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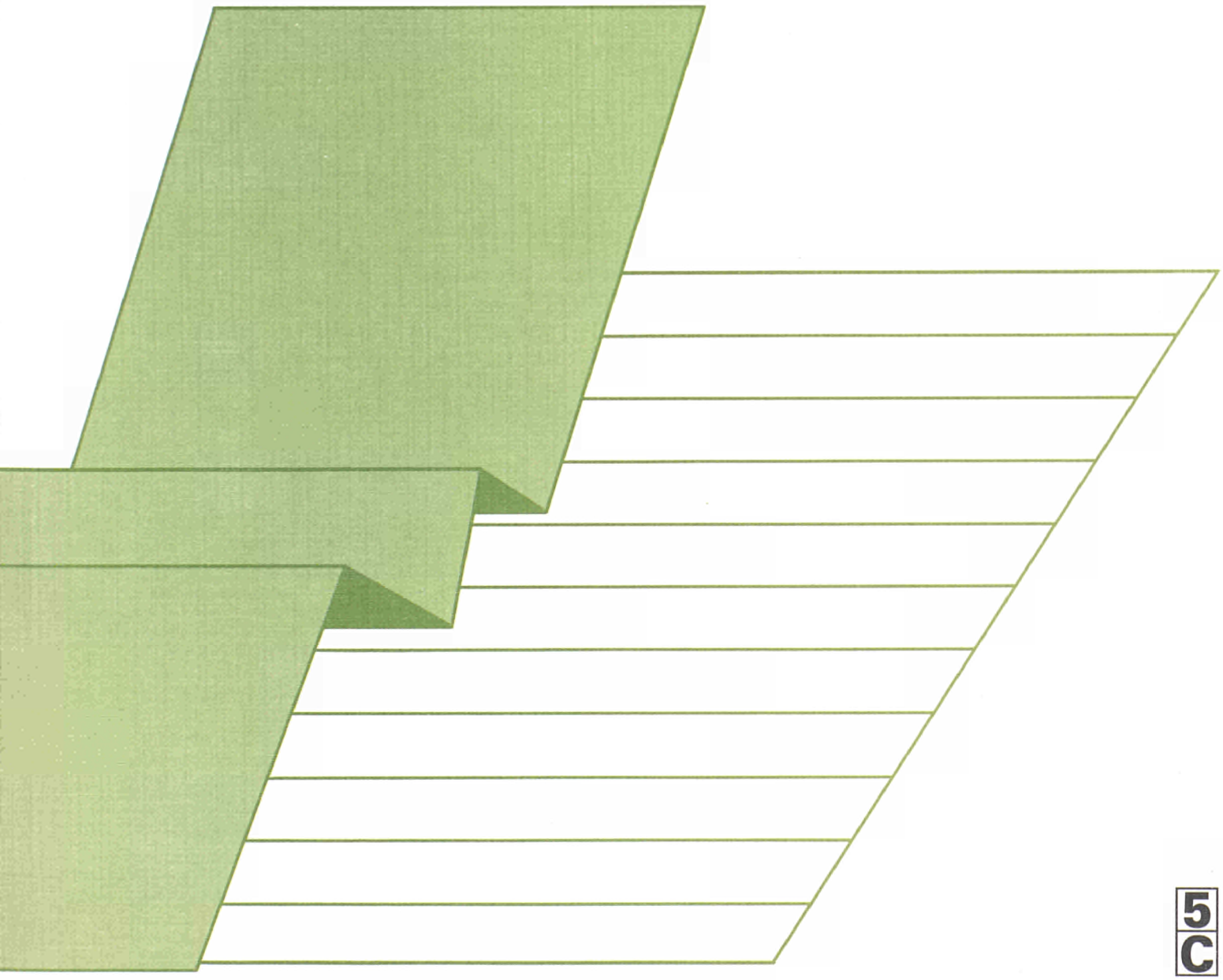
TOTAL INCOME OF AGRICULTURAL HOUSEHOLDS

1992 REPORT



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Y. Franchet
Directeur général

TOTAL INCOME OF AGRICULTURAL HOUSEHOLDS
1992 REPORT

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PART ONE - GENERAL REPORT

Chapter 1 Introduction

1.1 Background to the project, including guidelines and objectives

1.1.1 It is becoming increasingly important to have available harmonized information on the income situation of agricultural households in Member States for the purpose of guiding Community agricultural and other policies. Central to the Common Agricultural Policy (CAP) is the objective of ensuring a fair standard of living for the agricultural community, reflecting Article 39 of the Treaty of Rome. Though alternatives are possible, the conventional way to approach this issue has been through the measurement and monitoring of farmers' incomes.

1.1.2 With the success of the CAP in achieving, even over-achieving, most of its other aims, the concern with incomes has come to dominate agricultural policymaking. Reform of the CAP is interpreted largely in terms of finding ways in which the income objective can be more effectively approached without at the same time encouraging further volumes of production. Changes to make farming more subject to market conditions are being accompanied by the introduction of new forms of assistance which aim to be neutral in their effect on production decisions at the farm level, at least as far as agricultural commodities which are in surplus are concerned. Some measures have been introduced for social reasons, some for environmental reasons, and some are to mitigate the impact of reductions in product prices which for so long have been supported by CAP commodity regimes. Examples include pre-pensions, transitional income aids, the encouragement of farm diversification, payments for extensification and for the provision of environmental services. Though few if any are completely neutral, since even transitional income aids are likely to retain temporarily in agriculture some resources which might otherwise have left, they are far less distorting than the market interventions which they are intended partly to replace.

1.1.3 As CAP reform proceeds it is to be expected that the activities of farmers and their families will broaden to include new forms of enterprise which are not strictly agricultural, as defined by the conventional industrial classification. These include the results of diversification (such as tourism, food processing and other small and medium enterprises). The greater amount of spending committed to the Community's Structural Funds for the support of rural areas (projected to double from 1989 to 1993) can be expected to increase the diversity of economic activities taking place there, with implications for the income and employment patterns of farmers and their families. Already about one third of Community farmers have some other gainful activity, typically off the farm, and pluriactivity is likely to be found on a rising share of holdings. In addition to earnings from gainful occupations, members of agricultural households may have income from property and, as citizens, are likely to be in receipt of welfare transfers and other payments.

1.1.4 An income measure which aims to be a proxy for the standard of living of

the agricultural community, though clearly not an exact one, will need to cover income from all sources, not just that from farming activity. It will focus on the household or family unit rather than the farmer (agricultural holder) alone. And because not all the income is available to be spent, due allowance has to be made for taxation, social contributions and other transfers. The name given to the residual income is (Net) Disposable Income, and this forms a widely accepted concept for assessing the income situation of households.

1.1.5 At present, most of the support of agricultural commodity prices is given irrespective of the type of farmer, his farm tenure, size of business, family involvement and so on. Support is primarily given in proportion to the level of output, with only small additional assistance for small farms; under such a system, the bigger farms receive most of the benefits. Whether or not the farmer, or a member of his household, has other sources of income in addition to the farm is not taken into account. However, there is a general movement towards greater selectivity in targeting aid[1]. Under the reform of the structural funds, some of the new forms of assistance have various tests of eligibility associated with them, the aim being to target aid to farmers who are mainly engaged in agriculture or who gain most of their income from farming. Thus information on the total income of farmers and on income composition, which would enable the balance between the various components to be assessed, can play an increasing role in shaping policy and in monitoring its performance.

1.1.6 Anticipating the emerging need for additional income information, in 1985 Eurostat proposed the Total Income of Agricultural Households (TIAH) project. This was supported by the European Community's Agricultural Statistics Committee (ASC). The intention was that a measure of farmers' aggregate disposable income should be developed which could eventually stand alongside existing indicators relating to the income of the agricultural branch of the economy in each Member State (calculated by Eurostat and described below), thereby enhancing the range of information available to policy decisionmakers. Though summary statistics on disposable income cannot, of course, reveal the distribution of incomes among agricultural households, estimates at Member State level were seen as representing a necessary and important advance in knowledge. However, such measures of aggregate disposable income marked a substantial departure in thinking from that usually adopted within the CAP and, indeed, within most national agricultural policies. Consequently the information systems in most Member States were not capable of enabling estimates to be made. It was recognised that substantial effort would be required to achieve results on a comparable basis for each country, and that this would take several years.

1.1.7 The ASC gave some general guidelines which subsequently have proved

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[1]For example, see Commission of the EC (1991) The Development and Future of the Common Agricultural Policy: Proposals of the Commission. COM(91) 258 final, also published as Green Europe 2/91. A summary of changes concerning structural support appears in Commission of the EC (1990) Agriculture and the Reform of the Structural Funds. Green Europe 5/90.

very important. These were that: the definition of agricultural households should be in line with the methodology of the European System of Integrated Economic Accounts (ESA), the Community's national accounting system to which all Member States subscribe; the coverage should be restricted to the households of holders (ie farmers, and not households of hired workers); and that provision should be made for comparison with non-agricultural occupation groups. The Working Party on the Economic Accounts for Agriculture was requested to look into the technical problems of the project; this it has continued to do, making regular reports back to the ASC.

1.1.8 A first main task was to *collect and collate information which already existed* in Member States on the total income situation of agricultural households and on the data sources which might be used to estimate aggregate disposable income. The alternative methods by which estimates might be constructed were also to be explored; these were expected to vary between countries according to the available data sources. The outcome of this first task was summarized in Eurostat's first report on the TIAH project, published in 1988.[2] This systematically listed and analysed all relevant information known to national statistical authorities. Two Member States (Germany and France) were found to already publish estimates of disposable income for agricultural households (and for other socio-professional groups) as part of their system of national accounts. The Netherlands had an experimental calculation for a single year. Other countries varied widely in the basic data which might be used for such a calculation.

1.1.9 All EC countries carry out annual farm accounts surveys. One reason for doing so is the commitment to contribute harmonized data to the Community's Farm Accountancy Data Network (FADN, also known by its French acronym RICA), whose results are published regularly by the Commission[3]. But, at present, for a variety of reasons farm accounts surveys in most Member States do not provide information on the overall income situation of agricultural households. There is no requirement in FADN to cover information on income from outside the farm business, though this may be collected for national purposes. Most surveys do not gather such data; the exceptions were found to be Germany, Netherlands, Denmark and the United Kingdom. Moreover, the administrative requirement that these surveys should achieve a high coverage of national production in an economic way means that they leave out many small farms which fall below some imposed minimum size threshold and which contribute relatively little to total

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[2]Hill, Berkeley (1988) Total Incomes of Agricultural Households: Existing information and proposed methodology for a harmonized aggregate indicator. Theme 5 Series D. Luxembourg: Eurostat. 133 pages. Versions in French and German were published in 1989.

[3]The basic harmonized methodology is described in: Commission of the European Communities (1989) Farm Accountancy Data Network: An A to Z of methodology. Document series. FADN results are published regularly in a separate report, the latest being Commission of the European Communities (1990) Economic Results of Agricultural Holdings No 5 - 1986/87: Farm Accountancy Data Network. Document series. Summary results also appear in the annual Commission of the European Communities Agricultural Situation in the Community reports.

output. Nevertheless, these small farms may be the main source of livelihood or occupation of their holders and may form a substantial element of "the farm income problem".

1.1.10 All countries also undertake family (household) budget surveys, co-ordinated by Eurostat. The methodology is not yet completely harmonized, but similar approaches are taken by Member States[4]. However, these surveys are often widely spaced in time (with intervals of up to seven years between surveys), are frequently weak in terms of income data, especially from self-employment (independent activity) since they were not set up with income measurement primarily in mind (their focus was expenditure information needed to construct indices), and the number of cases formed by farmer households is, at least in the northern countries, often too small to be statistically reliable.

1.1.11 Among the other sources encountered, taxation records are hampered by incomplete coverage and, in many Member States, by regimes that levy tax at a flat rate per hectare (the "forfait" approach) rather than on actual income. Information sources found in a few countries included social security schemes and occasional surveys. Perhaps not unexpectedly, some Member States had several good data sources while others had none.

1.1.12 The second main task at the outset of the TIAH project was to *develop an agreed methodology* by which harmonized estimates could be generated for each Member State. After much discussion of details within the Working Party, this was published in 1990.[5] One vital step in this process was the clarification of the aims of the TIAH project. In the Manual of Methodology the specific objectives are set out. They are to generate an aggregate income measure, using a harmonized methodology, in order to:

(i) monitor the year-to-year changes in the total income of agricultural households at aggregate level in Member States;

(ii) monitor the changing composition of income, especially income from the agricultural holding and from other gainful activities, from property and from welfare transfers;

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[4]The basic methodology for the latest round of surveys is described in Eurostat (1990) Family Budgets: Methodological handbook. Theme 3 Series D. Results are given in Eurostat (1990) Family Budgets: Comparative tables. However only the methodologies and results for six countries (Germany, Spain, France, Ireland, Italy, Netherlands) are covered. For a more complete account reference should be made to the earlier round of surveys, made in about 1979, and reported in Eurostat (1985) Family Budgets: Comparative Tables - Federal Republic of Germany, France, Italy, United Kingdom and Eurostat (1986) Family Budgets: Comparative Tables - Netherlands, Belgium, Ireland, Denmark, Greece, Spain. Both Theme 3 Series C. Luxembourg: EEC.

[5]Eurostat (1990) Manual on the Total Income of Agricultural Households. Theme 5 Series E. Luxembourg: Eurostat.

(iii) enable comparisons to be made in the development of total incomes of agricultural households per unit (household, household member, consumer unit) with those of other socio-professional groups.

and (iv) enable comparisons to be made between the absolute incomes of farmers and other socio-professional groups, on a per unit basis.

1.1.13 The main features of the harmonized methodology are outlined in Chapter 2. It consists of a set of target definitions and procedures to be adopted in the estimation of the aggregate disposable incomes of agricultural households. The methodology's development drew on the conceptual framework of national accounting, the experience of countries (both inside and outside the EC) which already construct estimates, the view of the policy sections of the Commission (in particular the Directorate-General for Agriculture DGVI), and the opinions of the relevant national statistical authorities in Member States. For the latter purpose bilateral discussions were held between Eurostat (with an external expert) and each Member State.

1.1.14 The diversity of data sources found in Member States has meant that, though target definitions are harmonized, the way in which estimates are actually created must be allowed to vary from country to country. Three broad approaches to making estimates were proposed, representing points on a spectrum between macroeconomic and microeconomic methodology. The first was to base the estimation firmly within national accounting. The second was to gross-up results from surveys. The third was to take the estimates of income from farming from the aggregate branch Economic Accounts for Agriculture (described below) and to use other sources (often survey data) for the other components of disposable income. These approaches are described in more detail later.

1.2 The relationship between the existing Eurostat Indicators and the new measure of net disposable income

1.2.1 Eurostat already calculates a range of indicators (Indicators 1, 2 and 3, and a Cash Flow) which are published in its annual *Agricultural Income* report and in other Community documents, notable the *Agricultural Situation in the Community* series. These Indicators play an important role in the monitoring of the CAP, and they will continue to do so long after the TIAH project reaches maturity. In order to understand the methodology adopted by the TIAH project and to put the initial results in context, it is necessary to outline briefly the nature of the existing indicators.

1.2.2 Indicators 1, 2 and 3 (and Cash Flow) are derived from the aggregate Economic Accounts for Agriculture (EAA), drawn up by Eurostat for each Member State and for the EC as a whole using data supplied by national statistical authorities. A detailed harmonized methodology has been developed for these

agricultural accounts[6]. This set of EAAs in turn forms part of the harmonized national accounts system for the EC, the European System of Integrated Economic Accounts (ESA)[7]. Within the ESA two types of account are of direct relevance to the discussion here - the Production Account and the Distribution of Income Account. The existing Indicators are derived from the first of these; the TIAH methodology belongs to the second.

1.2.3 The *Production Account* shows, on one side, the value of output from productive activity (good and services) and, on the other, intermediate consumption (goods and services bought); the balancing item is Gross Value Added (GVA) at market prices. After allowing for capital consumption and adjusting for subsidies and taxes linked to production, this becomes Net Value Added (NVA) at factor cost. In the ESA the overall Account is subdivided into parts, and the account of the agricultural branch of the economy is shown separately. As a historically important part of the economy of most countries, especially so in the period during and following the Second World War when the conceptual framework of the present accounting system took shape, this singling out of agriculture reflects the way that national accounting developed.

1.2.4 The "branch agriculture" is defined in terms of economic activities to produce commodities deemed to be agricultural and which are listed in the EAA Manual. Consequently, the production by farms of non-agricultural commodities (such as tourism services, food processing and environmental services) is excluded when measuring the activities of the agricultural branch. In practical terms the building up of an account for agricultural production is relatively straightforward; its products are fairly easily distinguished from those of other industries, and the inputs it buys from other industries can also be measured, though not so easily. The values of outputs and inputs are, in the main, taken from information on physical levels of production and input use which are multiplied by average prices of outputs and inputs. This enables an account to be drawn up rapidly, so that, typically, estimates for the calendar year are available to Eurostat within a few weeks of its closing date, with early estimates possible before the year end (as soon as the main harvest period is over). The balancing item in the agricultural production account (agriculture' s Net Value Added) can be interpreted as the increase in value which agricultural production gives to the goods and services (including capital goods) which farming buys from other parts of the economy.

1.2.5 A "branch" is described in the ESA Manual as consisting of "groups of units of homogeneous production which are exclusively engaged in the production of a single product or groups of products". In essence, the account for the agricultural branch of the economy relates to the total production of agricultural goods

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[6]Eurostat (1987) *Manual on Economic Accounts for Agriculture and Forestry*. Theme 5 Series E. Luxembourg: Eurostat. A new English version has been published in 1992.

[7]Eurostat (1979) *European System of Integrated Economic Accounts*. Second edition. Luxembourg: Eurostat.

irrespective of the nature of the operators who produce them. Though most of this productive activity takes place on what would be generally accepted as being commercial farms, some takes place on units which are not primarily farms (for example, religious institutions) and some takes place in domestic gardens. No notice is taken of the nature of the operator, so the agricultural branch's production is the combination of output from full-time farmers, part-time farmers with various degrees of off-farm activity, from corporate bodies and so on.

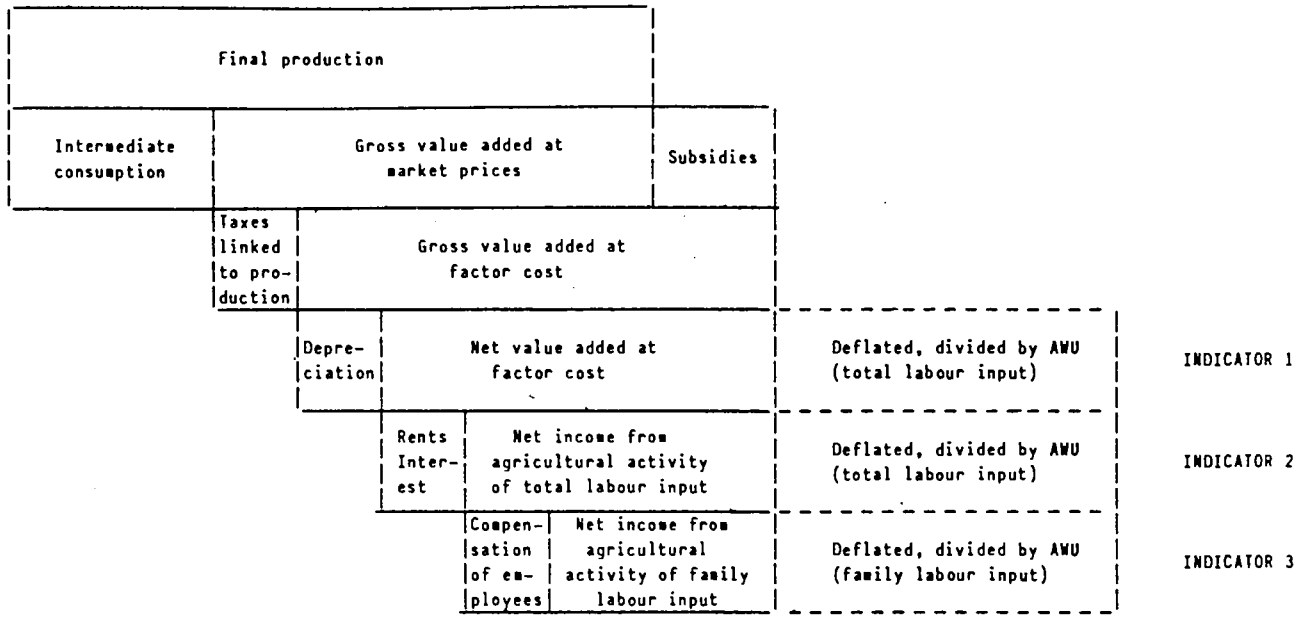
1.2.6 Agriculture's Net Value Added at factor cost forms the reward to all the fixed factors used in agricultural production - all land, all capital and all labour (both independent and dependent). From the Net Value Added of agricultural productive activity it is possible to deduct the costs of interest payments and rents paid to leave a residual which forms the reward to a bundle of resources consisting of the total labour input employed and the capital and land owned by producers. A further deduction of the cost of hired labour leaves a residual which is the reward to the unpaid (family) labour (including its managerial activities) and the owned land and capital. From these three Eurostat calculates its Indicators 1, 2 and 3 by deflating and dividing by the number of Annual Work Units (AWUs), in the manner shown in Figure 1.

1.2.7 These Indicators have been interpreted, for policy purposes, as showing the changing income situation of agriculture. Of the three, Indicator 1 (Real NVA/AWU) has been given the greatest weight because it pre-dated the others and is considered statistically the most reliable. However, it is self-evident that, except in very particular circumstances, they represent concepts which are far removed from the personal income of farmers and their households; this applies especially to Indicator 1. They ignore any income accruing to farmers and their families from sources other than farming. They make no allowance for the amounts taken by taxation and other forms of involuntary spending. It would be wrong therefore to interpret them as representing personal incomes; even using them as proxies for *developments* in personal incomes over time is suspect, since the existence of multiple income sources means that it is possible for the total income situation of farmers and their households to be improving while their incomes from farming are declining, and vice versa. Nevertheless these Indicators *have* been misused as a proxy for personal incomes, probably because they were published and no other measure nearer the policy needs was available.

