this report, will affect all parts of the food economy. Animal and plant breeding and the control of pests and diseases have been influenced by genetic engineering; the processing and preservation of foods and the production of non-conventional foods have been changed through bio-technology; the control of production processes and the transmission of information have been altered by computerisation. Long-life milk, single-cell and fermented industrial protein, isoglucose and artificial sweeteners are some of the products now available.(2)

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1) Equally, the use of agricultural raw materials for non-food uses should be mentioned, such as manufacture of gasohol and detergents from sugar, as well as energy from biomass.

2) The total food system embraces farm production, processing, transportation, wholesale and retail trades, and final preparation or cooking.

4.22 The application of even the existing technologies have critical implications for food policy. Some of the applications, for example industrial protein and isoglucose have been developed as a response to high meat and sugar prices as a result of the food crisis in the world in the early 1970s and due to domestic price policies. The potential for providing adequate diets worldwide is greatly enhanced by technological developments, but the realisation of that potential will partly depend on policies concerned with relative prices, market access and food regulations (safety and compositional standards). Similarly, within the OECD countries, the development of the new technologies, the location of production and the size of the food economy will be influenced by policy. It is, therefore, both timely and necessary to recognise that food policy must incorporate more and more elements that are less conventionally agricultural.

vi) Nutrition

4.23 In general in OECD countries per capita food consumption is adequate in providing minimum levels of nutrients on a regular basis. However, there are groups which are at risk in this respect, including low income households, one-parent families, elderly people.(1) The slowdown in economic growth and the increasing proportion of elderly people in the population gives added importance to those areas of policy concerned with these groups, involving welfare foods, consumer price subsidies, income assistance and dietary information. One particular problem in this area is to ensure that policy measures are directed to those groups for whom the policy is intended; something which has not always been achieved in the past.

4.24 But equally, with a more affluent and educated population, there has been greater concern in OECD countries with the composition of food and dietary patterns with more and more prepared and artifical foods in the diet leading to a risk of adverse effects on health. There is evidence that the food industry has responded to some extent to these concerns in the range and nature of foods available, but it is likely that nutritional issues will play a greater role in policy measures in the future and there could be a move towards more government activity (mainly through better information, labelling, etc.). Whilst the diversity of opinion and preferences limit the scope and desirability of Government intervention the trends in consumption patterns, and the nutritional advice, could create conflicts with, for example, the existing structure of agriculture and the pattern of agricultural policy in OECD countries.

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1) These groups are not necessarily mutually exclusive.

vii) Efficiency of the food chain

4.25 In the past, much of the consideration of policies relating to the food economy has concentrated on agriculture itself. However, as pointed out in earlier sections of this document, the other sectors of the food chain, such as manufacturing distribution, processing and marketing are increasingly important and Governments are becoming more concerned to encourage improvements in the efficiency of operation of these sectors. Thus an important aspect of the emerging situation in relation to food policies is the need for close consideration of the opportunities for improvements and rationalisation in the components of the food chain downstream from agriculture.

viii) Environment

4.26 There has been some shift away from the traditional emphasis on production of food and towards a concern with the conditions of agricultural and food production and the impact of industrialisation generally on the environment. Again, this has been a feature of an increasingly affluent, mobile and educated population. The welfare of animals in intensive production systems, the use of agricultural chemicals and the aestheticism of farm buildings have been featured in the media and given prominence by various pressure groups. The issue highlights the possible conflict between the industrialisation and productivity of the food economy on the one hand and the value of the countryside for leisure pursuits, the nature of foods produced and the sensibilities of people to animals on the other hand.

3. Guidelines for food policy

4.27 The previous section has illustrated the wide range of issues incorporated within the area of food policy that are likely to be important in the future. But the identification of those issues and the analysis in the earlier chapters illustrates another critical aspect of food policy, namely, that food policy is closely involved with monetary, fiscal, social and foreign policy - as well as the established policies directed towards the food economy. This is the central conclusion from this report, and is a consequence of the growing integration of the food economy into the national and international economy. The implication of this observation for policy-making is that the effects of policies directed towards one sector can have significant secondary effects and that policy-making will be improved if those effects are explicitly recognised. In this section some of the more practical guidelines for food policy and recent measures introduced at government level are discussed.