1.2.8 The other account within the national accounting framework of the EC which is relevant to income measurement in the present context is the *Distribution of Income Account*. Again this can be subdivided, and for this purpose the economy may be split into sectors, of which households form one, on the basis of their principal function. An account can be drawn up for the household sector of the economy. On one side of the account are the resources flowing towards households (from independent and dependent activity, from property income, welfare transfers and so on) and on the other are the payments which households are required to make (including taxes and social security contributions). The residual in this account after all claims on income are met is Net Disposable Income.

Figure 1: Income indicators relating to the agriculture production branch of the economy, as calculated by Eurostat.

Note: computation or estimation of these income indicators is based on the Economic Accounts for Agriculture, which form part of the European System of Integrated Economic Accounts. Indicators are worked out as shown below.



1.2.9 Within the ESA there is provision for further sub-division of households into socio-professional groups. However, this has not as yet been developed. As will be seen later, even the methodology by which households should be classified into occupation groups has not been worked out. Nevertheless, it would seem quite likely that the households of farmers would be adopted as one distinct socio-professional group. The TIAH project is, in effect, an anticipation of a more general disaggregation of the household sector account. The aim is to construct a Distribution of Income Account for agricultural households, and for other groups where possible, in order to estimate aggregate Net Disposable Income for these households. Disposable income of the agricultural household sub-sector can be expressed per household, per household member and per consumer unit. Comparisons can be drawn with the income situation of all households and, where the data exist, with other socio-professional groups. The account also allows the composition and distribution of agricultural households' total income to be examined.

1.2.10 In this sector approach some conceptual problems (described later) are encountered because agricultural households are engaged both in consumption activities and in production, no separation being made in the ESA Distribution of Income Account. On a more practical level, it is important to realise that in the Distribution of Income Account all the resources flowing towards agricultural households are covered, not just the rewards from farming. Drawing up the Account presents more data problems than are encountered in the EAA, since the economic activities of agricultural households extend well beyond the limits of agricultural production. Many of the aggregate data sources (such as the interest paid or received by banks) will not keep separate records on the amounts paid or received from agricultural households; a variety of sources have to be used to build up the income picture. Some of the practical difficulties and the ways in which they may be overcome are described in Chapter 2.

1.2.11 When considering estimates of Net Disposable Income, key issues which must be borne in mind are the definition of income used, the definition of a household, and the definition of what constitutes an agricultural household. Each is dealt with separately below. For specific policy purposes it may be desirable to use other concepts than these. This is completely in line with the principle that the choice of any indicator will depend on the problem in hand. It is therefore not reasonable to criticise the TIAH methodology because it does not fit a particular situation. Some of the concepts used in the TIAH project also differ in detail from those used in microeconomic data sources on farmers' incomes, such as family budget surveys and farm accounts surveys. Given sufficiently detailed basic data, it should be possible to construct estimates using a range of definitions of income, household and agricultural household. However, there was virtue in starting the project using a clearly-understood set of definitions within the framework of national accounts. This formed the approach of the Working Party. An important stage was marked by the publication of the agreed TIAH methodology in 1990, though this is not the end of the development process; modifications and refinements are under frequent consideration by the Working Party.

1.3 Progress so far

1.3.1 During 1990 and 1991 Member States have been applying the TIAH methodology and have supplied Eurostat with their results. At the outset countries differed greatly in the extent of the existing information and available data sources. Therefore some had to take far larger steps in order to make estimates than others. Consequently, Member States are at various stages of development. At one extreme, Germany can supply estimates of household disposable income for agricultural households and other selected socio-professional groups on an annual basis from 1972. At the other, some Member States can only provide figures for a single year for agricultural households, with no comparisons possible. A variety of approaches to estimation have been used; all countries, however, have operated within the harmonized methodology.

1.3.2 The years for which results are now (beginning of 1992) available are as follows:

Belgium	1987 (only partial information)
Denmark	1985, 1988 (some data also for 1983, 1984, 1986, 1987)
Germany	1972 to 1989, for each year.
Greece	1982 to 1988 for each year
Spain	1981 base year, extrapolation for 1982 - 1986
France	1984 to 1989 (non-comparable estimates for 1970, 1979, 1983 are also available from national accounts)
Ireland	1987
Italy	1984 to 1988 for each year
Luxembourg	1989
Netherlands	1981, 1983, 1985 (from socio-economic accounts) 1985/86/87 (from farm accounts survey)
Portugal	1980 to 1990 in two series (1980-85 and 1986-90)
United Kingdom	1980 to 1986 (and partial information for 1987) 1988/9 (from farm accounts)

1.3.3 It is evident that, even when commitments under the TIAH project are fully met, countries will differ in the extent of their available information, both in terms of the time periods covered and the degree of detail. At present harmonization of initial results is far from complete. Nevertheless, in recognition of the considerable interest in the total income situation of farmers and their households, there is sufficient in hand to form the basis of a general review of the progress so far. A flavour of this has already been given in the annual Eurostat *Agricultural Income*

report (from the 1987 report, published in 1988, onwards). Internal working papers have reviewed the results from a methodological perspective, but these are unsuitable for general distribution. The ASC has pointed to the necessity of ensuring that adequate explanation of the methodology is given in order to avoid misinterpretations. The Working Party is also adamant that publication should not be premature.

1.3.4 This 1992 Report has therefore to balance, on the one hand, interest in the nature of the information coming from the TIAH project with, on the other, the need for caution for statistical reasons. Consequently, for most countries absolute income figures are not given here, though numbers are attached to rates of change, relative levels and percentage composition of income where appropriate. As harmonization proceeds, more absolute results will be published. Despite this present limitation, it is the opinion of Eurostat and the Working Party that the information already assembled is of substantial importance. The Report is structured as a general section followed by short reports on each Member State.

Chapter 2: Summary of major features of the methodology

2.1 Background

2.1.1 The full methodology of the TIAH project is presented in the Manual on the Total Income of Agricultural Households (hereafter called the TIAH Manual), published in three languages (French, German and English) in 1990. This methodology was developed by Eurostat staff concerned with the Economic Accounts for Agriculture and with national accounting in collaboration with the Working Party on the Economic Accounts for Agriculture, representing the relevant statistical authorities in Member States. Other parts of the Commission were consulted and kept informed; these included sections of Eurostat concerned with national accounts and family budget surveys and the Directorate-General for Agriculture, DGVI.

2.1.2 The TIAH Manual sets out "target" definitions and procedures. It is recognised that Member States are not yet fully capable of applying the methodology. Nevertheless, by having targets it is clear what the harmonized basis of producing results should be, and any changes in actual practice should be in the direction of the targets. The TIAH Manual also sets out, for key elements in the methodology, a number of acceptable interim alternatives to the "target" which Member States may adopt. As will be seen below, this applies principally to the method by which households are classified into socio-professional groups. Member States are requested to supply documentation on any departures from the harmonized methodology.

2.1.3 Here only an outline of the most important features can be given. Attention is focused on three issues; the definition of disposable income, the definition of a household, and the classification system used to distinguish agricultural households from those belonging to other socio-professional groups.

2.2 Definition of disposable income

2.2.1 The main income concept used in the TIAH project is (Net) Disposable Income. The way that this is defined is shown in Figure 2. It should be noted that this concept includes not only income from other gainful activities, but also from pensions and other forms of transfer. The value of farm-produced goods consumed by agricultural households and the rental value of the farmhouse are treated as positive components of income. Elements deducted include current taxes and social contributions.

2.2.2 The items shown in Figure 2 are each composed of a number of sub-items, described in detail in the TIAH Manual of Methodology. When sending figures to Eurostat, Member States are requested to supply details of each item and sub-item. In addition to being necessary in order to describe the composition of income of agricultural households (one of the objectives of the TIAH project), in the short term, some countries may not have access to data for all the components, and a detailed presentation of information will allow a degree of harmonization between

Figure 2: Definition of (Net) Disposable Income

(1)	Net operating surplus from independent activity - (a) from agricultural activity - (b) from non-agricultural activity - (c) from imputed rental value of owner-occupied dwellings
(2)	Compensation to members of agricultural households as employees
(3)	Property and entrepreneurial income received
(4)	Accident insurance claims (personal and material damage)
(5)	Social benefits
(6)	Other current transfers
(7)	*Total resources (sum of 1 to 6)*
(8)	Property and entrepreneurial income paid
(9)	Net accident insurance premiums
(10)	Current taxes on income and wealth
(11)	Social contributions
(12)	Other outgoings current transfers
(13)	**Net disposable income** (7 minus 8 to 12)

them at something less than the target income definition. In the longer term, the detail will permit the consideration of a range of alternative income concepts, such as income before the deduction of tax.

2.2.3 Some features of the definition are worthy of note, since lack of awareness may lead to a misinterpretation of results. Many of these reflect the macroeconomic origins of the methodology. There are differences between the nature of individual items listed in Figure 2 and concepts using similar names within microeconomic sources (such as family budget surveys). However, their importance should not be overstated.

2.2.4 First, in the flow of resources to agricultural households in Figure 2, the reward from independent activity (self-employment) is shown in the form of Operating Surplus (value of output minus costs of hired labour). Rent and interest costs (property and entrepreneurial income paid) are deducted later, among the list of negative items. However, in practice many Member States deduct these two at the level of Item 1, showing what is in effect an income figure. The end result is the same, but there are implications when looking at the composition of total income.

2.2.5 Second, accident insurance premiums and claims (receipts) are shown as separate items. This may seem strange, but is explained by the fact that the Distribution of Income Account for households, as part of the ESA, has to record flows between all the various sectors; one of these is the Insurance Enterprises sector. On the negative side, at the individual household level insurance premiums would normally be regarded as a cost to be deducted before the calculation of disposable income, but receipts from claims, especially for the replacement of assets destroyed by accident, probably would not. This is a specific example of a general point; in microeconomic approaches some items would not normally be regarded as elements in the calculation of disposable income although they appear in the list in the macroeconomic approach.

2.2.6 Third, in the TIAH methodology all interest charges are treated as negative items, whether the borrowing is for business purposes or to finance consumption goods. This reflects the dual role of agricultural households within the ESA as both production and consumption units (see 1.2.10 above). Again, a family budget approach might accept the former as being a cost associated with independent activity, but would probably claim that payment of interest on consumer borrowing should be made out of disposable income, and not treated as a cost in its determination. However, even if the methodology required a distinction between the two, for agricultural households it may be impossible in practice for surveys to separate them in any meaningful way because of the close association of business and personal wealth.

2.2.7 Net Disposable Income should not be interpreted as bearing a direct relationship with standards of living. No account is taken of the consumption of goods and service provided by the state without direct cost to the individual, such as public health care or education. While there is an attempt to cover goods and

services taken from farms by their operators in non-money forms (farmhouse consumption of farm products, the rental value of owned accommodation) it is by no means certain that these are either adequately captured or correctly valued. Furthermore, Net Disposable Income is only a measure of current flows, and no account is taken of capital gains which, according to some conventions, could form a part of personal income.[8] Capital gains can be realised in many ways other than by sale, and it has been found that farmers with capital gains can adjust their consumption spending (or sums set aside for pensions) to reflect these gains. Wealth, which represents a potential source of purchasing power and therefore of economic status, is also ignored. Hence Net Disposable Income must be regarded only as a partial measure of the command which agricultural households have over goods and services.

2.2.8 Particular care must be taken when drawing comparisons between the income levels of agricultural households and those of other socio-professional groups. Here the coverage of income in kind is a particularly sensitive issue. Comparisons in the development of incomes of agricultural households over time are not likely to be hampered by an inadequate coverage, and even for comparisons between different groups of farmers (for example, those belonging to different farming types) the impact would probably be small. However, this is not the case when comparisons are drawn between agricultural households and the all-household average, which is dominated by households, mainly urban, in which wages from dependent activity form the main income source. In contrast to this last group, farmers have the opportunity to consume directly the output from their productive activities (food, fuel), and to treat some items of personal consumption as business expenses. Often farmers live in houses which would command substantial rental values; there is an impression among the statistical authorities of Member States that, where this item is included as a form of income, the value of owner-housing on farms is often understated. In some countries the estimate of own-consumption is too low, as it is valued at farm-gate prices whereas perhaps it should be measured at retail prices, with appropriate reductions to allow for any lack of processing, presentation and so on. On the other hand, the costs of consumer goods are often higher in rural than urban areas, so that a given disposable income could indicate lower physical consumption[9]. To ease some, though not all, of these sources of disparity, the Working Party has proposed that comparisons should be made, where possible, with other households which rely for their main income source on independent activity.

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[8]For a discussion of the definition of personal income, and the relevance of different form of income measurement to agricultural policy, see: Hill, Berkeley (1989) *Farm Incomes, Wealth and Agricultural Policy*. Aldershot, UK: Gower.

[9]In practice it seems that the net effect of these factors is to lower the cost of living of farmers as a group, requiring a correction factor to applied to their income when attempting to comparisons with other members of society. In the USA the official poverty income for farmer households is set at 85 per cent of the non-farm level. In Australia the 1973 Henderson Poverty Enquiry used a farmer poverty line 20 per cent below that for all families.

2.2.9 It is also evident that the income of agricultural households differs in the nature of the rewards it represents from that accruing to households in general. Income from independent agricultural activity (the main source for farmers) is a mix of rewards, being the residual available to the owned capital and land, and the unpaid labour of the household, including an element for the risk-taking function of entrepreneurship. In contrast, the main source of income of households in general is from dependent activity (that is, wages) alone. While not denying the different economic function of the main income source, this is not a valid reason for objecting to comparisons between the disposable income of farmer households and other groups, even those whose income comes entirely from state welfare benefits. Net Disposable Income is essentially an indicator of potential for spending on consumption and/or saving. Whether one group is relatively disadvantaged compared with another will depend on the level of disposable income, not its composition (though composition may be used as a means by which the groups to be compared are defined). For policy purposes there may be special interest in drawing comparisons of income levels between farm households and the households of, for example, other independent businessmen, but again this has nothing directly to do with matching the mix of factor returns. This is an important point.

2.2.10 Finally, there is the matter of comparability between incomes in different countries. Such an exercise is beset with problems. Even in the absence of the present disharmony between actual TIAH methodologies, the balance between private and public provision of goods and services varies, and this may lead to false pictures of real consumption potentials. There may be different cost structures, reflecting national indirect taxation regimes. And the means of expressing national currencies in a common unit (ECU exchange rates, or Purchasing Power Standards) may be inadequate for the purpose. Hence, at this stage, comparisons of Net Disposable Incomes of agricultural households between Member States are best avoided.

2.3 Definition of a household

2.3.1 For the purpose of measuring Net Disposable Income, the most appropriate unit is that of the household. This is the practice in Family Budget Surveys. The logic for preferring the household rather than the individual as the income unit is that members of households, and especially married couples and their dependent children, usually pool their incomes and spend on behalf of the members jointly. This is not to deny that there may be some differentiation; a wife may consider part of her income, perhaps some minor sums coming from outside the farm, as her own to do with as she wishes. However, in general it makes much more sense to use the household as the unit. Otherwise, in a farm family with the business operated as a sole proprietorship, all the farming income would be shown against the farmer, and his wife and children would be shown as having zero income, a situation which obviously inaccurately expresses their real position as potential consumers.

2.3.2 In the TIAH methodology, households are defined as in national Family

(Household) Budget Surveys. Though not completely harmonized, the definitions of household employed in Member States typically include all members who live under the same roof and share meals. A household can consist of a single person. Large groups of persons living together in institution (religious houses, universities etc) are normally excluded.

2.3.3 In order that households of different sizes and compositions can be brought together for income measurement purposes, it is convenient to express incomes per household member and per consumer unit. While the former is simply the result of a count of the number of persons in households, the latter uses coefficients (in the form of an equivalence scale) to express children and additional adults in terms of consumer units. A variety of approaches can be used to calculate these coefficients.[10] However it appears that, whatever scales are chosen, arbitrary judgements are inevitable. Scales devised for general application may not necessarily be suitable for application in agriculture, though they may be accepted as being the only ones available. The use of such scales is nevertheless important to any comparison between farmers and non-farmers, since agricultural households are on average larger than households in general in all Member States[11]. Small variations in the scales used are found between Member States (which may reflect real differences in socio-economic conditions between countries), but in practice most Member States adopt a standard set of coefficients; typically the head of the household counts as 1 unit, additional adults 0.7 units, and children as 0.5 units.

2.3.4 It is important to note that households of farmers, defined in this way, may include persons who contribute no labour input to the agricultural holding. These individuals may or may not have other occupations or sources of income. Their treatment reflects the consumption orientation of income measurement in the TIAH methodology. In contrast, some of the assistance given by the CAP under structural aids adopts a narrower view of the household. For example, in applying income tests to the "Transitional aids to agricultural income" (Regulations (EEC) Nos 768/89, 3813/89, 1279/90) income is measured only for the farmer and those members of his family working on the holding, though it captures all forms of

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[10]Some of these methods are reviewed in Buhmann, B., Rainwater, L., Schmaus, G. and Smeeding, T. M. (1987) Equivalence Scales, Well-being, Inequality, and Poverty Sensitivity Estimates Across Ten Countries Using the Luxembourg Income Study (LIS) Database. *Review of Income and Wealth*, 33, 115-42.

[11]In Eurostat (1986) *Family Budgets - Comparative Tables*, the average numbers (persons) per household were as follows, (all households followed by households headed by farmers and agricultural workers): Belgium 2.9, 4.2; Denmark 2.2, 2.8; FR Germany 2.5, 4.1; Spain 3.7, 4.2; France 2.8, 3.6; Ireland 3.7, 4.0; Italy 3.2, 4.0; Netherlands 2.9, 3.8. The reference year varies from 1978 to 1982. Part of the difference may be explained by the inclusion of households headed by retired persons in the "all households" figure. The way that elderly farmers (who may be in receipt of retirement pensions but who regard themselves still as farmers) are treated in the statistics requires careful consideration.

income for these persons. Early retirement aids (Regulation (EEC) No 1096/88) only consider the income from the applicant (that is, the one person). These various approaches taken to the size of the unit over which income measurement takes place are not necessarily in conflict. Aids directed at those engaged in agriculture will, understandably, not wish to consider people who do not work in agriculture. Given sufficient detail in its basic data, the TIAH project might throw light on the relative contributions made to the total income of households by members who do no work on the holding. In practice, it is felt that very few people who live as parts of agricultural households would contribute zero labour input to the farm at times of labour shortage, such as harvest, even if they held full-time jobs off the farm. The essence of the TIAH project is to provide information on the *overall* income position of agricultural households, not fractions of them.

2.3.5 As will be seen below, all but two of the Member States who have supplied results to the TIAH project have adopted the household as the basic unit over which income has been measured. The exceptions are Denmark and the United Kingdom. In the former, where the "Family" is used, this is not felt to be a major departure since the social structure of Denmark means that multi-generation households (and other extended forms) are not common. The latter uses tax cases, as this is the only practical option in the UK.

2.4 Classification of households into agricultural and non-agricultural groups

2.4.1 The most significant part of the target methodology, and one which can have a substantial effect on the results, is the system used for classifying households as agricultural or belonging to some other socio-professional group. As noted above, the national accounts methodology for the European Community as a whole (ESA) has not yet developed such a classification system. Nevertheless, it is clear that it would have to be capable of allocating all households in a systematic way using the same basic criterion. For example, it would not be satisfactory to classify agricultural households on the basis of occupation of agricultural land, but to classify households of waged workers according to their main income source. The possibility would exist of one household being included in two groups or being left out of any. Such inconsistencies must be avoided.

2.4.2 After consultation with Eurostat staff responsible for developments in ESA, the target methodology for household classification within the TIAH project was set in line with what appeared, at the time, to be the option which the ESA was most likely to chose for its proposed general disaggregation of the household sector into socio-professional groups. This was a system based on the income composition of the entire household. Under this system, *an agricultural household is taken to be one in which independent (self-employment) agricultural activity is the main source of total income of the entire household.* Agricultural activity is taken to coincide with the definition used in the Economic Accounts for Agriculture; fishing and forestry are excluded. No limits on the size of agricultural holding are made. It is possible for a single holding to have associated with it more than one household satisfying the definition, or indeed no household at all.

2.4.3 Another possible approach was to allocate households to occupation groups on the basis of the occupation group of one of its members, termed the reference person (normally the head of the household). Many Member States already have such systems in operation. The reference person's socio-professional group is determined by criteria such as the main source of income, or main use of time, or combinations of the two. This is typically the approach adopted by Family Budget Surveys. Developments in ESA methodology made after the TIAH target definitions were settled suggest that such a reference person system is now more likely to be adopted for the proposed general disaggregation of the household sector, for reasons of practicality rather than theory. To cater for this possibility, and as a reflection of what is practically possible within Member States, during 1991 the TIAH methodology was expanded to encourage the estimation of results by all Member States using a reference person classification system. This was seen as a supplement to (not a substitute for) using the original target definition. Under this system *an agricultural household is one in which the main source of income of the reference person (or, failing that, the main occupation of the reference person) is independent activity in agriculture.*

2.4.4 A reference person system carries with it the possibility that the nature of the total household may be poorly represented. For example, an elderly person who considers himself as being the head and also as being a farmer may have living in his household many younger people whose main income sources and occupations are off the farm. While the household may be classed as agricultural using a reference person system, it might be non-agricultural in terms of its overall income composition. Such situations can be reduced by imposing criteria to determine who is taken as the reference person; it could the member with the highest income. However, as will be seen later in the country chapters (Part Two), typically the determination of the reference person, or head of the household, is subjective and self-declared, though there are examples of explicit criteria being applied.

2.4.5 In most examples of main-occupation classification systems, the choice of socio-professional group is also left to the subjective judgement of the reference person. This would not necessarily correspond to the view of an outside observer. Neither does it necessarily reflect dependency; there is plenty of evidence to show that wide differences exist between the proportionate use of time and the proportionate composition of income, particularly among small farms.

2.4.6 It should be noted that households headed by hired workers in the agricultural industry are not included within the agricultural household group under any of the classification systems put forward. In practice, only farmer-households are covered.

2.4.7 A specific problem which has had to be tackled is that of farmers who run their farm businesses as corporate institutions (companies). These are of numerical importance only in a few countries (most notably in the UK) but tend to be in the largest business size groups. Their operators might therefore be expected to have relatively high incomes. In practice these farms may behave as if they were

operated in non-corporate form; the structural arrangements are often made for taxation convenience rather than to secure other advantages. Taxation data form an important information source in countries where these farms are found. However, farmer-directors of such farms will normally be treated in taxation statistics as receiving income as employees of their own businesses, rather than as receiving income from independent activity (self-employment). Consequently, they may escape inclusion as agricultural households; they may be classed among the large group of dependent households (wage or salary earners). Special arrangements have been made in the TIAH methodology to cover such households.

2.4.8 The definition of an agricultural household used here is consistent with the background and aims of the TIAH project. In other circumstances other definitions are appropriate[12]. Specific policy programmes will have target groups which may be either more or less restricted in their coverage than the definition adopted here. For some policy purposes it may be desirable to treat all households with which a holding is associated as "agricultural". Eurostat has considered this "broad" definition and the problems of estimating results to cover all the households involved. In some countries (Greece, for example) such an approach would have little meaning; small holdings operated on a part-time basis and associated with large families whose members are predominantly engaged in urban jobs will not produce meaningful information on the income situation of the agricultural community. For other programmes some minimum threshold of holding size might be imposed on the "broad" approach, but this runs the danger of excluding families who produce little but who nevertheless are mainly dependent on farming for their livelihood. Also, some large farms will be included where the occupiers are mainly dependent on even larger earnings from other businesses; these may be significant agricultural producers and thus of importance to policies directed at influencing the level of production, but they will be outside the boundary of policies aimed at families which are mainly dependent on farming. Given enough basic data, it might be possible to estimate disposable incomes for agricultural households defined in many alternative ways. However, for the present purpose it was necessary to give priority to a definition which was appropriate to the general direction of the TIAH project.

2.4.9 Though the main focus of attention of the TIAH project remains the "narrow" approach to what constitutes an agricultural household, during the period since the target definition was established the desirability of also making income estimates using the "broad" approach has risen. It is accepted that this could never be the basis for a complete disaggregation of all households into socio-professional groups. But in the opinion of the Commission's DGVI (a major potential user of the results) there are particular policy situations where information gathered in this way might be useful. By subtraction it should also be possible to throw light on the income situation of those households with agricultural holdings

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[12]The question of what sorts of households constitute the target for agricultural policy is tackled in Hill (1989) *op cit.* and in Hill, B. (1990) In Search of the Common Agricultural Policy's "Agricultural Community". *Journal of Agricultural Economics,* 41(3), 316-26.

which are not primarily dependent on farming for their livelihood (those households which fall outside the "narrow" but inside the "broad" approaches). The conceptual and practical problems of using a "broad" definition are still under consideration.

2.4.10 To sum up, the present position in the TIAH methodology is that the "target" criterion for defining the agricultural household remains the income composition of the entire household. However, in addition all countries have been asked to generate estimates using a reference person system. In the short term this should enable greater harmonization of results from Member States. In the longer term it would permit the TIAH methodology to adapt to the ESA methodology when the latter has been settled. Steps are also being taken to made aggregate income estimates for all households which operate an agricultural holding, for use in particular policy situations outside the main line of development of the TIAH project.

2.5 The impact of time on household classification

2.5.1 An income-based system which only looks at figures for a single year is likely to result in many temporary reclassifications at the margin from year to year due to the fluctuating nature of farm incomes. This problem exists whether the income classification is applied at the level of the household or the reference person. Not only will the number of agricultural households change; their average income will be affected, though it is not clear if this results in an overstatement or an understatement of the position relative to that of a more consistent group of households[13]. Averaging incomes over a run of years would present a more stable classification; analysis of farm-level data in Germany suggests that taking a three year period removes most of the unpredictable variation in incomes. Taking longer periods gives more stability, but there is an increasing danger that changing farm structure (changes in the size distribution of the farms concerned) will affect the long-term trend in income variability[14]. Classifying according to the main occupation (defined according to time spent) of the reference person may show

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[13]Situations could be set out in which either possibility might arise. Also a distinction has to be drawn between those circumstances in which the number of agricultural households remains unchanged and those where the same individuals remain in the group. Taking a rather extreme case, if falling agricultural incomes are restricted to households with low total incomes, marginal reclassification could result in a rise in the average income for the remaining agricultural households. Conversely, rising agricultural incomes could cause a fall in the overall average if many previously-excluded low income farms are brought in.

[14]See: Cordts, W., Deerberg, K. H. and Hanf, C. H. (1984) Analysis on the Intra-sectoral Income Differences in West German Agriculture. *European Review of Agricultural Economics*, 11(3), 323-42. Using estimates of the coefficients of variation in farm profits for single years (over the period 1968/9 to 1979/80) and for profits averaged over from two to twelve years, it was shown that for single years the average coefficient was 0.78, for two years 0.68, for three years 0.64 and for four years 0.61. Over twelve years it was 0.55. Some 60 per cent of the total reduction was achieved by averaging over three years. More reduction (83 per cent) was achieved by taking five year averages, but in the opinion of the authors, farm growth had probably become significant by then.

more stability, but this system has other major disadvantages; time spent is not a satisfactory guide to income dependency, and it does not correspond to the suggested ESA methodology.

2.5.2 The TIAH project encourages the exploration of classification involving the averaging of incomes over time. While at present income measurement systems are rarely set up in ways which enable this to be carried out formally, in practice an element of averaging seems to take place. For example, when information on the main source of income involves some subjective judgement by administrators (such as is used in the UK by taxation authorities in allocating taxpayers according to their normal main income source) a form of averaging is already being employed.

2.5.3 Whichever means of classification is used, the households which are classified as agricultural will not form a constant group over time. In the long term numbers will be expected to fall, in line with the historic pattern. If the policy interest were to be to trace the development of income of people who started any given period as members of agricultural households, some attempt would have to be made to retain these in the group. For example, the households which are most successful in diversification into non-agricultural activities can be expected sooner of later to fall outside the agricultural group and to join some other. Under the present arrangement, farmers who face a fall in their income from farming will eventually be excluded from the agricultural category as their welfare transfers grow in relative importance. Thus when commenting on income developments over time, changes in the composition of the group of agricultural households must be borne in mind.

2.6 Examples of the impact of alternative definitions of the agricultural household

2.6.1 To illustrate the points above, examples can be taken from those countries where comparable sets of data are available using alternative ways of defining agricultural households (Denmark, Greece and Ireland). In *Ireland* the results shown in Table 1 were obtained from data taken from the 1987 Family Budget Survey, the National Farm Survey and the Farm Structure Survey. The numbers of households found to have *some* independent agricultural income was almost three times the number where farming was the main income source of the entire household. The use of a reference person system produced higher numbers of agricultural households than the "target" household-based system; the impact of using an income criterion for the reference person was relatively modest, but many more households resulted from selecting according to the person's self-declared main occupation.

Table 1 Ireland: Numbers of households resulting from alternative definitions of an agricultural household. 1987

Criterion of agricultural household	Number of households 1987
Broad Definitions of agricultural households	
All households with some independent agricultural income	206,700
Holders recording 1 AWU or more in the Farm Structure Survey	91,800
"Full-time" farms (labour requirement measurement) in the National Farm Survey	68,600
Narrow definitions of agricultural households: Households in which independent agricultural activity was:	
the main occupation of the head of household	140,500
- and also the main income of the head (of whom 86% were under 65 years old)	(82,000)
- but not the main income of the head (of whom 54% were under 65 years old)	(58,500)
the main income of the head of household	84,500
the main income of the entire household	72,400

2.6.2 Results for *Denmark* from using alternative bases for classifying households as agricultural in 1988 are shown in Table 2. It should be recalled that here the definition of "household" was narrower than the TIAH target, consisting only of the couple and dependent children; however, this discrepancy was not felt to be of great importance. The use of a reference person system (income based) clearly caused more households to be brought into the category of agricultural households than did a household income criterion, though not to the extent of covering all households associated with a holding in the Farm Structure Survey. Moreover, the average household disposable income was lowered. This effect is compatible with these additional households having smaller incomes and, very probably, smaller farms. The differences between household numbers and average incomes are much greater than was experienced in Ireland (where the main impact was caused by moving from an income-based system for a reference person to a main-occupation based system, again using a reference person). However, 1988 was a year in which the income from Danish farming was particularly low. The way in which these low incomes may have affected numbers and income levels produced by the alternative classification systems is explored further in the country-by-country section of this report.

2.6.3 In the light of the discussion above on the desirability of taking a longer term view of income, it is of interest to look at the analysis for Denmark on the number of households which satisfied the income criterion in two successive years (1985 and 1986, results for adjacent later years not being available). As Table 3 below shows, almost half the households with holdings (47 per cent) were

eliminated from being classed as "agricultural" by using a main-income definition for a single year (1985), but this left considerably more than in the very poor farming year of 1988. Though not shown by the Table, the largest reduction was among cereal farms and the smallest in cattle farming, a finding which is compatible with the association commonly seen between levels of pluriactivity and farming types. Overall, a further 6 percent were excluded by applying the income criterion for two successive years; the average household disposable income, already marginally higher from applying the criterion once, saw a further small increase. As would be expected, the average size of holdings followed a similar pattern.

Table 2 Denmark: Numbers of agricultural households and characteristics by criterion, 1988

Criterion	No. households	Average household disposable income (1000KR)	Average UAA (ha)
All households with holding in the farm structure survey	83,467	123	33.0
Agriculture was main household income	36,067	143	45.6
Households with reference person a farmer(*)	68,894	124	

Note: (*) households where the person with the highest gross income has agriculture as his or her industry and employment status as self-employed (independent).

Table 3 Denmark: Numbers of households and characteristics by criterion, 1985 and 1986

Criterion	No. households	Average disposable income (1000KR)	Average UAA (ha)
Households with a holding in the farm structure survey	90,722	79	30.6
Agriculture was main household income in 1985	48,293	84	39.2
Agriculture was main household income in 1985 and 1986	42,307	86	40.3

2.6.4 For *Greece* somewhat different results come from using the household income and the reference person's main occupation. (Greece also allowed alternative definitions of a household to be explored, either including or excluding adults who live in the household but who are financially independent of the farmer; these are not pursued here.) Contrary to the situation in the two countries above, a classification system based on a reference person produced *lower* numbers of households and household members for 1985 than one based on household income composition (437,750 households and 1.64m members as opposed to 500,250 households and 1.84m members). The explanation for this is not immediately clear, but might result from farmers in receipt of old-age pensions declaring themselves as "retired" in Greece's family budget survey rather than as farmers.

2.6.5 Summing up, the choice of definition of what constitutes an agricultural household can be seen to have a substantial impact on the number of households covered and on the income levels per household. Applying the income criterion to the entire household excludes some households which are brought in using a reference person system, and, typically, these additional households have relatively low incomes. But the magnitudes of the differences are not consistent between countries, and a reference person system using income composition can produce results very different from one based on main occupation. The issue of the impact of the classification system is still under investigation.

2.7 The methods (models) used for generating results and the problems of bringing together estimates produced by macroeconomic and microeconomic approaches

2.7.1 In order to meet the objectives of the TIAH project, given above, it is necessary to generate, on an annual basis, the following series:

(i) estimates of the aggregate disposable income of agricultural households in total, and expressed per unit (household, household member, consumer unit)

(ii) the component parts of (i)

and (iii) estimates of the aggregate disposable income of non-agricultural households, or all households together (including agricultural households), preferably also broken down into a number of socio-professional groups for comparative purposes, and expressed as totals and per unit.

2.7.2 There are three main ways by which harmonized measures of the disposable income of agricultural households can be generated. The term Model is used in this context to mean a basic approach. Here only the general outlines and the problems most likely to be encountered are described. The model used by each Member State is described in the second part of this report.

2.7.3 ***Model 1*** - **Grossing-up microeconomic data.** Estimates of the disposable income of the agricultural household sector can be obtained by grossing-up microeconomic data, as collected in household budget surveys, taxation records (total or samples) or farm accounts surveys. The first two typically also generate estimates for non-agricultural households using the same methodologies, though for purposes of comparison this may not be ideal (for example, the way that own-production is valued may be inappropriate). None of these banks of data will have been designed for the purpose of estimating the income measure currently under development, and each will have its own set of definitions and conventions, including the classification system used to place households in socio-professional groups. They share the microeconomic approach to components of income. In particular, they do not use operating surplus as a concept, but substitute income net of rent and interest and insurance payments. Where disposable income is estimated, this would be before the subtraction of some items (such as voluntary contributions to religious bodies) which are treated as deductions in the target macroeconomic methodology. Consequently, details on some items in the chain of calculation leading to disposable income, as set out in the TIAH Manual, may be partly or totally subsumed in other categories, or information may not be collected.

2.7.4 As noted above, *farm accounts surveys*, though sharing a harmonized methodology for those items which are contributed to RICA, vary widely in their coverage of non-farm income and the other elements leading up to disposable income. They also tend towards a farmer-and-spouse definition of the household rather than the wider one preferred here. Farm accounts surveys are also not capable of providing information on the income situation in non-agricultural households (except those which are included in their samples as operators of holdings but which do not satisfy the criteria to be classed as agricultural). *Family budget surveys* are held only once every five to seven years. Some means of updating between survey years is required. There is also the problem of verifying the accuracy of the data at the individual level. This applies particularly to the income from self-employment in agriculture (and in other branches) and is of obvious relevance when agricultural households are the centre of interest. *Tax records* suffer from gaps, as information on types of income which are not taxable is often not collected. Farmers in many Member States fall largely outside the tax net or are taxed on a flat-rate basis, in which case the records reveal little about the agricultural income, though they may yield information on other sources of income. Furthermore, there may be institutional difficulties in manipulating tax information.

2.7.5 Member States using this microeconomic approach include Denmark, Ireland, the Netherlands (one of two estimates) and the United Kingdom. The chief issues to be faced in the Model 1 approach are as follows:

(i) How does the concept of the household, the definition of the agricultural household, and the definition of disposable income compare with the TIAH target methodology, and what is the significance of the disparity in terms of numbers of persons and income levels?

(ii) Does this approach generate comparable estimates for non-agricultural households?

(iii) Is raising (grossing up) capable of producing statistically reliable estimates of

(a) aggregate disposable income
(b) elements within the calculation (e.g. taxation)?

(iv) Are there special problems with covering individual components, such as the income from agricultural activity and other independent activity?

(v) If the estimates are only possible for an occasional base year, or are only calculable after a substantial lag, what are the ways in which extrapolation can be made, and what sources of information exist by which it could be carried out?

2.7.6 ***Model 2*** - **Subdivision of the household sector (macroeconomic approach).** This Model is within the macroeconomic framework of national accounting, and consists of subdividing the household sector to form a separate Distribution of Income Account for agricultural households. It uses economic aggregates (for example, the global interest received by households) as the starting point for the separate components in the income calculation, augmented by microeconomic data sources. In practice macroeconomic data sources rarely distinguish between payments or receipts from people who are members of agricultural households and those from other households. Sometimes alternative indirect methods can be used to deduce amounts; for example, the age composition of agricultural households can be used to estimate the receipts from pensions and some other social benefits.

2.7.7 Often a distribution agent is used to allocate an economic aggregate between classes of recipient. For example, data from tax records of income from self-employment, though perhaps underestimating the level of income, might be used to distribute the equivalent income figure taken from national accounts. The choice of distribution agent to allocate the income of the branch agriculture to agricultural households and other institutions (including non-agricultural households) is of particular importance in view of the large contribution this item is likely to make to the former's total income. Often the Farm Structure Survey is a source of distribution agent; Standard Gross Margin (or Income) can be used. The overall quality of this approach will depend on both the quality of the aggregate (which will reflect the sources used in its construction and the existence of means of checking and reconciling them) and that of the distribution agent. In the present context the latter poses the bigger problem.

2.7.8 Member States using this approach include Germany, Spain, France, Italy, the Netherlands (one of two estimates) and Portugal. Issues to be faced by the Model 2 approach include the following:

(i) For which items in the target definition are there corresponding items in the national accounts of Member States?

(ii) For which items in the target definition of disposable income are there direct estimates for agricultural households?

(iii) For items identified in (i), are there distribution agents which can be used to allocate the aggregate to agricultural and other households, and are the degrees of approximation involved with their use acceptable?

2.7.9 ***Model 3*: Hybrid.** This Model combines a macroeconomic approach for deriving the income from agricultural activity of agricultural households with a microeconomic approach towards the other components in the target list leading to disposable income. It recognises the difficulty in collecting reliable details on the income from independent activity in agriculture through surveys of agricultural households by substituting an estimate derived from the accounts of the branch agriculture. Where macroeconomic sources allow estimates for other forms of income and outgoings corresponding to agricultural households to be made, these are used, but the principal data source on all these other items will tend to be a survey of agricultural households. This may be the household budget survey, or a survey mounted specially. The results will be grossed-up and, if not repeated annually, will require extrapolation.

2.7.10 Member States using this approach include Greece and Luxembourg. The issues to be faced by this Model include those of Models 1 and 2. Model 3 faces the following additional problems:

(i) Are the concepts of agricultural households in the macroeconomic and microeconomic data sources the same?

(ii) Are the accounting periods the same?

(iii) Are there ways of generating comparable figures for non-agricultural households? Unlike grossed-up figures from surveys covering all households and general disaggregation of the household account, such comparisons are not an integral feature of the data source.

2.7.11 All the above are capable of producing absolute figures. In addition, the term ***Model 4* (Extrapolation from a Base Year, or Change Model)** has been used where direct estimates of disposable income are not available but have to be extrapolated from a base of absolute figures by applying rates of change to the various components in the income calculation. In reality this process (also called Base-line and Mover) is also often employed within the other Models to fill data gaps.

2.7.12 The normal method of updating would be, first, to establish the composition of disposable income in the base year as a means of attaching weights to the various components. Then indicators of the rates of change for the individual components would be sought from the most appropriate sources which, suitably weighted, would enable the change in overall disposable income to be estimated. This could be expressed in terms of an absolute figure by reference to

the base year. Where direct annual estimates exist for individual components, these would take the place of extrapolated figures. For Model 3, this process would be used for items other than the income from agricultural activity, for which annual estimates could be made from the agricultural accounts.

2.7.13 Issues to be faced include the following:

(i) What proxies are available for the change in the unit value of each component in the target definition leading to disposable income (for example, for the level of earnings by agricultural households from off-farm dependent activity)?

(ii) What proxies are available for the change in volume of each component (for example, for the amount of off-farm dependent activity, comprised of the number of persons involved and the amount of hours worked)?

Chapter 3 An overview of first results and of progress still to be made

3.1 Introduction

3.1.1 Results for the TIAH project are not at the same level of development throughout the EC, and for several countries there are large gaps. Methodological differences remain between Member States, and interpretation must therefore be cautious. Nevertheless, some broad observations are possible. Even in an incomplete form the new information demonstrates the value of the TIAH project in terms of an ability to cast additional light on the income situation of the agricultural community in ways not possible using the existing Eurostat branch Indicators 1 to 3.

3.1.2 The aims of the TIAH project (set out in para 1.1.12 above) have been met, substantially or in part, by most Member States. In many countries the estimation of disposable income for this socio-professional group was a new step. Figures relating to a single year are of interest, especially where comparisons between the income situation of agricultural households and other socio-professional groups can be made. However, in order to trace income developments over time (one of the main aims) the TIAH methodology will need to become firmly established throughout the EC. Though some historical calculations may be possible, the greater interest will always be in what has been happening to incomes in the immediate past. This suggests that the TIAH project should be seen more as a starting point than as an end in itself.

3.1.3 Detailed results are reported country-by-country in the second part of this report. However, they may be summarized as follows:

(a) Agricultural households, taken by the TIAH project to be those where the main income source of the head of the household is independent activity in agriculture (farming) or where this is his/her main occupation, are shown to be recipients of substantial amounts of income from outside agriculture. Though typically only about two thirds of the total comes from farming, there are substantial differences between Member States and resulting from using alternative systems of household classification.

(b) Countries differ in the amounts of household income taken in taxation and other deductions, so the same average total income figure can imply different levels of disposable income in different Member States.

(c) For those countries in which comparisons are possible, agricultural households appear to have average disposable incomes which are typically higher than the all-household average. The relative position is eroded or reversed when income per household member or per consumer unit is examined. In Member States which have information extending over several decades (Germany and France, though in the latter case there are breaks in the methodology) the relative disposable income situation of agricultural households seems to have been deteriorating over time.

(d) There is evidence that total household income is more stable than the income from independent agricultural activity. Non-agricultural income (taken all together) is less variable from year to year than is farming income (though this is not a necessary condition for total income to be more stable). Disposable income seems to be less stable than total income, but no clear relationship seems to hold between the relative stability of disposable income and farming income; a variety of factors are operating here, including the way that taxation is levied.

(e) The relationship between the numbers of agricultural households which satisfy the TIAH definition and the number of holdings shown in the Farm Structure Survey varies widely between Member States and depends on a variety of factors. In some the ratio is about 4/5 (Denmark, Netherlands), but in others fewer than half the holdings appear to be operated by households which are classed as agricultural (Greece, Ireland, Italy). The limited amount of information concerning households which operate an agricultural holding but where farming is *not* the main income source or occupation of the head suggests that on average the amount of income these households derive from farming is small compared with that of households which satisfy the TIAH definition. Their holdings are also on average smaller.

Though comparisons between Member States of average household disposable incomes, converted to a common monetary base using PPS, are arithmetically possible, there are substantial theoretical and practical reasons why such calculations are best avoided at present.

3.1.4 The evidence on income sources, distributions and developments over time supports the warnings that Eurostat has for some time attached to its branch Indicators, that they should not be interpreted as measures of personal or household income. Certainly, absolute levels of personal incomes, and most probably movements from year to year, are not adequately represented by the branch indicators. The justification for the TIAH project seems to be strengthened by these first results.