4.28 In OECD countries the market mechanism is the principal means through which production and consumption decisions are implemented. But, in addition, many policies are introduced which interfere in one way or another with the free operation of the market and the effects of such decisions frequently generate other policy responses. The different interests, views and perceptions of what the political mechanisms should provide give rise to policy conflicts. In meeting the objectives of policy, a variety of instruments and measures may be used, with different secondary effects. Within the overall policy context there is a complex matrix of objectives and instruments. A general problem in all policy-making is that the achievement of one objective can be at the expense of others and that the instruments employed may be inadequate in either number or type to fulfill their intended objectives. The diversity of interests and the interdependencies of the various sectors provide much evidence of this in relation to the food economy.

4.29 There are a variety of approaches that have been tried in various OECD countries as a means of implementing a wider "food policy" approach. The most important of these are explained in more detail in section 4 but they can be said to range from implicit policies and bureaucratic structures to more explicit processes (such as in Norway and Canada). The most difficult process seems to have been to develop a bureaucratic system that can adequately take account of the side range of economic interests involved in the food system while not becoming an institutional obstacle in itself to progress and without excessive cost. Some countries have established single food and agriculture ministries but, in general, these would seem to not be enough in themselves due to the need to take account of a much wider range of interests. It should also be noted, as explained in detail in the following paragraphs, that an important principle is that of public participation and information rather than merely bureaucratic arrangements that do not involve or improve these aspects.

4.30 Therefore, a fundamental requirement in the food policy approach is transparency (particularly in view of the large number of different interest groups that are involved in the food chain). This involves both the openness and ease of public scrutiny of the policy-making processes and the identification of the secondary effects of policies, implicit as well as explicit. It is recognised that policies evolve in a framework in which pressures from interest groups, bureaucrats and politicians all play a part. As the actual processes of decision-making, the reasons and justifications for decisions taken and the evaluation of policies may be obscured from the general public, transparency requires greater public access to

data and information relevant to policy as well as regular reports to parliaments.

4.31 Transparency implies a set of administrative mechanisms for the review of food policies such that they may be evaluated in a broad, economy-wide context and such that major, affected groups are automatically considered before policy measures are implemented. In this way, it may provide a set of checks and balances in the policy-making process by widening the framework in which it occurs. In a market economy, these checks and balances are provided by the choices with which consumers and producers are faced; the transparency principle is to an extent additional to these market mechanisms.

4.32 The transparency of policy-making is further facilitated if the specification of objectives is clear and the mechanisms for implementation of these objectives are as simple and straightforward as possible. The more complex the implementation of policies, the more difficult they will be to comprehend, to scrutinise and evaluate and the more prone they will be to manipulation by those groups enjoying the necessary technical expertise and available time. The purpose of simplification is to democratise this policy-making process.

4.33 But, in addition, a time dimension is involved. There is often a conflict between the timescale necessary to achieve some objectives and the preferred timescale in the domestic political context. This can result in the unsatisfactory situation of either frequent policy changes or in an attempt to compromise by means of a package of piecemeal measures. In other words, an element of uncertainty is added to an area of economic activity (the food economy) that is subject to many inherent uncertainties. However although the political-electroral cycle is a fact, and policies and instruments must be adapted to the prevailing circumstances and government objectives, as far as possible safeguards should be available such that any sudden change of policy does not cause unnecessary extra costs. This may, for example, involve an announcement to the effect that a particular policy or instrument will be valid for at least some specified period of time, a general rule (such as maintaining a particular relationship between world prices and domestic prices for agricultural commodities) or procedures for compensation to aggrieved parties.

4.34 A crucial element is information in order to identify the secondary effects of policies and therefore to be able to evaluate them. The guidelines described above implicitly recognise that the widest possible range of information is preferable, from private as well as national and international sources. Such information would include cost-benefit studies of various policies, the impact of

policies on different groups and sectors in societies, the effects of alternative measures in achieving given objectives and the impact of policies through time. The transparency of the decision-making process and the wider availability of information on the overall effects of policies cannot eliminate the implicit conflicts in policy-making. But it can provide the framework in which more groups are involved in the policy-making process with greater recognition of the distribution of costs and benefits of policies. It is important to remember that there are a number of different interest groups (e.g. processors, consumers, farmers, bureaucrats) who can have varying influences on the food policy making process.

4.35 Throughout this report the importance of transparency in information (and, by implication in decision-making) relating to the food economy has been referred to. Examples of specific areas in which more information on the linkages and effects could improve policy-making are the commodity markets, the international as well as domestic effects of deficiency payments, the locational, product type and production method effects of price and regulation policy in the agricultural and food sector, and the efficiency of alternative measures in achieving farm income objectives.