3.2 Progress still to be made.

3.2.1 The TIAH project is still in its development phase. Understandably, there are outstanding issues in the application of the methodology set out in the TIAH Manual. These concern the use of the Data Transmission Table, checking against other data sources, the classification system used, and other disparities. At present there are important gaps in the required information. Mostly this affects the ability to draw comparisons between agricultural and other households and to construct estimates expressed per household member or per consumer unit. Gaps have formed the subject of bilateral correspondence between Eurostat and Member States, and it is hoped thereby to fill many of them.

3.2.2 The TIAH methodology asks that estimates be checked against alternative

sources of information, and that the results be communicated. In the present context this implies reconciliation with the Economic Accounts for Agriculture, as estimates of disposable income are likely to be contrasted by users with the branch income indicators (especially Indicator 3). This applies chiefly to Member States basing their estimates on grossed-up microeconomic data. At present some Member States have generated estimates per household but are cautious about grossing up to national levels; Ireland is one such country. For Member States using macroeconomic methodologies the aggregates are automatically in line, but some checking in the opposite direction (especially with farm-accounts results) might be appropriate. In the documentation received so far, only Germany, Ireland and Spain make this checking a feature of their reports; it will need to become an integral part of the estimation procedure.

3.2.3 The TIAH methodology is rooted in the national accounting system, and support for this principle has been given by the ASC on several occasions. As described in 2.4 above, this principle was instrumental in the choice of the definition of what constituted an agricultural household; agricultural households were those where farming was the main income source. It has always been recognised that this definition does not necessarily accord with current national uses, and that for some purposes within agricultural policy, other definitions might be appropriate. The TIAH methodology produces a definition of agricultural households which might be considered as "narrow", since it excludes many holdings where farming is not the main income source.

3.2.4 The first set of reports received from Member States showed that only Ireland, the Netherlands (CBS) and Greece were able to use classifications which followed closely the target definition of what constituted an agricultural household. Other Member States applied the income criterion to a narrower social unit (the farming couple or the head of household, rather than the complete household) or adopted a reference person classification system in which subjective judgement (typically the reference person's own) was used to ascertain the person's "main occupation". The comparative information for Denmark, Ireland and Greece (described in Part Two) illustrates that alternative classification systems can produce substantially different average income levels and can affect the comparison between agricultural and non-agricultural households. Some of the apparent differences between Member States in their patterns of income composition, importance of deductions and in relative income levels may partly accounted for by disparities in classification methodology. Therefore, a major issue to be faced is the search for the best way to achieve harmonization in this important matter.

3.2.5 In view of the predominant use of classification systems based on a reference person, uncertainty over the system to be finally adopted by the ESA, and some suggestion that a reference person system might be preferred by agricultural policymakers, the Working Party has agreed to expand the TIAH methodology to cover results estimated on this basis. Where the target classification system can be applied, income estimates are still to be generated using it. However, in the interests of comparability between Member States, all

countries have been requested to produce TIAH estimates using a reference person system, with the main source of income as the criterion for allocating reference persons to socio-professional groups. Where this is not possible, the main occupation of the reference person is an acceptable interim basis of classification. The use of a reference person system has meant additional work for some Member States; all except the Netherlands (CBS) can now make estimates on this basis.

3.2.6 Member States which are committed to a "main-occupation" approach might bring their results more in line with an income criterion result by the use of a cut-off age (at which state pensions are received) and the elimination of occupiers of very small holdings. Ireland has put forward proposals in this direction, though designed to reflect the needs of agricultural policy rather than as a statistical device. Such procedures, of course, would require empirical investigation.

3.2.7 The methodology has not completely decided upon the nature of the other socio-professional group (or groups) with which the income estimates for agricultural households should be compared. An issue is whether this comparative group should consist of all households or only non-agricultural households. Obviously, where farmers constitute only a small proportion of the total population the difference in income estimates for these two groups will be slight; for reasons of practicality, the all household figures are to be preferred. Some Member States have already subdivided their household sector into sub-sectors, of which agricultural households form one (Germany, France, Italy). In others the basic data seem to exist by which such a breakdown could be made. This opens up the possibility at some time in the future of drawing comparisons between farmer households and other more narrowly-defined groups (for example, independent households, households of managers and so on). In order to make further progress in this direction, when the present methodology has reached a satisfactory state of development it will be necessary to consider which socio-professional groups should be used for drawing comparisons, how these groups should be defined (there are large differences between countries in the categories used at present), and the possibilities within existing data sources for generating estimates of disposable income for them.

3.2.8 Subjectively, the other methodological disparities seem less important. Firstly, there are differences in the coverage of some of the components from which Net Disposable Income is calculated. This stems largely from the nature of the basic approach adopted and the data sources used. For example, the imputed resource flows which appear in national accounting are not usually to be found in household budget or farm accounts surveys. Disparities of this nature are unlikely to seriously impair the ability of the TIAH results to trace income developments of agricultural households in individual Member States over time, or to prevent comparisons between income movements of farmers and other socio-professional groups in the same country. Clearly they would be of more importance to inter-country comparisons of absolute income levels but, as was indicated above, these are purposely avoided at this stage. An indication of how the coverage varies between Member States is given in Table 4.

Table 4 Matrix of results for TIAH project (revised May 1992)

COUNTRY	B	DK	D	GR	E	F	IRL	I	L	NL(1)	NL(2)	P	UK
YEAR (latest base year of methodology)		88	88	88	81	84	87	88	89	85	87	80	87
No. households		y	y	y	y	y	y	y	y	y	y	y	y
No. persons		y	y	y	y	y	y	y	y	y		y	
No. consumer units		y	y	y	y	y	y	y	y			y	
1 INDEPENDENT ACTIVITY		y	y	y	y	y	y	y	y	y	y	y	y
1a From independent agricultural activity				y									
Net Operating Surplus		y			y			y	y				
Income			y			y	y				y		y
1b From independent non-agricultural activity													
Net Operating Surplus		y			y			y	y				
Income			y			y	y				•		y
(Income from all ind. act.)										y	y	y (@)	
1c Operating Surplus from imputed rent of owner-dwellings		y	y	y	y	•		y	y	y	y	y	
2 DEPENDENT ACTIVITY		y	y	y	y	y	y	y	y	y	y	y	y
2a Gross wages and salaries		y	y	y	y	•	y	y		y	•		y
2b Employers actual social contributions			y		y	•		y		y	•		
2c Imputed social contributions			y		y	•		y		•	•		
3 PROPERTY AND ENTREPRENEURIAL INCOME		y	y	y	y	y	y	y	y	y	y	y	y
3a Actual interest		•	•	y	y	•	•	y	y	y	•		•
3b Imputed interest accruing to insurance policy holders			•		y	•		y					
3c Income from land and tangible assets		•	•	y	y	•	•	y	y	y	•		•
3d Dividends and other income distributed by corporate enterprises			•	y	•	•	•	y	y	y	•		•
3e Withdrawals from the entrepreneurial income of quasi-corporate enterprises		•	(•)			•		y					
3f Profits assigned to employees		•	•		•	•	•			•	•		•
4 ACCIDENT INSURANCE CLAIMS			y	y	y	•		y	y		y	y	
4a Claims on capital items			•	•				y	y				
4b Claims on personal accident			•	•					y		•		•
4c Redistributed profits paid to the insured			•	•							•		
5 SOCIAL BENEFITS received		y	y	y	y	y	•	y	y	y	y	y	(y)
6 OTHER CURRENT TRANSFERS received		y	y	y	y		y	y		y	y	y	
7 CURRENT RECEIPTS Sum of 1-6		y	y	y	y		y	y	y	y	y	y	y

TABLE 4 (continued)	B	DK	D	ELL	ESP	F	IRL	I	L	NL(1)	NL(2)	P	UK
8 DISTRIBUTED PROPERTY AND ENTREPRENEURIAL INCOME		y	y	y	y	•	•	y	y	y	•	y	•
8a Interest on loans		y		y	y			y					
(i) farming purposes		•	•	•	•	•	•	•	y	•	•		•
(ii) purchase of agr. land and buildings		•	•	•	•	•		•		•	•		•
(iii) other business purposes		•	•	•	•	•	•	•		•			•
(iv) private (consumer) and other credit		•	y		•		•	•	y	y	•		
8b Rents on				y				y					
(i) agricultural land and buildings		•	•	•		•	•	•	y				•
(ii) other business land and buildings		•	•	•		•	•	•					•
9 NET ACCIDENT INSURANCE PREMIUMS			y	y	y	•		y	y		y	y	
(i) Gross insurance premiums				y								y	•
(ii) adjustments				y									
Net insurance premiums			y	y	y	•		y	y		y		
10 CURRENT TAXES ON INCOMES AND WEALTH		y	y	y	y	y	y	y	y	y	y	y	
10a Taxes on personal income		•	•	y	y	•	•	y	y	y	•	•	
10b Capital gains tax			•				•				•		
10c Current taxes on wealth			•	y	y	•	•		y	y	(*)	•	
10d Taxes on private use of vehicles			•			•			y				
Other						•					y		
11 SOCIAL CONTRIBUTIONS		y	y	y	y	•	y	y	y	y	y	y	
11a Actual social contributions			y	y	y	•	y	y	y	y	•		
(i) employers' actual social contributions			y		y			y		y			
(ii) employees' social contributions			y	•	y		•	y		y			
(iii) social contributions by self-employed and non-employed persons		y	y	•	(*)		•	y		y			
11b Imputed social contributions			y			•		y			•		
12 OTHER OUTGOING CURRENT TRANSFERS			y	y	y	•	y	y	y	y		y	
12a Current transfers to non-profit institutions			•	y	y	•	•			y			
12b Private international transfers			•	•	y	•							
12c Miscellaneous current transfers			•	y	y	•	(*)	y	y	y			
13 NET DISPOSABLE INCOME (7 minus 8-12)		y	y	y	y	y	y	y	y	y	y	y (@)	
Other													y

Note: In the above table a response is listed under the main heading of each Item if information has been provided for any of the relevant Sub-Items. The coverage of Sub-Items is described using the code below. In some cases no details of Sub-Items are available.

y = yes, explicit data/ * = implied data covered elsewhere/ (y) and (*) = covered in part (@) = gross of capital consumption/ NL(1) = CBS: NL(2) = LEI

3.2.9 Smaller matters concern the following:

(a) There are minor differences between Member States in their definition of "household". The only major departures from the target definition (so far received) are for Denmark, where the nature of households reduces its importance, and for the United Kingdom, where the source of basic data (taxation records) does not enable a complete household income picture to be established.

(b) Most Member States adopt a definition of "agriculture" which is close to the that used in the NACE (General Industrial Classification of Economic Activities in the European Communities). There are exceptions (for example, France includes forestry households in the agricultural sub-sector), but again these are not thought to be very important overall.

(c) There is some ambiguity regarding the treatment of family farms arranged as corporate bodies. The problem they pose is probably of greatest significance in the UK.

(d) Expressing income per consumer unit is restricted at present because not all Member States have provided estimates of numbers and given details of equivalence scales. More information will be required before this concept can be used fully.

(e) Different methods are used to estimate depreciation, some Member States using tax rules and others national accounting rules. The implication of this departure from the target methodology is difficult to assess. It is unlikely to be great if the same rules are applied to other households and attention is focused on income developments of farmers and other self-employed groups in the same country over time.

(f) Similar disparities exist regarding the basis for estimating the imputed rental value of owner dwellings and of the value of own-consumption. Because of probable real differences in the importance of these items to agricultural and non-agricultural households, there is likely to be bias when making inter-sectoral comparisons. But again, these are less likely to influence comparisons of developments over time.

(g) Insurance claims (personal accident and material damage) are given a range of treatments, sometimes shown as a separate Item, sometimes assumed to net to zero and sometimes partially hidden within other Items. While this is not entirely satisfactory, the overall income situation is probably not influenced greatly by these relatively small amounts.

(h) Member States differ in the nature and coverage of items which they include under social benefits and current transfers (both flows towards and away from households).

3.3 Future steps

3.3.1 The immediate task for the TIAH project is to take the steps outlined above on the provision of information, the use of a common basis of household classification, checking estimates against alternative data sources, and reducing disparities in methodologies. Those disparities which result, in some Member States, from problems of integrating microeconomic data sources with macroeconomic concepts of disposable income are likely to persist, though with adequately detailed information they can be reduced.

3.3.2 Looking further ahead, steps must be taken to allow the future regular estimation of disposable income. Member States differ in the facility with which the estimates described in this report can be updated and maintained. At one extreme, some countries already have the mechanisms in place to generate annual series of average disposable income per household for agricultural households and for all households. Others have developed mechanisms as part of the TIAH project which should enable them to do so. Others, typically those relying on periodic family budget surveys, are looking at ways to extrapolate their findings. At the other extreme, however, are a few in which such updating presents more substantial difficulty.

3.3.3 The information presented in this report included the latest available, ranging from 1985 (Netherlands, CBS results) to 1990 (Portugal), with most countries having estimates for 1987 or 1988. However, from a policy standpoint these data are probably already too historical for the purpose of assisting policymaking. Some updating will be required if the eventual aim is to generate figures comparable in timing to Eurostat's current branch estimates. Thus, when discussion takes place on the present state of progress of the TIAH project and the interim findings, it should also embrace the steps that can be taken to produce more timely estimates. Such estimates would enable the longer term aims of the exercise, as set by the Agricultural Statistics Committee, to be better met.

PART TWO - COUNTRY REPORTS

Review of the methodology and results from the Total Income of Agricultural Households project on a country-by-country basis:

Belgium
Denmark
Germany
Greece
Spain
France
Ireland
Italy
Luxembourg
Netherlands
Portugal
United Kingdom

In the results which follow, absolute figures are only given where these are already published independently by Member States, or where specific permission is given to do so as part of this report (Denmark, Germany, France, Ireland and the United Kingdom). For other countries results are given in relative forms (indices or percentages). The degree of detail provided is related to the state of development of the estimation procedure in each Member State. At one extreme, for some there are simply the broadest indications of income composition and distribution. At the other, there is information on income developments over time and on comparisons between agricultural households and those in some other socio-professional groups.

The following elements are common to the country-by-country sections, although lack of data means that not all elements appear in each section:

- The main data sources and the limits these impose on the ability to generate results for household income (but with minimal repetition of the contents of the 1988 report);
- The method (model) used to generate results and any problems associated with this methodology;
- The household classification system used (and any departures from the target definition of a household);
- The composition of total income in the reference year;
- Deductions leading to disposable income;
- Developments in the net disposable income of agricultural households over time;
- Changes in the composition of income over time;
- The relative levels of income per unit (household, household member and consumer unit) between agricultural households and those in other socio-professional groups;
- Any particular insights given on the income situation of agricultural households from the information available.

BELGIUM

A full set of results had not been received from Belgium by January 1992. Partial information was provided in December 1990 relating to 1987, but this did not cover sufficient items to enabled an estimate of disposable income to be made for agricultural households.

DENMARK

Methodology:

General approach

Model 1 approach. Income data are taken from the Generalised Income Statistics, microeconomic data based largely but not exclusively on taxation information, and linked to other registers. As information for each household is available, only aggregation is required (no raising is necessary).

Household unit

Family; this is either a single person, or a group of persons, who live at the same address, and who have certain family relations. Children are included when the age is below 26. Families are of three types: a married couple with or without children living at home; a non-married couple with at least one joint child who live with their child/children at the same address; a single person living with or without children. Note: this is narrower than the Eurostat target, and adults in addition to the farmer and spouse are not included, except grown-up children.

Household classification

Agricultural households can be selected both using the "target" method, based on the main income source of the entire household, and using a reference person. However, only the latter system has been used to generate estimates of income for other socio-professional groups.

The "target" method as used in Denmark starts from all families with holdings identified from the Farm Structure Survey. Families are selected where income from self-employment in agriculture forms more than 50% of total gross income of the owner and spouse. This income includes imputed rent on owner dwellings. For classification purposes incomes are taken from the Income Statistics Register (mainly constituted from tax sources). It is important to note that gross income, used for classification, is before the deduction of interest paid; under the taxation system of Denmark nearly half of the interest is "paid" as deductions in income tax.

The reference person system as operated in Denmark takes agricultural households to be those where the person with the highest gross income has agriculture as his or her industry and employment status as self-employed (independent). The industry of the reference person is determined by the administration (that is, not subjectively by each reference person) according to several criteria, including the composition of income, registration for Value Added Tax and non-receipt of unemployment benefit. In essence this corresponds to a main-income system.

Treatment of reference persons who receive (or are eligible to receive) retirement (old-age) pensions: classification is based on the above criteria, irrespective of age.

Equivalence scale

1st person in household including and above 17 years = 1, 2nd and following = 0.7, persons $\leq$ 17 years = 0.5. (Source: OECD Standard)

Years for which results are available: 1985, 1988

Comment on the results

(a) Numbers of households

For both 1985 and 1988 two sets of results are available, expressed as total disposable income for the sector, and average income per household and per

Table DK1 Denmark: Comparison of agricultural households with other socio-professional groups, 1985

Household type	Average disposable income per household	Average disposable income per consumer unit	Numbers of households *
Reference person system	1000KR	1000KR	x1000
Self employed			
- agric.	114	56	83
-manufacturing and construction	147	70	30
- other	130	69	117
of which retail trade	132	-	26
Wage earners			
- agric.	87	59	15
- other	113	66	1,564
All other families (not occupied)	45	37	881
All gainfully occupied	115	-	1,810
All families	92	58	2,730
Household income system			
- agric.	84	39	48

Table DK2 Denmark: Comparison of agricultural households with other socio-professional groups, 1988

Household type	Average disposable income per household	Average disposable income per consumer unit	Numbers of households *
Reference person system	1000KR	1000KR	x1000
Self employed			
- agric.	124	63	69
-manufacturing and construction	188	92	30
- other	172	96	126
of which retail trade	168	-	26
Wage earners			
- agric.	100	71	18
- other	131	78	1,660
All other families (not occupied)	52	43	901
All gainfully occupied	134	-	1,903
All families	108	70	2,804
Household income system			
- agric.	143	67	36

* Totals may not correspond to the sum of items because of rounding and other factors

consumer unit (but not per household member). Firstly, a set can be based on the "target" classification system, where agricultural households are those in which farming constitutes the main (or largest) income source of the entire household unit (except that in Denmark it is the family rather than the household which forms the unit, and the income concept used for classification is before the deduction of interest payments). Secondly, a set can be made using a reference person classification system. In each, Denmark reports the resource flow in the form of operating surplus rather than as income. In converting this to an income concept (by deducting distributed rent and interest) it has been assumed that these payments relate entirely to agricultural activity. The outcome will probably be a small overstatement of the importance of non-agricultural independent income.

It has already been demonstrated in Section 2.6 of the General Report that the alternative ways of defining an agricultural household can result in substantially different numbers of Danish households falling into this socio-professional group. As Tables DK1 and DK2 show, greater numbers of households resulted from the reference person system *in each year*. However, the evidence from Denmark suggests that even a reference person system can exhibit substantial variations in the numbers of households classed as agricultural *from year to year* if an income criterion is used, as here. Comparison between Table DK1 and DK2 shows that there were far fewer agricultural households in 1988 than in 1985 (83 thousand in 1985 and 69 thousand in 1988). Some fall over this period would have been expected; the Farm Structure Surveys found that the numbers of holdings over 5 ha for these years were 92,354 and 84,093 respectively; of these all but 547 (1985) and 625 (1988) were operated by households. In relative terms the numbers of agricultural households (before rounding) fell by a greater extent than did the number of holdings; the ratio of households to holdings was 90 per cent in 1985 and 82 per cent in 1988. The number of households when classified by the entire household income composition fell in proportional terms even more. In 1985 the ratio of households to holdings was 52 per cent; in 1988 it was 43 per cent. These changes are consistent with a poorer income situation in the latter year; Eurostat's branch Indicator 3 confirms that the income from farming was indeed much lower (the "1985" = 100 index was 89.2 for 1985 and only 36.2 in 1988). Such a collapse in income is likely to result in disruption in any income-based system of classification.

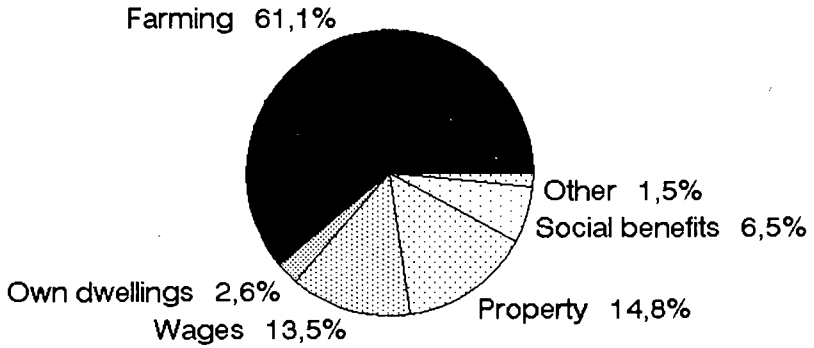
This sharp drop in income from farming could possibly help explain the rather unexpected differences in the average incomes of agricultural households as defined by the two approaches. It was pointed out in Section 2.6 of the main text that the levels of disposable income vary between the two systems. For 1988 the average household disposable income was higher using the "target" household income criterion than using the reference person system (KR 143,000 in contrast with KR124,000; see Table 2 in Section 2.6.2). This could be explained by falls in agricultural income which made an impact in such a way that small, low income farms were taken out of the agricultural group, leaving larger farms generating higher incomes for their operators. However, for 1985 the "target" criterion produced lower average results than the reference person system.