4. Government measures

4.36 Recent policy statements on agricultural and food matters in OECD countries are recognising the wide range of issues that are now involved. Of particular note has been the attention given to the functioning of commodity markets, nutritional aspects and environmental considerations. However, it is not clear that this recent attention has led to many changes in existing policies for the food system or to the procedures of policy-making. Largely, these newer issues have led to the provision of more information and recommendations from government although there appears to be little link between that advice and the implications for other policies relating to the food economy. Here, we are concerned to illustrate the extent that certain existing government procedures fulfil the guidelines above, particularly in terms of the transparency principle.

4.37 The availability of and accessability to the public of information relevant to decision-making has been provided for in several OECD countries (subject to national security). For example the United States has had a Freedom of Information Act since 1966 (reinforced in 1974 and 1976); Denmark, Norway and Sweden have similar acts. Other countries, while not having formally passed such Acts have adopted a policy of releasing relevant papers to the public (e.g. Canada).

4.38 In the United States there has been increasing discussion in recent years of the broadening of the range of issues and groups concerned with policies for the agricultural and food sector (i.e. not just agricultural production but also fixed prices, welfare programmes much as food stamps, nutrition, environment etc., and not just farmers but also consumers, environmentalists, non-farm rural people, organised labour, etc.). For example, one of the last reports released by the outgoing Carter administration very specifically spelt out goals for food policy.(1) The Annual Food and Agriculture Outlook Conference has included several papers related to food policy, and there is Administration support for the continued integration of agricultural and food policies. In 1978, the Administration directed all Executive Agencies "to adopt procedures to improve existing and future regulations"(2) In relation to agriculture the Department of Agriculture (USDA) has reported on its own procedures, which describes the time-tabling of decisions, the identification of significant problems, the encouragement of public participation, the writing of understandable regulations and the evaluation of policies (impact analysis).(3)

4.39 In Canada a National Food Strategy Conference was held in February 1978 and, as background, discussions were developed in relation to agricultural development, production distribution and retailing, nutrition and health and consumers interests. The strategy took as a fundamental principle the maintenance of viable agriculture and fisheries sectors, recognised the need for research, information development and education and required the accommodation of business apprehensions of about the potential disincentives of growing regulation, the threat of cheap food imports and the apprehensions of other groups over apparent concentration and vertical integration and the lack of important information concerning structural changes.

4.40 A major thrust of these discussions was to develop a more effective "consultative" process when dealing with food related issues. Following the Conference an interdepartmental committee was established to co-ordinate the follow-up and its attention focused mainly on the following areas: improved consultations on a multi-sectoral basis, agricultural development, market development, marketing boards, fisheries development, the performance of the processing, distribution and retailing sectors and the provision of services to them, and the concerns of consumers including nutrition and food safety.

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1) USDA, A Time to Choose: Summary Report on the Structure of Agriculture, Washington DC, January 1981.
2) US Executive Order 12044 of 23rd March, 1978.
3) USDA, Improving USDA Regulations, 1978.

4.41 The main emphasis of this strategy in Canada has, therefore, not so much been one of Government intervention but rather one of broadening the informational basis of debate and decision-making and of broadening the interests actively taken into account in the policy-making process. While this experiment has been an interesting one Canada now seems to be moving a little away from an explicit food policy. This is because the experience of the above procedures has been that having a specific bureaucratic structure can be rather costly and not particularly successful. Although the interdepartmental committee system remains in place the normal current procedure is to consider each issue of food policy on a case by case basis in the most appropriate way.

4.42 In Australia the Industries Assistance Commission was set up in 1974, extending to all industries the system of public inquiry regarding assistance. It assembles information on industry assistance measures, reports on the level and effects of proposed assistance in an economy wide sense and makes public recommendations for consideration by the Government. The experience of the Commission, by offering public participation and accountability in policy-making, has resulted in less power to special interest groups of lobbyists.(1)

4.43 In Norway, in 1975 a Government report was accepted which provided a blueprint for the development of food policy.(2) Goods and objectives were identified for the several aspects of public interest which in Norway comprise the food system: production, processing, distribution and consumption. The report recognised that the food economy is an integral and important part of the general economy, acknowledged the relationship between diet and health and made explicit the relationship between domestic food and nutritional issues and conditions existing beyond Norway's borders. Implementation of policy in these areas has required co-ordination and co-operation, not only among the several Ministries involved but also among special interest groups such as producers, consumers, organised labour and private industry.