(b) Composition of total income, and deductions

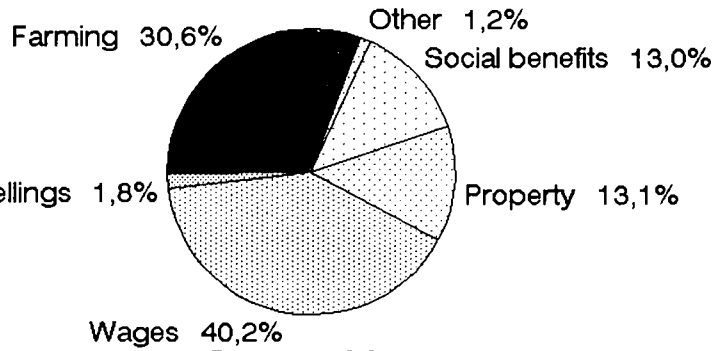
There are also striking differences in the composition of income resulting from use of the two approaches. In addition there are differences between the two years resulting from the drop in farming income from 1985 to 1988. The upper part of Figure DK1 shows for 1985 the composition of total income of agricultural households, as defined by the household income criterion and by the reference person system. Figure DK2 does the same for 1988. In the former year, using the "target" definition found that independent activity in agriculture (farming) contributed 61 per cent of total income; other independent activity accounted for very little (0.2 per cent). Property income formed 15 per cent and income from wages 14 per cent. Very different results come from applying a reference person classification system. Less than a third of the income of households selected in that way came from farming (31 per cent), a greater proportion (40 per cent) coming from dependent activity and a relatively greater proportion from social benefits. These differences are compatible with the tendency for the spouses of Danish farmers to work outside agriculture, one reason being to reduce the risk of farm business failure by improving the stability of household income in the face of the high interest burden that characterises agriculture in this Member State.

By 1988 the contribution to total income from farming had fallen under both classification systems. Under the reference person system it was down to only one fifth (21 per cent). Under the household income classification system in aggregate, agriculture only provided 39 per cent overall of the income of agricultural households. The policy implication of the finding that four-fifths of the income accruing to household headed by a farmer in this year of very low farm incomes is likely to be significant. While the low share of the total income coming from farming might be expected when agricultural households are selected according to the reference persons system, and to some extent represents a practical demonstration of the benefits of household diversification, the composition of income under the target, household income system requires more explanation. According to the TIAH methodology, by definition only households where income from farming is the main source should be included; in aggregate income from farming should therefore not fall below 50 per cent of total income (unless there were many cases where it was the largest single source but less than half the total). However, in Denmark the classification of a household as a farm household occurs *before* deduction of interest paid, rather than on the post-interest income from agricultural activity which is the practice in other countries using the income criterion and the intention of the TIAH methodology. Interest is a major cost to farmers in Denmark, in aggregate accounting for over a third of the (pre-interest) Operating Surplus of agricultural households; interest (plus rent, a relatively minor item) was 37 per cent of Operating Surplus in 1985 and 40 per cent in 1988 (see Table DK4). The apparent anomaly can therefore be explained by the inclusion as agricultural households of those whose main source of pre-interest income was from farming but whose low levels of post-interest farming income would have been insufficient to include them. The use of pre-interest income carries implications, of course, for both systems.

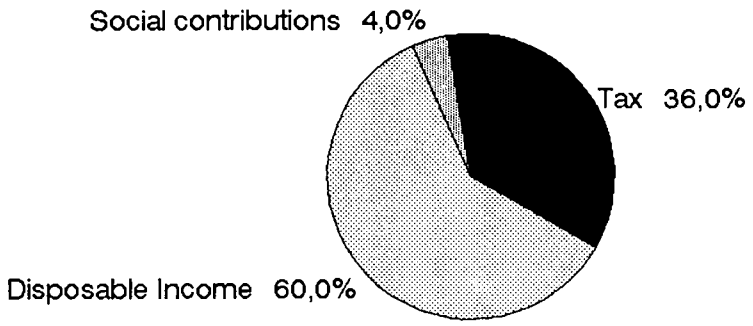
Figure DK1 Denmark:
Composition of total income, and deductions.
Agricultural households. 1985



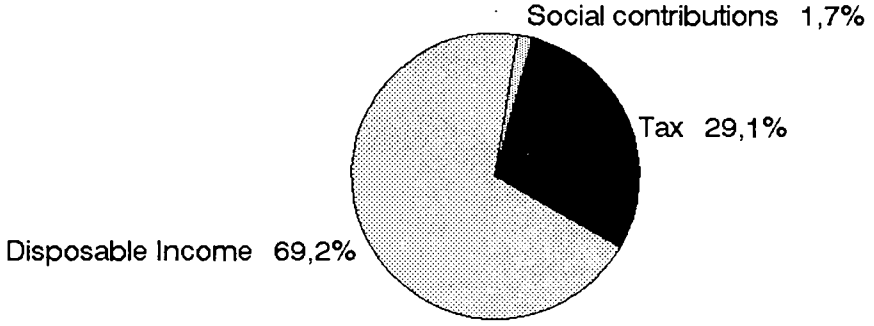
Composition
"Target" definition



Composition
Reference person



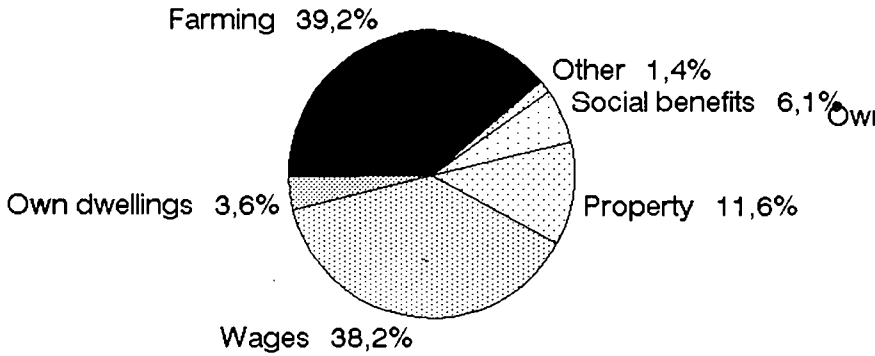
Deductions
"Target" definition



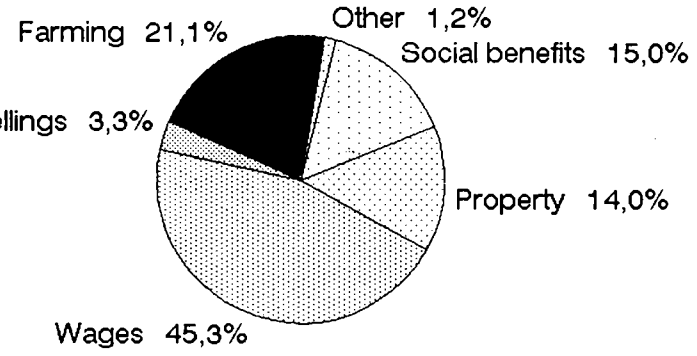
Deductions
Reference person

Note: Independent non-agricultural activity formed 0.2% of income under both definitions and is included in "Other".

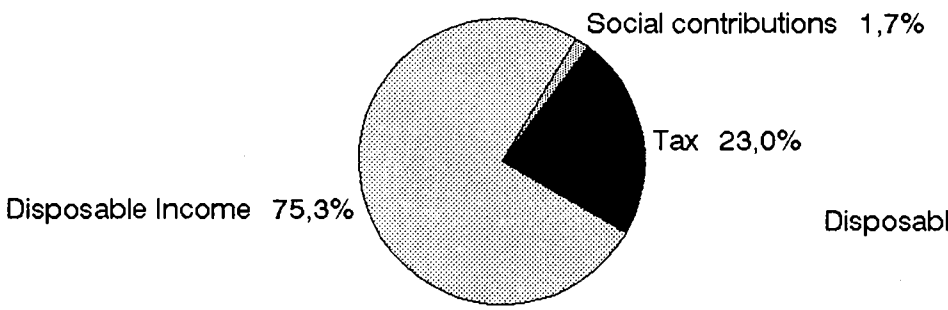
Figure DK2 Denmark:
Composition of total income, and deductions.
Agricultural households. 1988



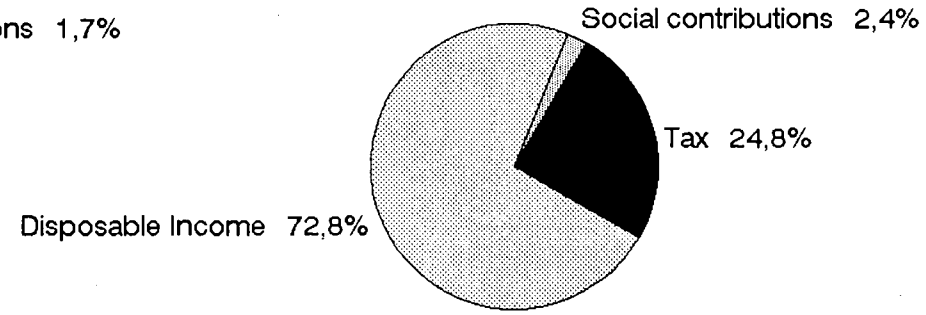
Composition
"Target" definition



Composition
Reference person



Deductions
"Target" definition



Deductions
Reference person

Note: Independent non-agric. activity formed 0.3% and 0.4% of total income under the "target" and reference person systems respectively.

The pattern of deductions from total income is shown in the lower parts of Figures DK1 and DK2. Under the "target" classification system, in 1985 current taxes absorbed 36 per cent and social contributions 4 per cent, leaving 60 per cent as disposable income. Though the shares taken by tax and by social contributions under the reference person system were both lower, the patterns produced by the alternative ways of defining an agricultural household were broadly similar. In 1988 the share taken by tax was less, a reflection of the lower farming incomes in that year. Both classification systems produced similar results, with about three quarters of agricultural households' total income remaining as disposable income. It should be noted that the proportion left as disposable income in Denmark is low in comparison with many other EC countries.

(c) Developments of income over time

Restricting consideration to results from the reference person system only, and bearing in mind the changed numbers, comparisons between Tables DK1 and DK2 find that the average disposable income of agricultural households rose by 9 per cent between 1985 and 1988. This was a smaller increase than other groups, especially those households of other self-employed people. The figure for all households (and all gainfully employed households) was 17 per cent, and for all wage earner households 16 per cent. Households headed by an agricultural worker also increased their average income by 16 per cent. In the independent sector average household incomes for the manufacturing and construction group rose by 28 per cent, the "other" group by 32 per cent; within this group retail trade households increased their income by 27 per cent.

(d) Comparisons of incomes with other socio-professional groups

Comparative income levels for agricultural households and some other socio-professional groups are only available for Denmark using a reference person system, but some other groupings based on household income composition can be derived. Some of the possible groupings are shown below for 1985 and 1988. On the basis of either the reference person system or the whole household income system, agricultural households had disposable incomes which were on average substantially above the all-family average in both 1985 and 1988. However, when those households in which the person with the highest gross income was not occupied in a gainful activity were eliminated, the position of agricultural households was relatively less well placed; in 1985 agricultural households were on a level with the average but in 1988 they had fallen some 8 per cent below. In both years farmer families had lower disposable incomes than other types of self-employed households, including those in the retail trade; the gap was larger in the second year.

Agricultural households were relatively less well placed when judged on the basis of income per Consumer Unit, and in the second year agricultural households fell below the all household average.

It is worth noting that agricultural wage earners had lower incomes per household

and per Consumer Unit than the average for all other wage earners. Household income was also lower than that of farmers, though in both years the disposable income per Consumer Unit was greater than their farmer employers. The unexpected rise in numbers of their households from 1985 to 1988 is probably explained by some operators of small farms who have jobs as wage earners on other farms; under the reference person classification system the decline in profits from farming in 1988 will have caused some of these to be switched from the agricultural household group to the wage earners (agricultural) group.

(e) Estimates using a "broad" definition of agricultural households

Attention has been given so far to income measurement using households which are selected as being "agricultural", using a criterion which would, at least in theory, enable all households to be allocated uniquely to one of a range of socio-professional groups. However, there are policy situations which require information on the incomes of all households which operate a holding, whether or not this forms the main income source or occupation of the holder or his household. Denmark is one of the few countries capable at present of providing estimates using this broad approach.

Table DK3 shows the aggregate income position in 1988 of all households who had a holding which qualified for inclusion in the Farm Structure Survey. Also shown are the incomes of holdings classified as agricultural on two separate criteria - the main income source of the family and the main income of the reference person. It is possible, by subtraction, to estimate the income of those households which were involved in agricultural production but which failed to meet the criterion for being classed as agricultural households. The two criteria produce substantially different pictures for the agricultural and "non-agricultural" farming households, at least for 1988 when farming profitability was particularly low.

In terms of Net Disposable Income per household (the bottom line of Table DK3), the average income of all households with a holding (KR 123,000) was substantially above the national average for all households (KR 108,000 - see Table DK4). When these farming households were divided into those which qualified as agricultural (narrowly defined) and those which did not, the agricultural households had average income levels which were above those of other households with holdings; this difference was substantial when the composition of family income was used as the basis for classification but much smaller when a reference person system was used. This income pattern is consistent with the argument put forward above that using the household income composition resulted in the agricultural group in 1988 consisting of only a relatively small number of high income farmers. However, neither system resulted in the "non-agricultural" farming households having an average income below that of the national all-household average.

Table DK3 Denmark: Aggregate incomes of agricultural households using "narrow" and "broad" definitions. 1988

	All households with holdings in Farm Structure Survey ("broad") (a)		Household income criterion ("narrow", target definition)					Reference person criterion ("narrow", alternative definition)				
			Agricultural households (b)		Non-agric. households (c) = (a)-(b)		Agr. as % Total	Agricultural households (d)		Non-agric. households (e) = (a)-(d)		Agr. as % Total
Form of income	KRm.	%	KRm.	%	KRm.	%		KRm.	%	KRm.	%	
Operating Surplus minus rent*: agriculture	10415	39	9289	69	1126	9	89	10194	52	221	3	98
Operating surplus minus rent*: non-agriculture	1447	5	21	0	1426	11	1	44	0	1403	20	3
Dwellings	539	2	243	2	296	2	45	387	2	152	2	72
Wages	9447	36	2610	19	6837	53	28	5308	27	4139	59	56
Property	2433	9	790	6	1643	13	32	1635	8	798	11	67
Social	1944	7	417	3	1527	12	21	1758	9	187	3	90
Other	202	1	76	1	126	1	38	96	0	106	2	48
Total resources	26428	100	13446	100	12980	100	51	19423	100	7004	100	73
Distributed property income (interest)**	11200	42	6614	49	4586	35	59	7726	40	3474	50	69
Taxes	4310	16	1569	12	2741	21	36	2897	15	1413	20	67
Social payments	649	2	119	1	530	4	18	275	1	374	5	42
Net Disposable Income	10267	39	5144	38	5123	39	50	8524	44	1743	25	83
Households (number)	83467		36067		47400		43	68894		14573		83
NDI/household (KR)	123		143		108			124		120		

* Can also be interpreted as income before the deduction of interest payments.

** No separation is made between interest on loans for farming purposes (including land purchase) and other loans.

Unlike most other tables in this report, Table DK3 shows the reward from independent activity as Operating Surplus minus rent, rather than as income (that is, Net Value Added after the deduction of the costs of hired labour and rent but before the removal of interest charges). Alternatively, Operating Surplus minus rent can be interpreted as income before the deduction of interest payments. Using this concept, both classification systems show that agricultural activity was the origin of only a very small proportion of the total resources of "non-agricultural" farming households, the main source being wages; income (pre-interest payments) from independent activities outside agriculture was more important than that from farming. Rather surprisingly, under the reference person system the share of total household resources taken by distributed property income (interest) was higher among "non-agricultural" farming households than among those headed by a farmer. Various explanations can be offered, including the following. Interest relates to all borrowings; since no separation is possible between interest on loans for farming purposes (including land purchase) and for other purposes. Among agricultural households the main part will relate to farming. The results might be explained by "non-agricultural" farming households having substantial amounts of non-farm debt. Also, some of these households may be those of newly-established farming couples, heavily indebted as a result of entering farming, yet where the reference person still has an other (main income) job.

Table DK3 also shows the share of resource flows to all households with a holding accounted for by agricultural households; that belonging to the "non-agricultural" group can be found by deduction. Households headed by a farmer, which were 83 per cent of all farming households and also contained 83 per cent of the aggregate disposable income, were responsible for 98 per cent of the total agricultural income (before interest payments) but for only 3 per cent of non-agricultural pre-interest income. They received more social benefits in proportion to their numbers than did "non-agricultural" farming households. Again, differences between the two classification systems are of interest. Using the household income criterion, there were far fewer agricultural households (43 per cent of holding numbers) but these accounted for 89 per cent of total agricultural income (before interest payments). On the other hand, they received a far smaller proportion of social benefits (21 per cent), again a finding consistent with them being large high income farms.

Table DK4 Denmark: Income of agricultural households in aggregate
Currency units: KR million
Years: 1985 and latest (1988)

	Item / Household group	agric: 1985	agric: 1988	all: 1988
1a	Independent agric. activity - Operating Surplus - Income	12,299 -	10,194 -	10,247 -
1b	Independent non-agric. activity - Operating Surplus - Income	26 -	44 -	35,538 -
	All independent activity - Operating Surplus - Income			
1c	Owner dwellings	253	387	14,698
2	Dependent activity	5,503	5,308	383,415
3	Property and entrepreneurial income	1,801	1,635	22,892
4	Accident insurance claims			
5	Social benefits	1,785	1,758	91,536
6	Other current transfers	131	96	7,894
7	Current receipts - based on Operating Surplus - based on Income	21,799 -	19,423 -	585,647 -
8	Distributed property and entrepreneurial income	8,109	7,726	49,254
9	Net accident insurance premiums			
10	Current taxes on income and wealth	3,980	2,897	185,411
11	Social contributions	231	275	32,576
12	Other outgoing current transfers			
13	Disposable income	9,479	8,524	301,880
	Number of households	83,220	68,894	2,804,021
	Number of household members	220,178	176,025	5,129,778
	Number of consumer units		135,579	4,321,299
	Disposable income per unit (Kr '000): - household - household member - Consumer Unit	 114 43	 124 48 63	 108 59 70

GERMANY

Methodology:

General approach

Model 2 approach. The methodology is essentially as described in the TIAH manual. The starting point is the income aggregates for the private household sector in the national Economic Accounts. These aggregates are distributed among socio-professional groups mainly on the basis of the results obtained from the five-yearly Income and Consumption Sample Survey, the most recent of which are for 1983 and 1988. The updating indicator used is, in most cases, the trend in the corresponding macroeconomic aggregate per receiver unit (ie household, employee, non-active person, pensioner etc). The results are as a rule further modified by aligning them to the macroeconomic data of the Economic Accounts. It is conceded that the results encounter more problems of reliability than is usual for national accounts figures; at the present time it is not possible to indicate the reliability of individual items.

Household unit

Household; comprises persons living alone or persons forming a residential, income and consumption unit. This definition is very largely similar to that used for the Income and Consumption Sample Surveys. Members in addition to the farmer and spouse are included.

Household classification

This is based on the main source of livelihood of the household's reference person (previously known as the head of household). The reference person is nominated by the household itself, following a set list of criteria, both for the annual Microcensus (the most important source of statistics for calculating the demographic reference frame) and for the Income and Consumption Sample Survey. In most cases it will be the person contributing most to the household's income. In the Income and Consumption Sample Survey the reference person's main source of livelihood was ascertained by comparing all potential main income types in gross terms (ie before deduction of tax and social contributions). For entrepreneurial income, depreciation and the balance of commercial interest payments and net rents have already been deducted. In the Microcensus, no information is required on the value of different types of income, so that classification of reference persons has to be based on details of the person's self-declared main source of livelihood and occupational status.

Treatment of reference persons who receive (or are eligible to receive) retirement (old-age) pensions: the income criterion is applied irrespective of the age of the reference person, and the receipt of an old-age pension does <u>not</u> automatically lead to the classification of that household as "non-active".

Equivalence scale

1st adult in household aged 14 years and above = 1, each additional adult = 0.7, children aged below 14 = 0.5. Source: SOEC request for Poverty Related Data, 1988, p8.

Years for which results are available: 1972 to 1988 (incomplete for 1989)

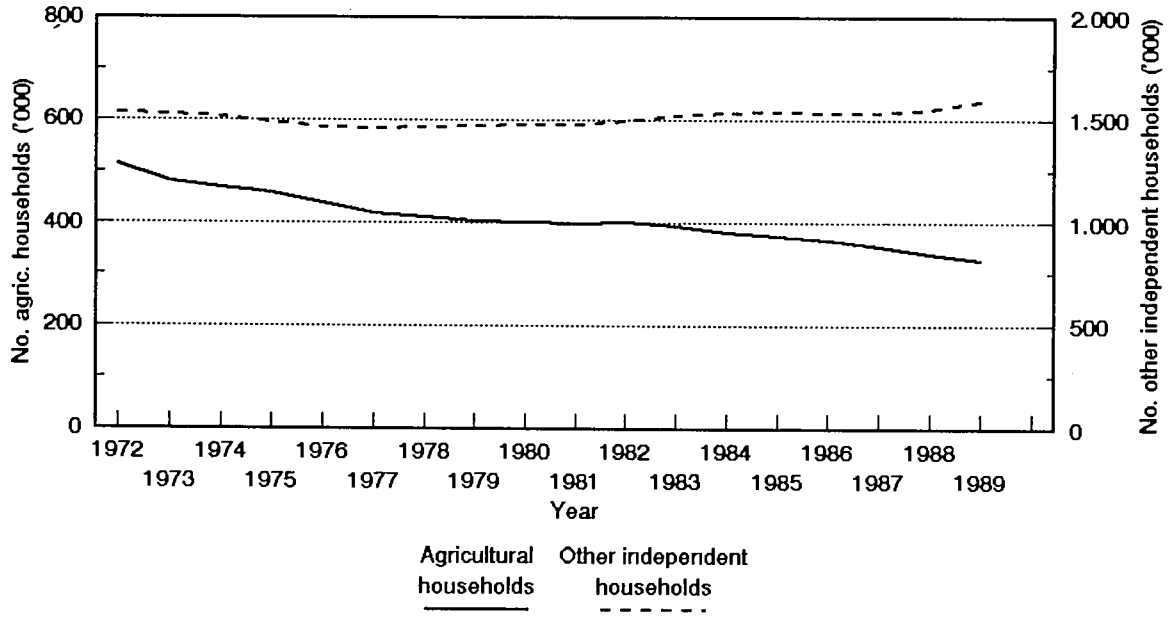
Comments on the results:

(a) Numbers of households

Germany is the Member State with the longest run of results for household incomes (for the Federal Republic as constituted before 3rd October 1990).