4.44 The main objectives of Norwegian food policy have related to adequate food supplies, the use and preservation of the natural resource base, regional development, equality of agricultural incomes with average incomes of industrial workers, reasonable consumer food

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1) For more detail on the nature and operations of the IAC see for example: the Australian Industries Assistance Commission, Discussion paper prepared for the Technical Sub-Group on Transparency of the OECD Special Groups on Positive Adjustment Policies, and R.G. Mauldon, Agricultural Policy Advice and the Public Inquiry Process, The Australian Journal of Agricultural Economics, Volume 19(2), August 1975.

2) Report Number 32 to the Storting: On Norwegian Nutrition and Food Policy, Oslo 1975.

prices, adequate nutrition and a cognisance of international relations. The main method of seeking co-ordination among the various Ministries responsible for achieving these objectives was the creation of an Inter-Ministerial Co-ordinating Body comprised of representatives of concerned Ministries. Given the differing responsibilities and objectives this co-ordination has proved a difficult task and conflicts have occurred.

4.45 In relation to progress in Norway towards achieving the objectives set out in 1975 a new report to the Storting is under preparation at the present time (April 1981) that will summarise and analyse progress. However, at this stage it can be said that overall agricultural production has risen in line with the objective and total food consumption has also moved in line with the objectives, except for fish (decline in consumption) and meat (which has increased more rapidly than projected). In relation to farm incomes, the objective of equality with incomes in the industrial sector seems to have been achieved, although some considerable cost is involved through high farm prices, subsidies etc.

4.46 In Sweden, the National Agricultural Marketing Board is usually commissioned by the Government to submit a proposal concerning the price regulation system after negotiations with farmers and consumers. In determining this proposal, farmers are represented by the Farmers' Negotiating Delegation set up by the Federation of Swedish Farmers (LRF) and consumers by the Consumers Delegation of the National Agricultural Marketing Board. The members of the Consumers Delegation, which is appointed by the Government, include representatives of the major trade unions and the food industry.

4.47 In France, the Government has presented an action programme with regard to the quality of foodstuffs and methods of nutrition (February 1981).

4.48 The main aspects of this programme are:

- Better training and information through the establishment of nutrition studies in schools and in university courses in medicine, agronomy, veterinary science and hotel management and through the creation of a study and information centre on nutrition and food.
- More research in the field of nutrition.
- Stricter toxicological controls prior to the marketing of new products, through the promotion of competent study and research centres and through improved procedures which would result in particular from modernisation of the higher Council of public hygiene in France (le Conseil supérieur d'hygiène publique de France).

- The development and adaptation of controls at different stages of the food production chain.
- Greater consultation between producers (both farmers and manufacturers), consumers and scientists through the creation of a national food council which will be consulted in every instance on the orientations of food policy.

4.49 In Italy, an agro-food plan has been drawn up to cover five years and was adopted under the "Quadrifoglio" Act (27th December, 1977). The agro-food plan is regarded as an essential strategy for economic stabilization, given problems of uneven regional development and slowing down of growth in the non-agricultural sectors. Part of the plan also concerns consumption and it is hoped that this will help lead to a more balanced and less rich diet and help reduce the cost of bad nutritional habits.

4.50 The "Quadrifoglio" Act also established an Interministerial Agricultural and Food Policy Committee (CIPAA) which deals with all agro-food matters provided these are compatible with the objectives defined by the Interministerial Economic Policy Committee (CIPE). The specific objectives of the agro-food plan include targets for annual growth rates in marketable gross agricultural production, the aim of strengthening the processing sector, reduction of daily per capita calorie intake, reduction of the agricultural trade deficit and reduction of the influence of the food component on cost of living increases (i.e. inflation). The assumptions underlying these objectives take account of broad financial and economic implications and Italy's international commitments. It is not yet possible to comment on how successful this approach has been.

4.51 In Japan, food sector policies are particularly important and are mainly the responsibility of the Ministry of Agriculture, Forestry and Fisheries (but several other Ministries have responsibilities for certain specific matters). However, it is possible to state the basic objectives of the Japanese Government in relation to food policy as "supplying better quality food at stable prices". This objective can be broken down into a set of goals encompassing protection of consumer interests (in respect of food safety, quality improvements, and description, consumer information and consumer complaints), ensuring food supplies to consumers, promotion of a diet in harmony with Japanese physical and economic conditions and stabilization of food prices.

4.52 Achievement of these objectives (and others related to environmental problems related to food processing, food safety, health education, energy consumption etc.) will necessitate continued (and perhaps intensified) co-ordination between the various Ministries which are involved, such as Health and Welfare Education, Labour,

the Economic Planning Agency, Agriculture, Forestry and Fisheries, etc.