Estimates of disposable income (in absolute figures) are published nationally for household groups, of which agricultural households are one. Agricultural households are taken to be those where the main source of income of the reference person (normally the one contributing most to the household's income) is from independent agricultural activity. No results using alternative definitions are available. The number of agricultural households is derived from the results of the Microcensus in combination with employment statistics and information from the farm structure survey. In the Microcensus the reference person of an agricultural household is a person who describes himself as an independent farmer and as earning his/her living mainly from gainful activity. People who describe themselves as farmers presumably do so in years when farming incomes, which are known to fluctuate, are temporarily low. Hence the system gives a greater degree of stability to numbers of agricultural households than would result from an annual reclassification based on income composition. Bearing this in mind, the long time series for Germany enables the falling numbers of agricultural households over time to be followed. Figure D1 shows that, since 1972, the number of agricultural households has been in steady decline, with the pace of loss rather faster since 1983 than in the previous five years. By 1989 numbers had fallen to only 64 per cent of the numbers in 1972. In contrast, numbers of households headed by other self-employed persons rose a little (by 4 per cent) and the total numbers of private households increased by 18 per cent; almost all of this latter increase was accounted for by more households headed by someone who was not in employment.

Figure D1 Germany: Number of households, 1972-89. Agricultural and other independent households.



Some comparison with other information sources showing the numbers of workers in agriculture and with agricultural holdings numbers is of interest. In 1987, when there were 355,000 agricultural households, the Farm Structure Survey found that the number of farm heads was 690,000 and the number of self-employed workers in agriculture was 970,000. Of the 690,000 farmers (who were at the same time farm heads), 393,000 (57.0 per cent) were found to have no other gainful employment and 32,000 had a secondary other employment, leaving 264,000 where the other gainful activity was described as "main"[1]. The first two categories sum to much more than the number of agricultural households reported in the TIAH project (about a fifth more). These total are not necessarily in conflict, since the Farm Structure Survey takes no account of income sources other than gainful activities (that is, pension and property income are ignored) and "main" may imply use of labour input rather than income derived (used in the TIAH methodology). It is also possible for the holder not to be a household reference person. Turning to numbers of holdings, in 1987 there were 670,700 holdings recorded in the Farm Structure Survey, of which 355,400 were of 10 hectares or more. Between 1980 and 1987 holding numbers fell by 15.9 per cent, whereas agricultural households fell by 11.9 per cent.

(b) Composition of total income, and deductions

Figures D2 shows the composition of income for 1985 (a year for which most Member States could produce results for the TIAH project) and for 1988, the latest for which complete data are available. Income from independent activity in agriculture (farming) contributed under half the total income of agricultural households in both years (43 and 47 per cent respectively); the method of classification must be borne in mind when interpreting these figures. In 1987 (not shown, but one in which farming was notably less profitable), the contribution from this source fell to 40 per cent. Other independent income was of minor importance in each year. The second largest source was from dependent activity (wages). Unusual among Member States, Germany was capable of supplying information on the resources flowing towards households from insurance claims. This amounted to 5 per cent of total income; any comparisons of the results for Germany with those of other countries where this flow is not shown will need to take this difference in coverage into account.

Figure D3 shows the deductions from total income for agricultural households for 1985 and 1988, and for all private households for 1985. For the former, deductions left two-thirds of total income as disposable income. The biggest single deduction was for social security payments. Germany was again unusual in that data were available on distributed property income other than that related to independent activity; this is interest on loans for consumer purchases. Most other

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[1] In the Farm Structure Survey the **farmer** is the person for whom and on whose behalf the holding is farmed. The **farm head** is the person responsible for the current, day-to-day management of the holding. In EUR10 in 1987, 97% of agricultural holdings were farmed by farmers who were at the same time farm heads.

Figure D2 Germany:
Composition of total income. Agricultural households. 1985 and 1988

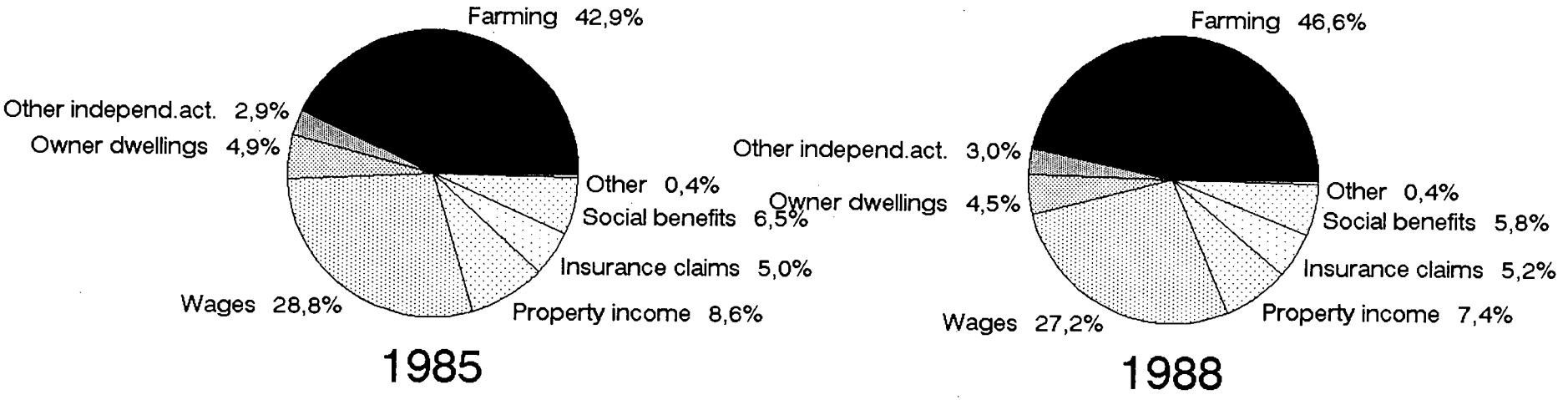
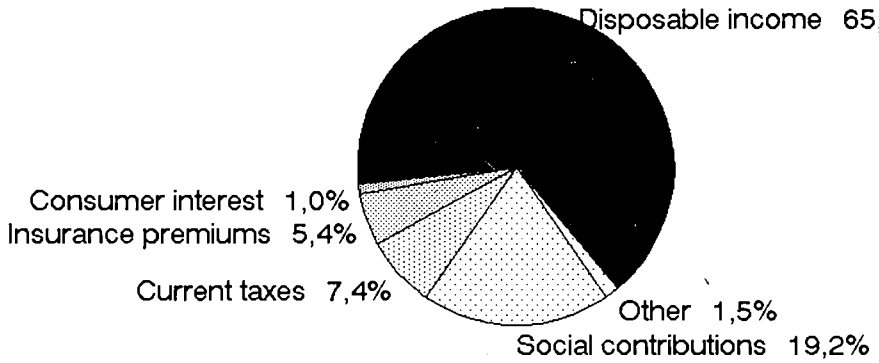
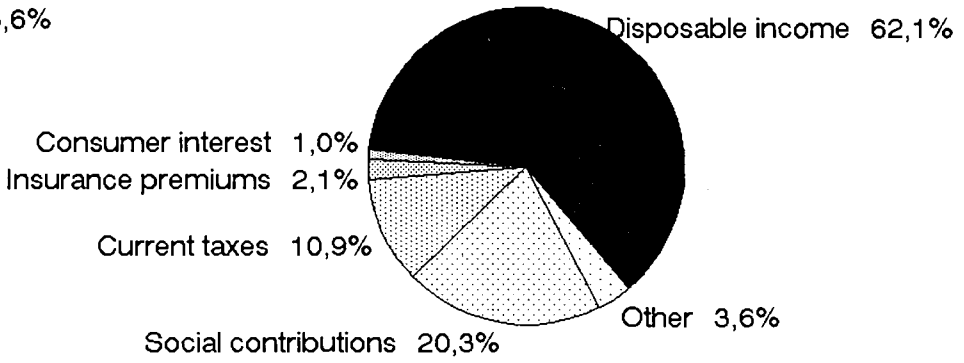


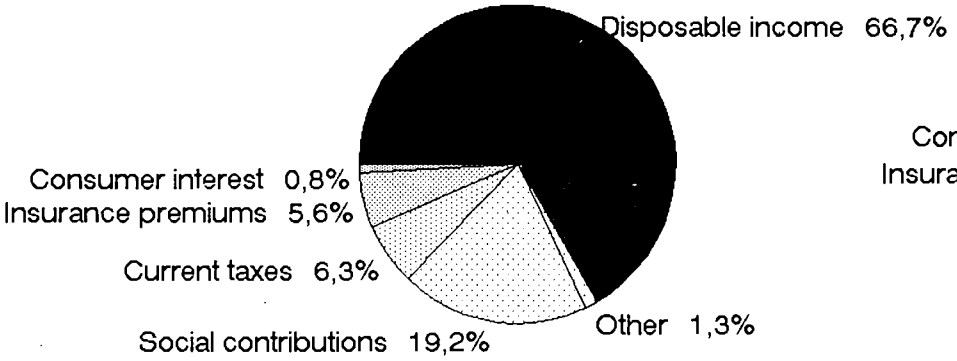
Figure D3 Germany:
Deductions from total income. Agricultural households. 1985 and 1988



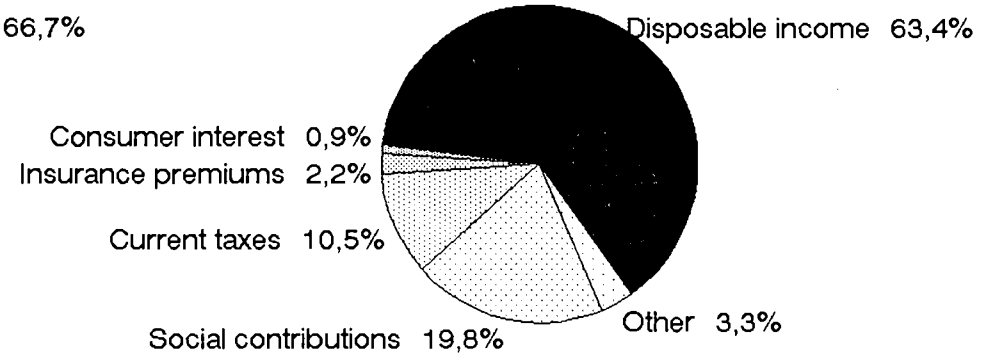
1985
Agric. households



1985
All households



1988
Agric. households



1988
All households

countries either ignore this item (so that it forms part of disposable income) or include it with interest on business loans, deducting it before total income is calculated. Such practices are unlikely to have a major impact; interest on consumer loans represents only about 1 per cent of total income of agricultural households.

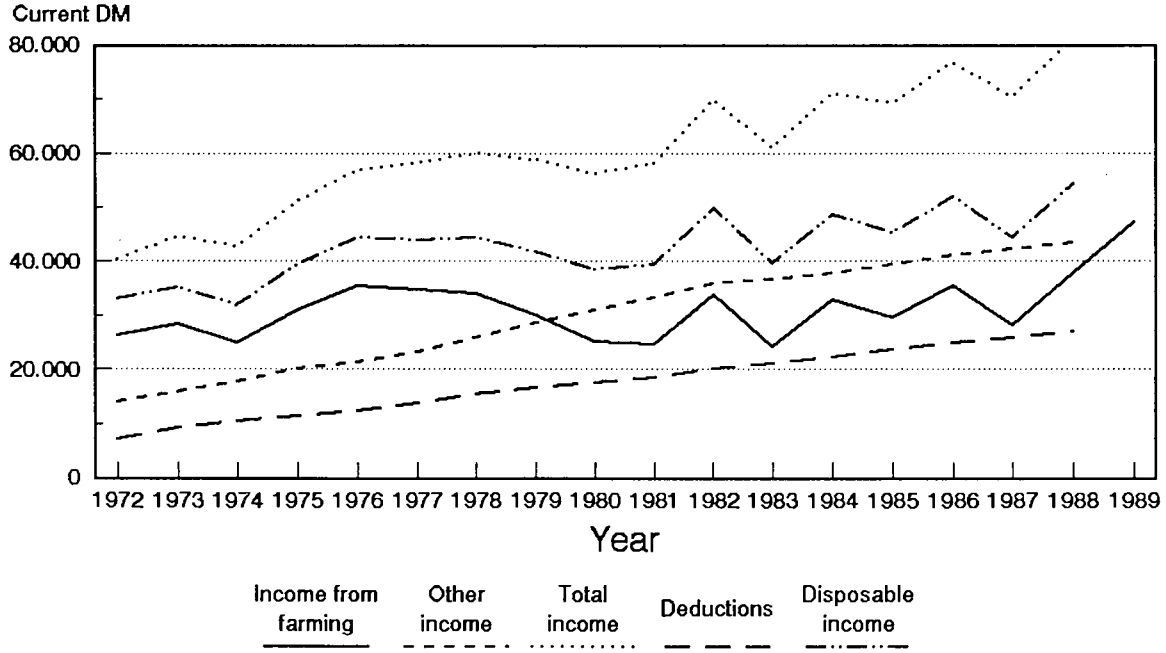
Figure D3 also shows that agricultural households pay a somewhat lower proportion of their incomes in the forms of tax and social contributions (taken together) than the average for all private households.

(c) Developments of income over time

Figure D4 traces income developments for agricultural households from 1972 to 1989, in current money values per household. It shows, separately, income from farming, income from other sources (combined), total income, deductions made in order to calculate disposable income, and disposable income. The following observations may be drawn:

(1) The income which agricultural households gain from independent agricultural activity has grown less rapidly (in nominal terms) than their income from other sources.

Figure D4 Germany: Income per household, 1972-89. Agricultural households.



(2) Since 1980 agricultural households have received less income from farming than from other sources. The substantial improvement in farming income seen between 1987 and 1989 may have caused independent agricultural activity to become the main source for the latter year (it was 47 per cent in 1988), but this is unlikely to represent a reversal to the longer-term position. Full data for 1989 are not yet available.

(3) The stability of the total income of agricultural households has deteriorated in the 1980s compared with the 1970s, and this clearly originates from greater fluctuations in the income from agriculture. Non-agricultural income (per household) has grown in a stable way and adds a degree of stability to the total income situation of Germany's agricultural households.

(4) Even after the deduction of taxes and other negative items from the total, disposable income is substantially greater than the income from farming alone. Disposable income appears to be more stable than agricultural income, though less so than total income.

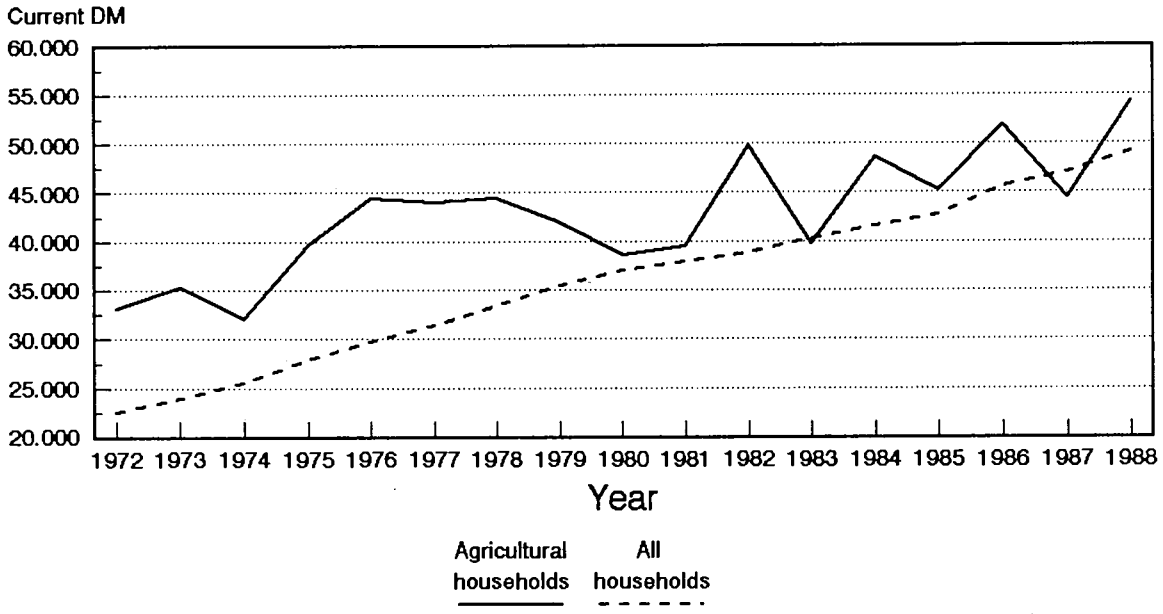
(d) Comparison of incomes with those of other socio-professional groups

In terms of disposable income, agricultural households in Germany have seen a decline in their relative position since 1972. The upper part of Figure D5 (income per household) shows that agricultural households in most years have had higher average disposable incomes than households in general. However the margin has narrowed. The lower part of Figure D5 shows income per household member and per consumer unit. The relative decline of agricultural households is again clear, but on these bases incomes in agriculture are lower than the all-household average. The larger average size of agricultural households holds the key to the explanation.

The information for Germany permits a breakdown of non-agricultural households into five main socio-professional groups; further subdivision is possible. Comparisons of disposable income per household and per consumer unit are shown for 1985 and 1988 in Figure D6. The two most numerous groups of households headed by a person in employment in 1988 were salaried and waged households (5.7m and 5.6m households respectively). However, the non-active households, with 11.5m households, was the largest group overall; nationally there were 26.3m households. On a per household basis, the disposable income of farmers was a little above the national average in both years and exceeded the incomes of salaried and waged households. In contrast, agricultural households had the lowest income per consumer unit of any group, even lower than that of households without a gainful activity. On both criteria, non-agricultural self-employed (independent) households were clearly better off than all other groups, by a factor of three or four times. Though not very numerous in relation to all households (1.6m in 1988) they outnumbered agricultural households in later years by about 4 to 1. These differences highlight the need for careful choice of the appropriate group with which to compare the income position of German agricultural

Figure D5 Germany: Disposable income per unit, 1972-88. Agricultural and all households.

Disposable income per household



Disposable income per household member and per Consumer Unit

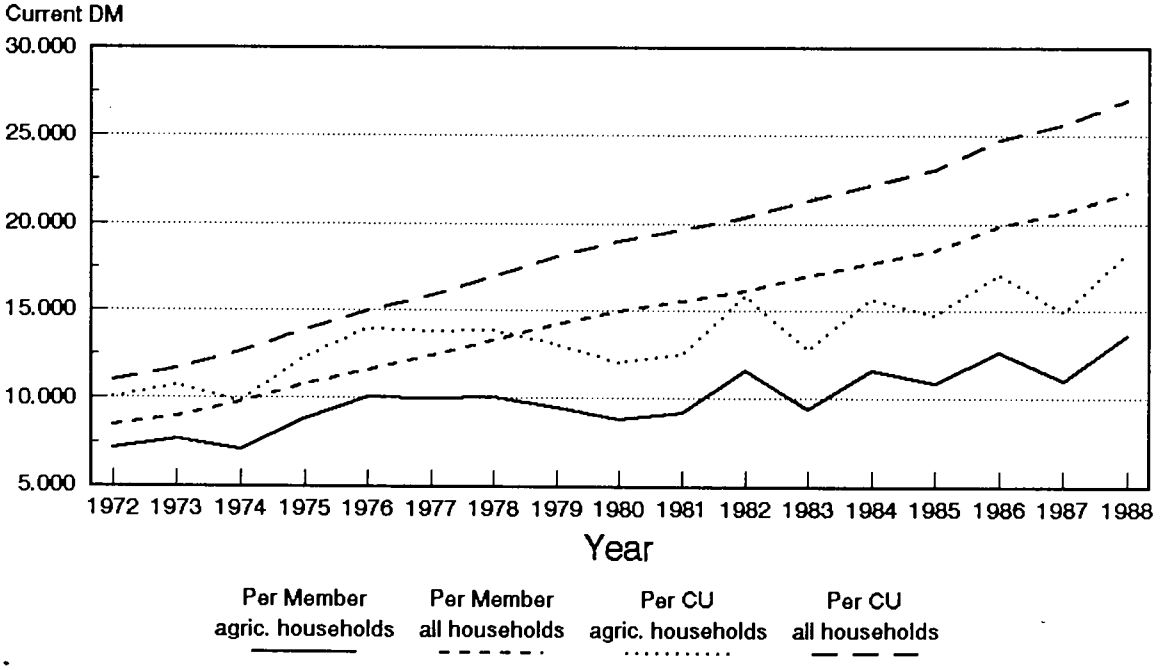
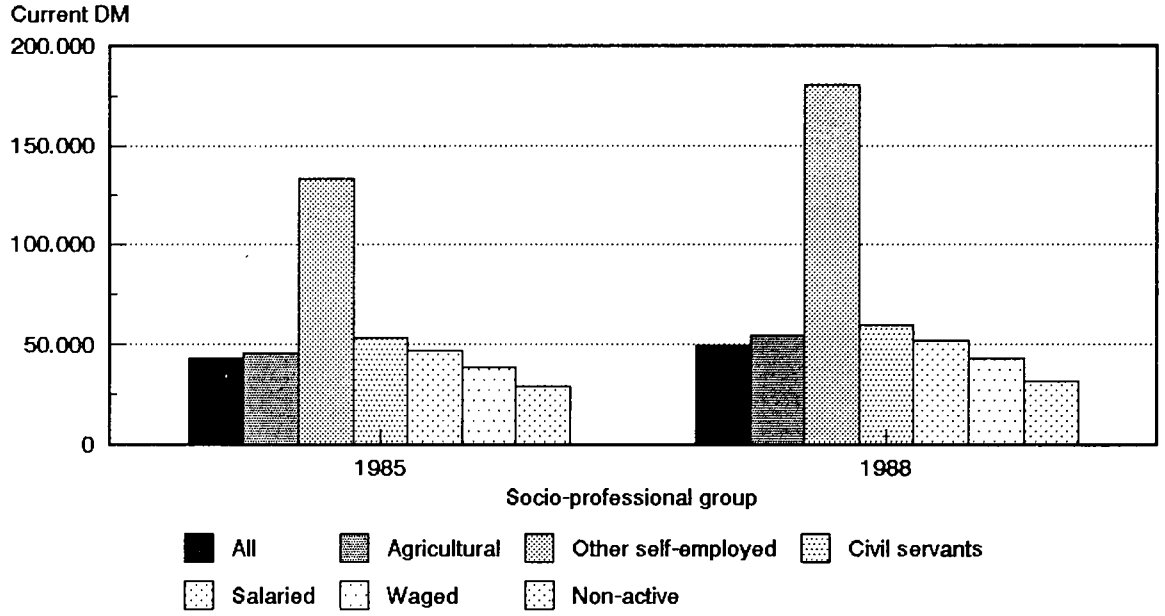
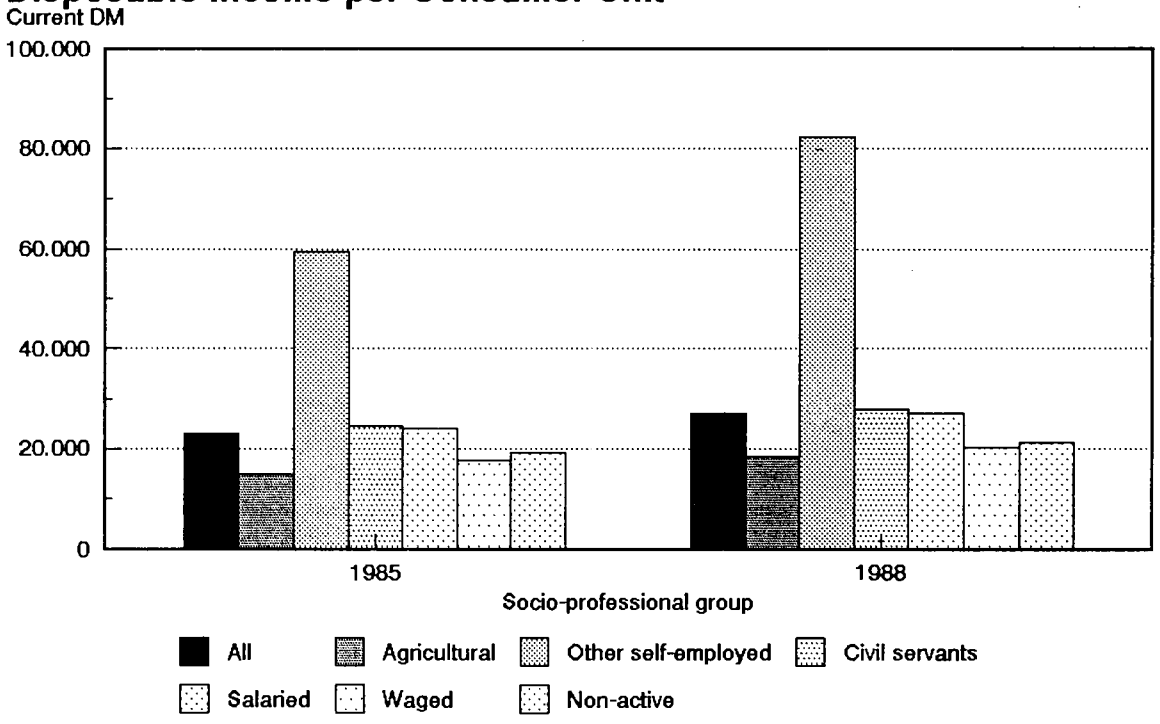


Figure D6 Germany: Disposable income of households classed by socio-professional group. 1985 and 1988

Disposable income per household



Disposable income per Consumer Unit



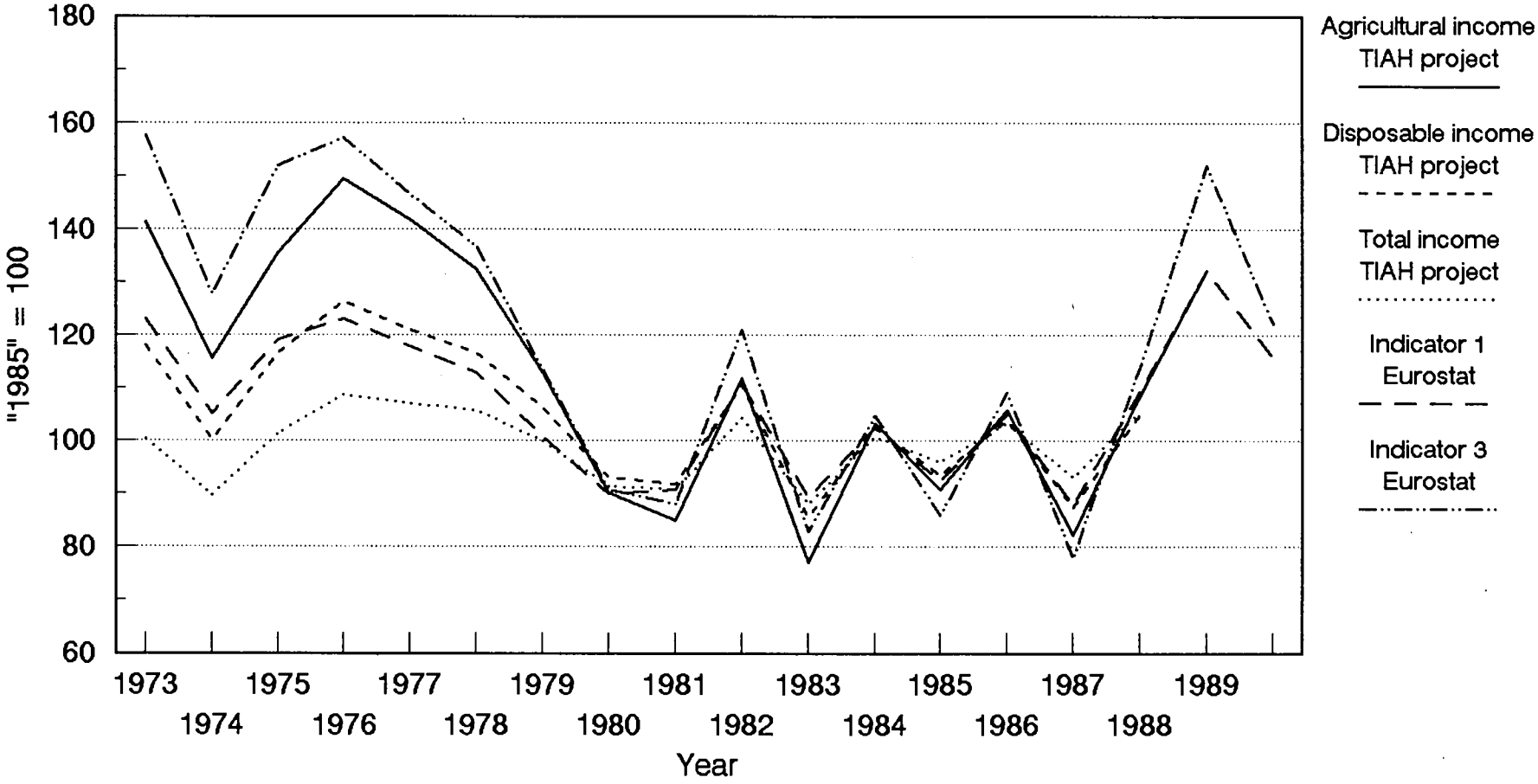
households; German farmers are in a far worse relative position compared to other self-employed households than they are when compared to households in general.

(e) Relationship between Net Disposable Income and Eurostat's existing income indicators

One question which is bound to be raised about the TIAH project is to what extent does its household sector income measurement add to information already available, particularly through Eurostat's Indicators 1, 2 and 3? Figure D7 shows three household income measures (income from agricultural activity, total household income, and disposable income) for Germany in real terms[2] for the period 1973-88 and compares them with Indicators 1 (Real NVA at factor cost per AWU) and Indicator 3 (Real Net Income from Agricultural Activity of Family Labour per AWU of family labour). Each is in index form ("1985" = 100). Full data for 1989 and 1990 are not yet available. As might be expected, the movements of Indicator 3 and of the average agricultural income received by agricultural households are closely similar. Average total household income shows much greater stability than Indicator 3, not only in the short-term fluctuations of the 1980s but also in the decline from the early 1970s. Indeed, though Indicator 3 (and household agricultural income) shows a large fall in real terms to 1980 with little further general change thereafter (at least up to 1988), the real average total household income was very similar in 1987-8 to the level it had been in 1973-4. Disposable income took an intermediate position of stability and, in practice seemed to bear some similarity to Indicator 1 in its movements, though conceptually they are, of course, far removed from each other. The TIAH results for 1989 and 1990 will be awaited with interest, since the sharp changes in income from agriculture shown by Eurostat's Indicators 1 and 3 may not be reflected in equivalent movements in household disposable income.

[2]The deflator used was the implicit price index of Gross Domestic Product at Market Prices in FR Germany, as given in Eurostat's Agricultural Income 1989. This index is used to calculate Indicators 1 to 3. A case could be made that an index of consumer prices should be used for household income (and has been so used nationally in Germany), but for convenience in this exploratory exercise the GDP index has been taken.

Figure D7 Germany: Alternative income indicators.
Indicators from TIAH project and from Eurostat, 1973-89.
Indices of real income ("1985" = 100)



TIAH indicators; per household
Eurostat income indicators; per AWU of total labour input (Ind.1) or family labour (Ind.3)

Table D1 Country: Germany. Income of agricultural households.
Currency units: DM per household
Years: 1985 and latest (1988)

	Item / Household group	agric. 1985	all 1985	agric. 1988	all 1988
1a	Independent agric. activity - Operating Surplus - Income	- 29683	- 464	- 37925	- 535
1b	Independent non-agric. activity - Operating Surplus - Income	- 2020	- 10122	- 2446	- 13267
1c	Owner dwellings	3422	554	3687	765
2	Dependent activity	19922	38400	22109	42500
3	Property income	5942	4018	6038	4020
4	Accident insurance claims	3459	1435	4227	1680
5	Social benefits	4494	12474	4690	13857
6	Other current transfers	266	1106	293	1183
7	Current receipts - based on Operating Surplus - based on Income	- 69208	- 68574	- 81414	- 77808
8	Distributed property income	713	681	692	674
9	Net accident insurance premiums	3717	1456	4549	1694
10	Current taxes on income and wealth	5102	7383	5128	8131
11	Social contributions	13301	13778	15646	15385
12	Other outgoing current transfers	1005	2471	1063	2660
13	Disposable income (per household)	45370	42805	54335	49264
	No. households ('000)	375	25553	342	26279
	No. household members ('000)	1555	59141	1363	59495
	No. consumer units ('000)	1148	47413	1011	47823
13	Disposable income per member	10936	18495	13626	21760
13	Disposable income per consumer unit	14805	23069	18358	27014

Table D2 Germany: Average disposable income per unit. 1972-88

DM current

YEAR	Household agric.	Member, agric.	CU, agric.	Household all	Member all	CU all
1972	33224	7200	10089	22644	8484	11032
1973	35379	7715	10780	24071	9044	11740
1974	32141	7082	9866	25660	9811	12678
1975	39636	8897	12350	27922	10819	13931
1976	44589	10078	13942	29804	11668	14980
1977	44192	10009	13808	31435	12413	15897
1978	44467	10074	13867	33410	13298	16977
1979	42072	9538	13100	35574	14258	18152
1980	38633	8839	12099	37070	14987	19020
1981	39624	9197	12546	38007	15551	19662
1982	49854	11672	15871	38971	16176	20367
1983	39830	9412	12780	40323	17011	21341
1984	48678	11618	15751	41622	17782	22242
1985	45370	10936	14805	42805	18495	23069
1986	51972	12680	17139	45688	19899	24773
1987	44578	11069	14930	47121	20654	25669
1988	54335	13626	18358	49264	21760	27014

Note to the tables for Germany:

The income from independent activity is shown as including retained profits, interpreted as increases in capital value of plant and buildings. Under certain circumstances these can be negative, for example when farmers consume capital by not investing in buildings at a sufficient rate to maintain the capital stock. This may occur in anticipation of retirement from farming. Whether such changes in real stocks should be taken into account or excluded depends on the purpose for which income measurement is taking place. If the intention is to indicate to what extent the income generated from agricultural production is supplemented by non-agricultural income, then these changes should be taken into account. If, however, the main interest is in consumer spending and (cash) saving, then they should be excluded. In the present circumstances, the former is the stronger area of concern. Also, the inclusion of this component for Germany can be supported on the grounds of harmonisation. Though the information from other countries is rarely explicit, it seems that most would include retained profits as part of the income from agricultural activity for the present calculations.

GREECE

Methodology:

General approach

A version of the Model 2 approach is used, but with some similarities to Model 3. For most items, data come from macroeconomic sources (agricultural income from the Economic Accounts for Agriculture, others from national accounts), distributed between agricultural and non-agricultural households. For other items not obtained in this way, data come from the Family Budget Survey (1982 and 1988) after being grossed up; interpolation was used for non-Survey years. Examples of items covered in this manner included financial assistance to households from friends or relatives living in Greece or abroad, and contributions to churches and charitable institutions. The FBS also provides distribution agents for the economic aggregates; other agents (for distributing income tax and social security contributions) come from the Statistics of Declared Income of Natural Persons (tax returns), published annually.

Household unit

Household; comprises all persons living under the same roof. This includes the head, wife, dependent members (young, disabled and elderly), but also adult and financially independent members who are still living with the family. Calculations using an alternative household definition are possible, in which the financially independent members are excluded.

Household classification

Two classification systems are available for comparative purposes. The first is based on the main employment (occupation) of the head of household, as declared to the Household Income Survey (Family Budget Survey). The second is based on the main source of income of the entire household. Classification can be applied to both broad and narrow concepts of a household. For the purpose of the FBS, agricultural activities also includes forestry and fishing.

Treatment of reference persons who receive (or are eligible to receive) retirement (old-age) pensions: classification is according to how the reference person declares himself/herself.

Equivalence scale

Head of household = 1.0; other members of 14 years and over = 0.7; members under 14 years = 0.5.

Years for which results are available: 1982 to 1988, each year

Comments on the results:

Greece is one of those countries for which there were no existing procedures for estimating the disposable income of agricultural households. Consequently, the TIAH project involved setting up a such a procedure. At present, while the framework is established, there are gaps in the coverage of particular items in the chain of calculation leading to disposable income. In particular, income (or operating surplus) from independent activity outside agriculture is not covered, the reason being that there are large discrepancies between the relevant magnitudes in the national accounts and in the Family Budget Surveys (the distribution agent). Such income is under-reported in the FBS by about 30 per cent, partly by a propensity to conceal income out of fear that the information might be used for fiscal purposes, and partly because of the considerable time lag between receipt of income and its declaration. There are also some differences between the

coverage of items for agricultural households and for non-agricultural households, which erode the validity of comparisons. The seriousness of these differences are difficult to assess, but the initial impression is that it is not large.

For these several reasons, it is not possible at this stage to give other than broad indicators of the income situation among agricultural households in Greece.

(a) Numbers of households

Four definitions of agricultural households can be used in Greece for the estimation of income. Two bases of classification can be employed (the income composition of the entire household, or the main occupation of a reference person as declared to the Family Budget Survey) and these criteria can be applied to either a broad or narrow concept of the household. In the former, which corresponds to the "target" methodology, the household is taken as consisting of all persons living in the same dwelling, that is, the head, his/her spouse, dependent family members (children. persons unable to work, and elderly people), together with financially independent cohabiting adults. Agricultural households are those where farming (self-employment in agriculture) is the household's main income source. The narrower concept differs in that, of the independent adults, only those members working in the family business (on the agricultural holding or, in the case of non-agricultural households, in the family's small industry or shop) are included. Hence, financially independent members working off the holding are excluded. Both classification and income measurement can be based on either the broad or the narrow household concept. It should be noted that the TIAH methodology includes only the broad definition. Estimates of numbers and incomes using the narrow definition are included here, but only for comparative purposes.

Table ELL1 shows the numbers of households, household members and consumer units which each definition of an agricultural household produced for 1985.

Table ELL1 Greece: Numbers of units resulting from alternative definitions of the agricultural household. 1985

Classification criterion Type of household/ classification system	No. households	No. household members	No. consumer units
Broad household Household main income source	500,250	1,837,000	1,337,275
Broad household Reference person occupation	437,750	1,637,750	1,192,350
Narrow household Household main income source	325,000	1,540,500	1,174,525
Narrow household Reference person occupation	268,500	1,410,250	1,033,100

The results do not fit closely with the experience gained in other countries.

Contrary to findings elsewhere, the use of a reference person classification system (where agriculture is the person's main occupation) produced lower numbers households and other units than a system based on the main source of income of the entire household. One possible explanation is that the use of Eurostat's "target" methodology causes some households to be classified as agricultural which otherwise would fall outside this group because the head considers himself to be retired. Similarly, the impact of using a narrower household concept is not as might be expected. Such differences require additional information on the nature of the households covered before a fully satisfactory explanation can be arrived at.

Another feature of Greece is the contrasting movements over time in the numbers of agricultural households produced by the two classification systems. A reference person (main occupation) system saw substantial falls between 1982 and 1988, the base years of the Family Budget Surveys (Table ELL2). This is in line with the finding of the Farm Structure Survey; numbers of holdings fell by 9 per cent between 1980 and 1987. However, the number of agricultural households found by using the income criterion was either almost static over the period (narrow household definition) or rose by some 9 per cent (broad household definition). Such an increase could be a reflection of the rise in real incomes from agricultural activity experienced in Greece between these years (Eurostat's Indicator 3 also rose by 9 per cent), but there may be other explanatory factors.

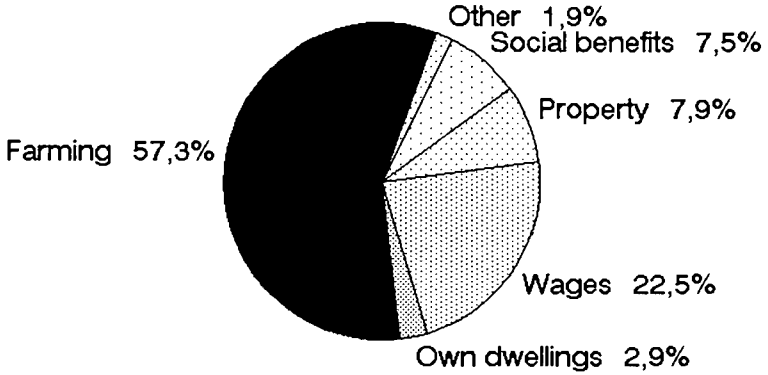
Table ELL2 Greece: Estimated numbers of agricultural households in base years of the Family Budget Survey

Classification criterion Type of household/ classification system	No. households 1982	No. household 1988
Broad household Household main income source	479,500	521,000
Broad household Reference person occupation	470,500	405,000
Narrow household Household main income source	327,500	322,500
Narrow household Reference person occupation	317,500	219,500

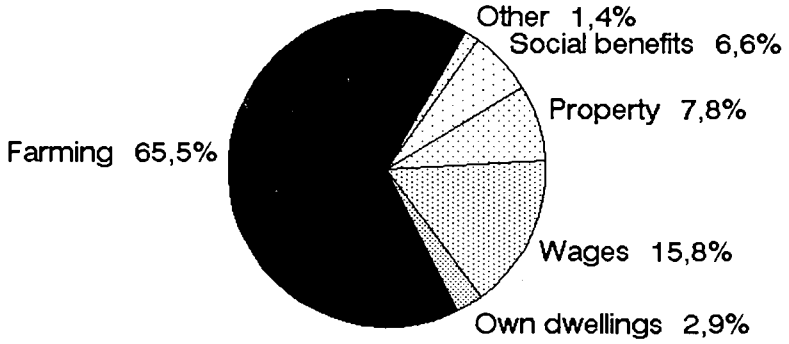
(b) Composition of total income, and deductions

Figure ELL1 shows two sets of diagrams for the composition of and deductions from total income for agricultural households in 1985, each using the broad household concept but one based on the "target" classification system (where self-employment income from agriculture is the main income source) and the other on the occupation of the head of household (the reference person). For this analysis,

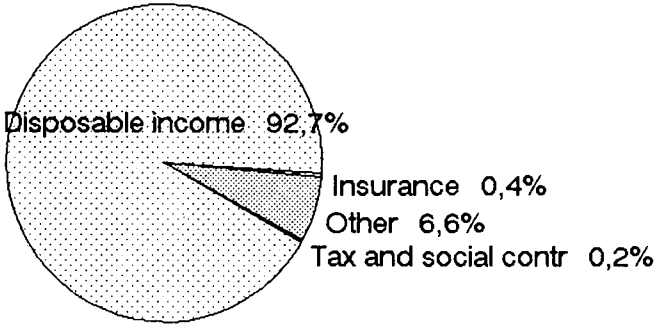
Figure ELL1 Greece:
Composition of total income, and deductions.
Agricultural households. 1985