5.53 In the United Kingdom, there has, in effect, been a food policy for many years, although this may not have been clearly stated in specific terms. In a White Paper published in 1979, for example(1), consideration was given not only to agricultural production but also to shifts in consumer demand for food. On the administrative side, there are in existence a series of advisory/executive committees which include non-Governmental people and which have an interest, in some cases, in food policy (amongst other things). In addition, within the Government machinery there are various liaison structures (such as inter-departmental committees) to deal with matters such as food policy which overlap functions of different arms of Government.

4.54 In other countries, a variety of procedures and rules to safeguard the general interest operate in specific instances. In the European Economic Community, for example, there is a comprehensive set of procedures for consultations between national governments interest groups, the European Economic and Social Committee and the European Parliament in the policy-making process.

4.55 In spite of the measures described above, the transparency of the policy-making process, adequate consideration of the broad secondary effects of policies and the rules to ensure that the general interest is paramount in policies are frequently not adequate in many implementation processes used in OECD countries. A further doubt arises over the international dimension to policies undertaken within the national context. To a limited extent such fora as GATT and OECD allow for rules and proposals relating to this area. However, if, within the national contexts, mechanisms are established such as those indicated in the section on guidelines and safeguards, the international dimension can be accounted for via the domestic parties. For example, if a producing sector wishes to restrict trade by an import duty or non-tariff barrier, then the benefit to that sector is effectively a subsidy paid by the same country's consumers of that product. Frequently, questions of trade restrictions are erroneously justified in terms of one country versus another country: the reality is that there are also important transfers within the country operating trade restrictions.

4.56 It is acknowledged that at present there is little evidence of comprehensive food policies in OECD countries, and to a large extent this is reflected in the relatively few examples of government measures that have been given. It is, further, recognised that

1) Farming and the Nation, Cmnd 7458, HMSO, London 1979.

countries place different stresses on the necessity of adopting the wider food policy approach and, in connection with this observation, different priorities exist within the range of objectives incorporated within food policy, reflecting the variety of interests. Nevertheless, this report has stressed the value of taking the broader view in food policy-making given the greater dependencies that exist within and between OECD food economies and has indicated the possible dangers of "neo-mercantilism" in what may well be a more unstable and uncertain future economic and political climate.

5. Future directions

4.57 This report is an overview of the whole food policy concept; the likely future developments in the food system present a challenge to policy-making that this wider food policy concept is designed to meet. Throughout this report the stress has been on the interdependencies in the food system and in policy, and the importance of improving the policy-making framework in order to satisfy the general interest. In turn, this report implicitly suggests areas where future work relevant to OECD countries might be directed.

4.58 While the future is always uncertain, it may be useful to think about the food policy approach in the event of certain developments. For example, there is some possibility that developments will occur during the 1980s that will put new pressures on the food system. One possibility that is currently being widely predicted is that demand for cereals and animal feedstuffs will rise strongly and put upward pressure on prices. If this should happen then there will be more need than ever to use the food policy approach when framing policies for the food and agriculture sector. That is, the very important consequences for other sectors of the economy, especially in relation to trade, food security and food aid, will need to be taken into account when considering agricultural policies. To put this another way, it is possible that policies framed for the agricultural sector will have relatively more influence on the general economy than in the past.

4.59 Another related possible development would be strong demand for agricultural products for other than traditional uses, such as for energy production. This development, which seems not unlikely, would put substantial pressure on the food system and the food policy approach would be most important to ensure that policies take account of the needs of the different sectors involved.

4.60 The food policy approach is also most important, of course, if the situation in coming years should turn out to be one of surpluses of agricultural products and low or unstable prices. In these circumstances the need for assistance to farmers, control of production

and structural adjustment would require policies that need careful integration with developments in other sectors.

4.61 There are also some more general points that should be made. The availability of information and data is one important area. This is not simply statistical, relating to the food system or cost-benefit studies evaluating policies, but also involves documenting current approaches to food policy implementation in all OECD countries, in order that a comprehensive and on-going body of such information is available. It is therefore, a monitoring exercise.

4.62 Another aspect which may be noted is the link between work in the food policy area and the general OECD work on positive adjustment, particularly in the emphasis of procedures and rules to safeguard the public interest.

4.63 Finally, this report questions assumptions relating to current policies and implicitly argues for a re-assessment of these policies. The overall choice between market and political mechanisms is fundamental to this area. At a more specific level, a re-assessment of the particular instruments employed to achieve particular objectives is implied.