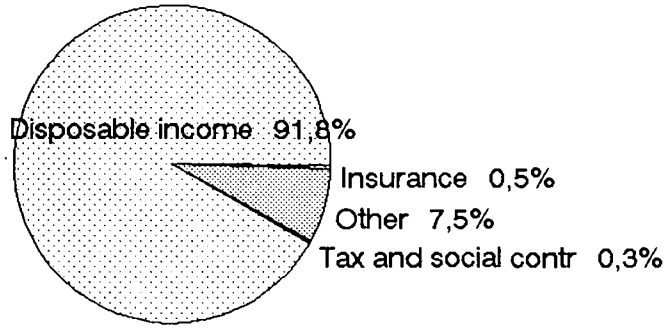
Composition
"Target" definition



Composition
Reference person

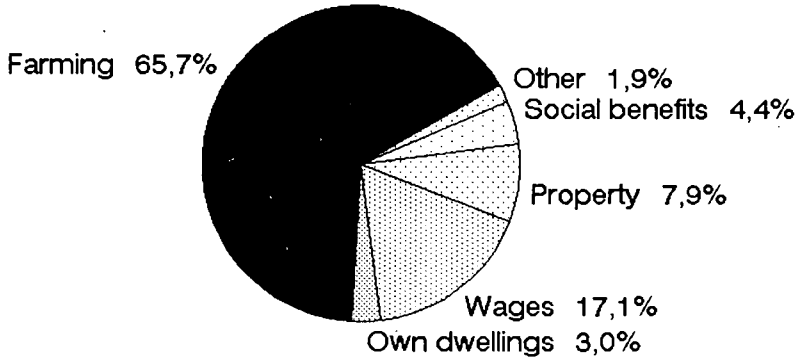


Deductions
"Target" definition

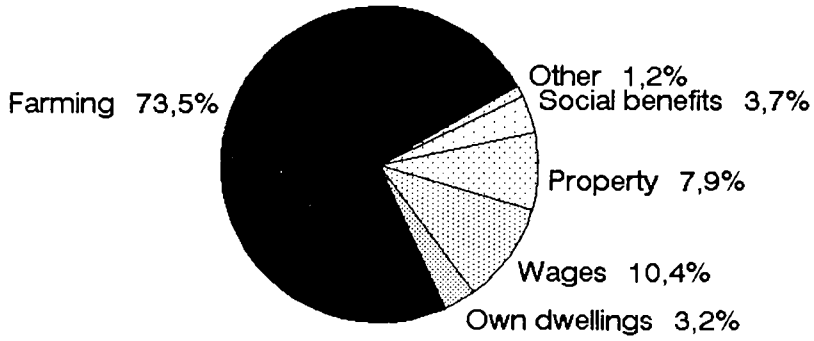


Deductions
Reference person

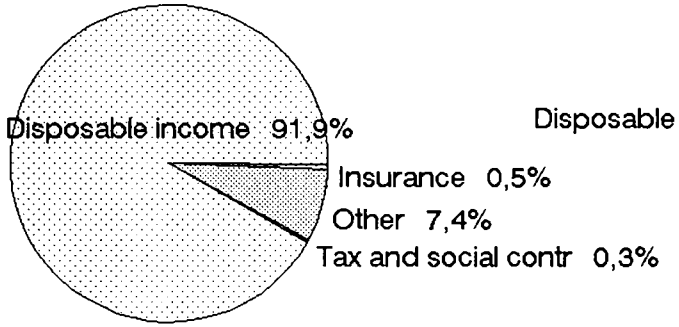
Figure ELL2 Greece:
Composition of total income, and deductions.
Agricultural households (excluding independent adults). 1985



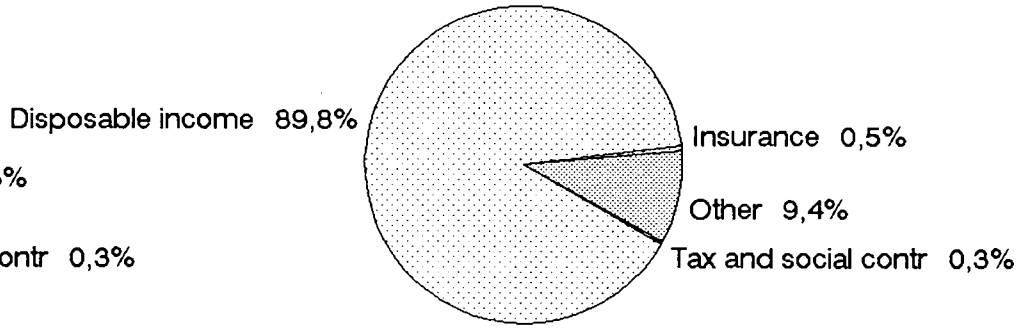
Composition
Main household income



Composition
Reference person occupation



Deductions
Main household income



Deductions
Reference person occupation

operating surplus has been converted to income by deducting rent and interest payments. It should be recalled that income from non-agricultural independent activity is not yet covered in the information from Greece. With this in mind, from Figure ELL1 it is clear that agricultural households received a substantial minority of income from sources other than from farming. Income from independent agricultural activity constituted only between half and two-thirds of the total in agricultural households. The second most important source was wages, rather more so when using an income criterion classification system than a reference person one, a somewhat unexpected result. In both systems, more than 90 per cent of total income remained as disposable income, with tax and social contributions accounting for less than 0.5%. Figure ELL2 shows a similar analysis, but using the narrow household concept and excluding financially independent members who did not work on the holding. As would be expected, the share of income coming from agriculture was greater when these people were excluded, but rose to not more than three-quarters of total income.

(c) Comparison of income levels

The various ways of defining agricultural households produced different levels of income per unit (household, household member, consumer unit). Using the broad household concept gave very similar incomes per household irrespective of the classification system used (Figure ELL3, in which the heights of the columns indicate levels of income). The narrow household concept produced a more varied picture, but when differing household sizes are taken into account, the level of income per member or per consumer unit was very similar whichever approach was taken. Although strict comparability between income measurement between agricultural and other household groups cannot yet be achieved, the familiar picture found in other countries appears to hold true for Greece. Average disposable income per household (broad concept) was higher in agricultural households than for all households together, but the income per member and per consumer unit was lower, although only marginally (Figure ELL3).

(d) Developments over time

Estimates of disposable income (and its constituent parts) are available for Greece for each year from 1982 to 1988. The average incomes of agricultural households (reference person classification system) have been plotted, in current money values, in Figure ELL4. The Figure shows the average income obtained from agricultural activity, from non-agricultural sources, the total income and disposable income, together with the average disposable income of all households. The labelling of the vertical axis has been deliberately left imprecise. The most significant features are the smoothness of the lines and the stability of the relationships between them. Over this short period there has not been any substantial income variation, even in the agricultural income component, nor any marked change in the balance of income from farm and other sources (together), nor any clear shift in the income position of agricultural households compared to households in general.

Figure ELL3 Greece:
Disposable income per unit.
Alternative definitions of agricultural households. 1985

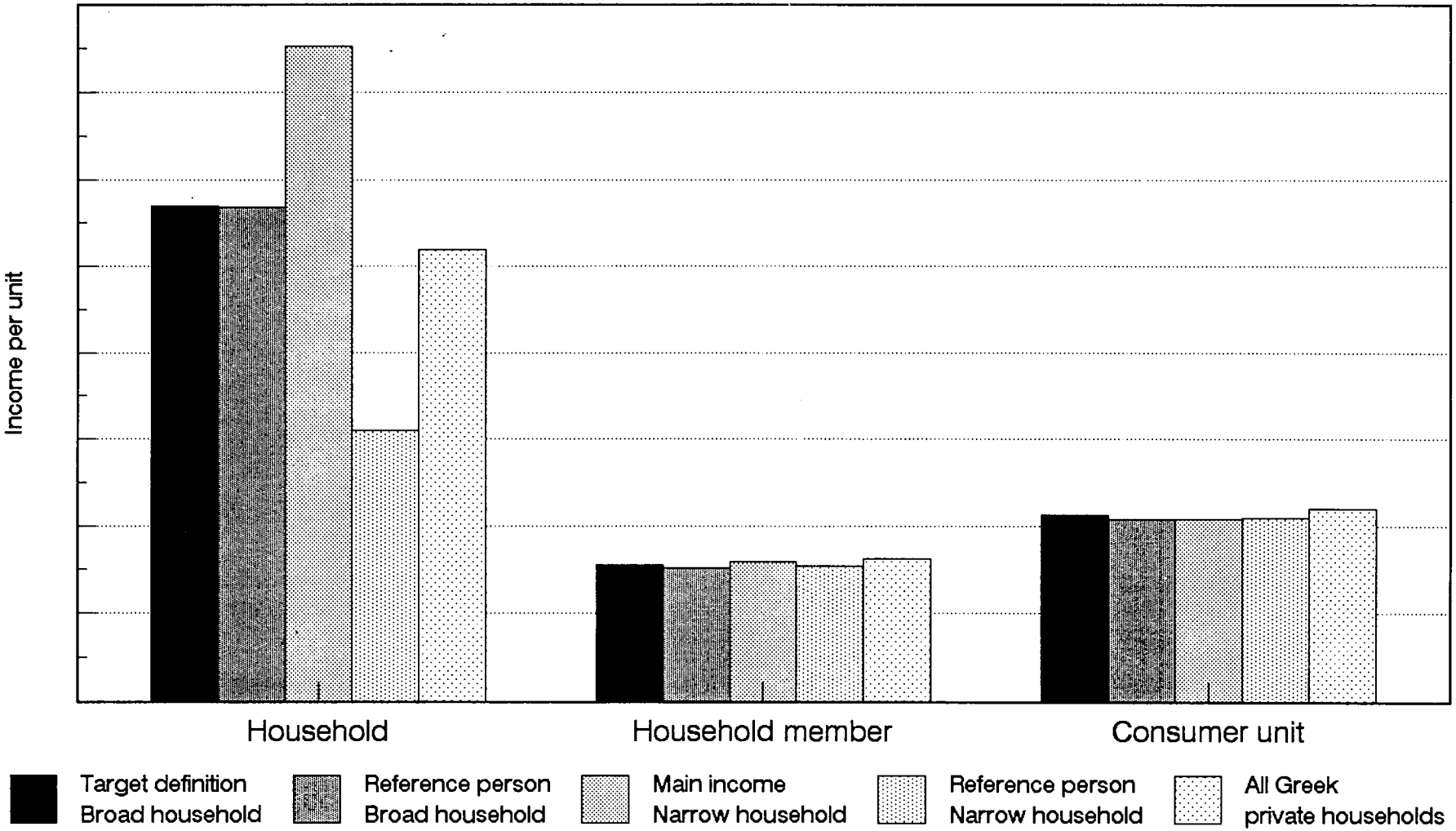
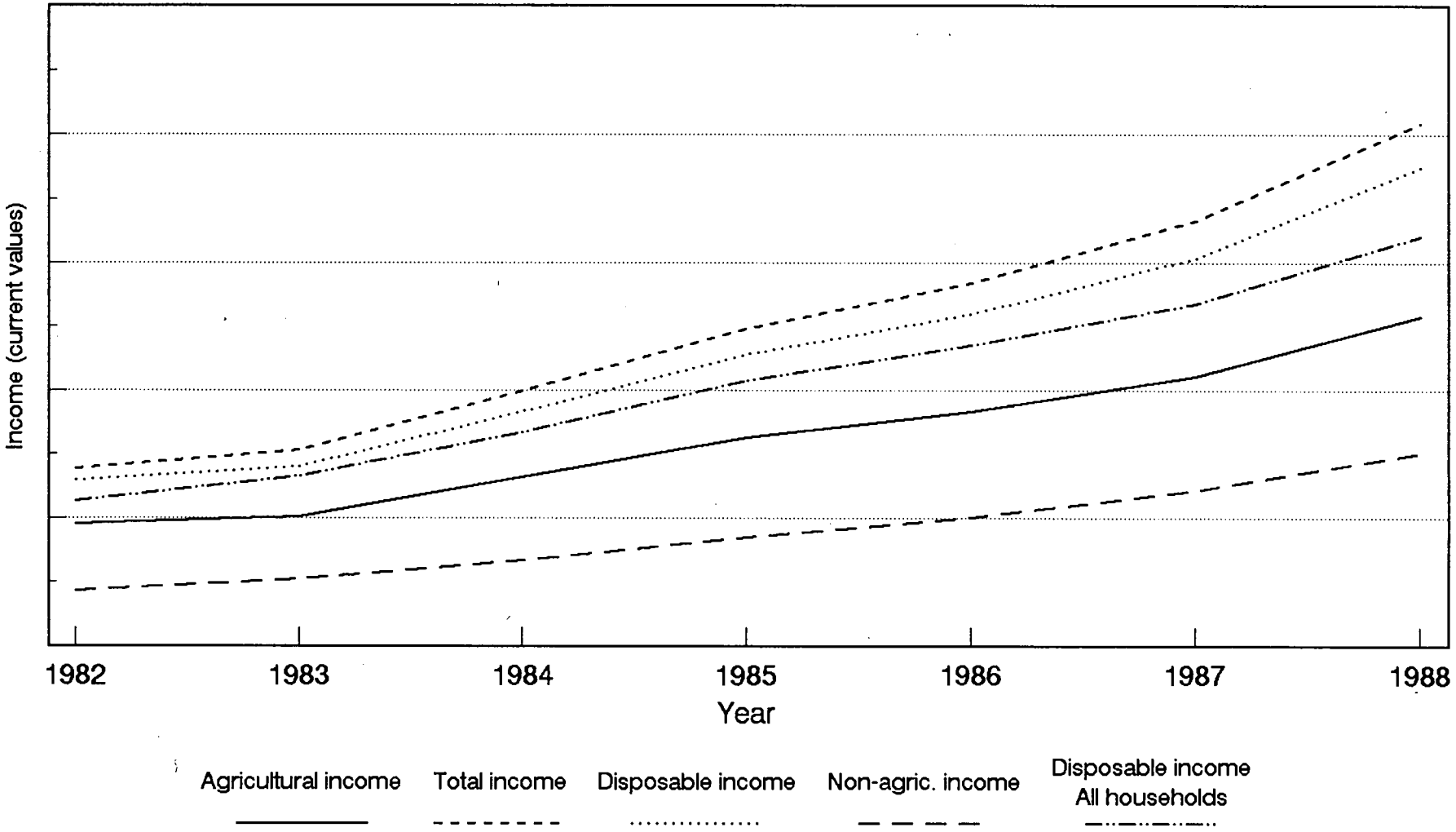


Figure ELL4 Greece: Income per household, 1982-88.
Agricultural households *



* Agriculture is occupation of reference person

SPAIN

Methodology:

General approach

Model 2 approach, but with some features of Model 3. First the structure of income is established for agricultural and non-agricultural households in a base year. For this purpose the Net Operating Surplus of households from independent agricultural activity is derived from the national accounts of the agricultural branch. It is distributed between agricultural and non-agricultural households on the basis of standard gross margins for these types of household taken from the agricultural census. Most of the other items are taken from the basic Family Budget Survey, or the FBS is used to distribute aggregates between agricultural and non-agricultural households. Adjustments are made for known under-reporting of some items. The final step is to make the results of each item compatible with the equivalent aggregate in the household sector accounts within Spain's national accounts.

The latest base year of the Family Budget Survey is 1981 (data from the 1990 FBS is not yet available). Extrapolation for the period 1982 to 1986 is done on the hypothesis that the distribution key between agricultural and non-agricultural households remained constant vis-à-vis 1981. This key is applied to the values of the components in the household sector accounts within national accounts for the years 1982 to 1986.

Household unit

Household: in the 1980-81 Family Budget Survey the household is defined as the person or group of persons jointly occupying a family housing unit or part thereof and consuming foodstuffs and other goods paid for from one and the same budget. Other data sources (mainly the agricultural census) use slightly different household definitions, but these discrepancies do not pose a significant problem.

Household classification

Based on the head of the household. In the FBS, the head is the member whose regular contribution to the common budget is currently the largest. Agricultural households are those whose head is an employer, entrepreneur without employees or self-employed worker working in arable or livestock farming, forestry or fishing, hunting and the like, where the business does not constitute a type of trading company. In the FBS, where a person has several occupations and there is doubt which is the main occupation, the one providing the highest income is recorded. However, to derive the NOS from independent agricultural activity, a classification system from the agricultural census is used; in this the agricultural household is one in which one of its members is the holder (natural person) running a holding with at least 1 ha UAA (or with no land at all), whose main occupation (defined in terms of time) is work on the holding.

Treatment of reference persons who receive (or are eligible to receive) retirement (old-age) pensions: a person who declares himself/herself to be a farmer is classed as such.

Equivalence scale

"Oxford" or CREDOC-INSEE scale: Head of household = 1.0; other persons over 14 years old = 0.7; other persons, or those of 14 years and under = 0.5.

Years for which results are available:

1981 to 1986, each year; estimates for 1982 to 1986 are updates based on the structure of income found in the 1981 base year.

Comments on the results

Spain had no pre-existing system for estimating the net disposable income of agricultural households, either in aggregate or per unit (household, household member or consumer unit). There were several of surveys covering households which could be used to obtain partial information (numbers, composition, some aspects of income and expenditure, sizes of holdings). In practice, the estimates for 1981 are derived from combining the household sector account and the agricultural branch account, both belonging to Spain's national accounts, with the Agricultural Census and the Family Budget Survey. In order to construct the account, some assumptions have had to be made (such as on the acceptability of using items in the FBS as distribution agents) which will need further empirical investigation. However, the final results have the advantage of being reconciled with national accounts.

One important characteristic which must be noted is that the estimates of aggregate disposable income for agricultural households for years 1982 to 1986 are updates of the 1981 results. This updating assumes that the structure of income for agricultural households (both positive and negative items) remained constant at the proportions found in 1981. These proportions are applied to the household sector accounts for the years 1982 to 1986. Thus there is no purpose, when describing income developments over time shown by the results for Spain, in looking for changes in the composition of income; by definition these are fixed. Changes in the income of farming activity, as shown in the Economic Accounts for Agriculture and Eurostat's Indicators 1 to 3, are not reflected in the updated results. This updating procedure is also likely to be a matter for further discussion.

(a) Composition of total income, and deductions

Figure ESP1 shows the composition of income, and deductions leading to disposable income, for 1981. Though data for later years are available, the method used for updating means that the proportions are identical. Following the practice adopted in displaying this information for other Member States, Operating Surplus from independent activity (agricultural and other) has been converted to an income concept by deducting all interest payments (both that on loans for farming purposes and on loans for consumption spending, there being many practical difficulties in separating the two). As no breakdown of interest between agricultural and other independent activities is available, this has been distributed in proportion to Operating Surplus.

On this basis, in 1981 independent activity in agriculture (farming) was responsible for just under half the total income of agricultural households in Spain. (Excluding interest paid on loans for personal consumption from the income calculation, as shown in the results for 1982-6 for Spain, did not change this picture; the share was only raised from 45 to 46 percent). Adding the income from other independent activity raised the proportion coming from self-employment to just over half (53 per cent). The second largest source was social benefits, followed by wages.

The deductions from total income were small. Taxes and social contributions together accounted for only 6 per cent. Disposable income formed 90 per cent of total income. Compared with the all-household position in Spain, agricultural households paid a smaller proportion of their income as taxes and a much smaller proportion as social contributions. Only 77 per cent of the all-household total income remained as disposable income.

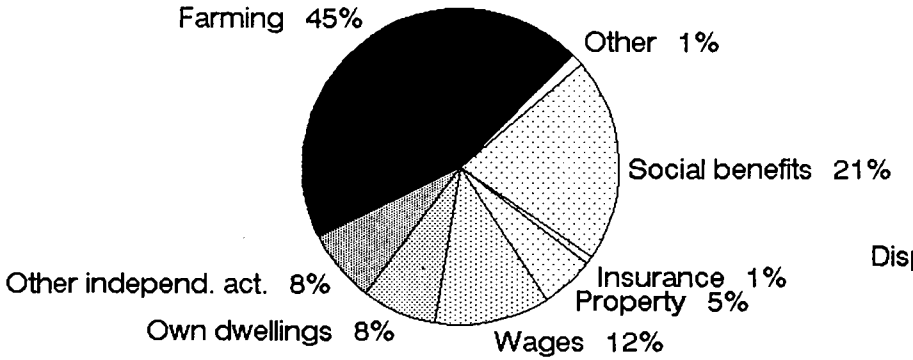
(b) Income developments over time

In view of the manner of updating, the picture of income developments over time shown in this first set of results from Spain is simply one of straight lines (Figure ESP2). The Figure serves only to illustrate that the income from agricultural activity is lower than from non-agricultural activities (together), with both total income and disposable income at substantially higher levels. Though the income structure is fixed, there have been changes in the numbers of households which enable some results to be obtained on the movement of relative incomes over time, described below.

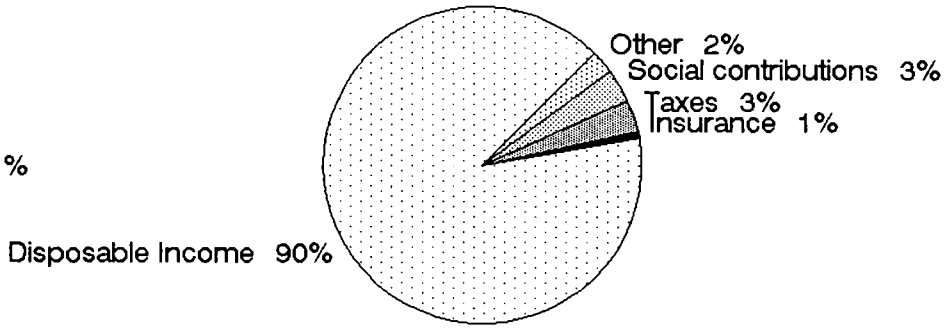
(c) Comparison of income levels

Considerable effort has been used in Spain to estimate the changing numbers of agricultural and non-agricultural households over the period 1981 to 1986. Information on the number of agricultural households, and the members and consumer units they contained, is available for 1981 and 1986 (though not for intermediate years). The total numbers of households for these two years are also known (though not their members or consumer units). Incomes per unit, for agricultural households only, are shown in Figure ESP3. Preliminary estimates of incomes per household for all households together have been prepared for comparative purposes but these are not published. The shortcomings and gaps in the methodology and data used mean that such results must be regarded with the utmost circumspection at this stage.

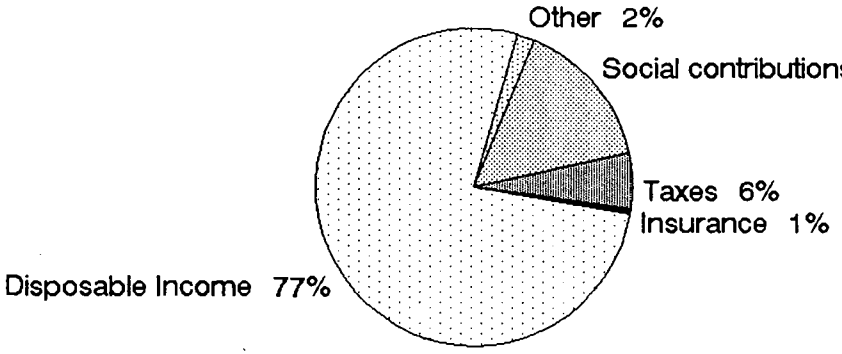
Figure ESP1 Spain:
Composition of total income, and deductions.
Agricultural households and all households. 1981



Composition
Agric. households



Deductions
Agric. households



Deductions
All households

Figure ESP2 Spain:
Development of aggregate income, 1981-86. Agricultural households

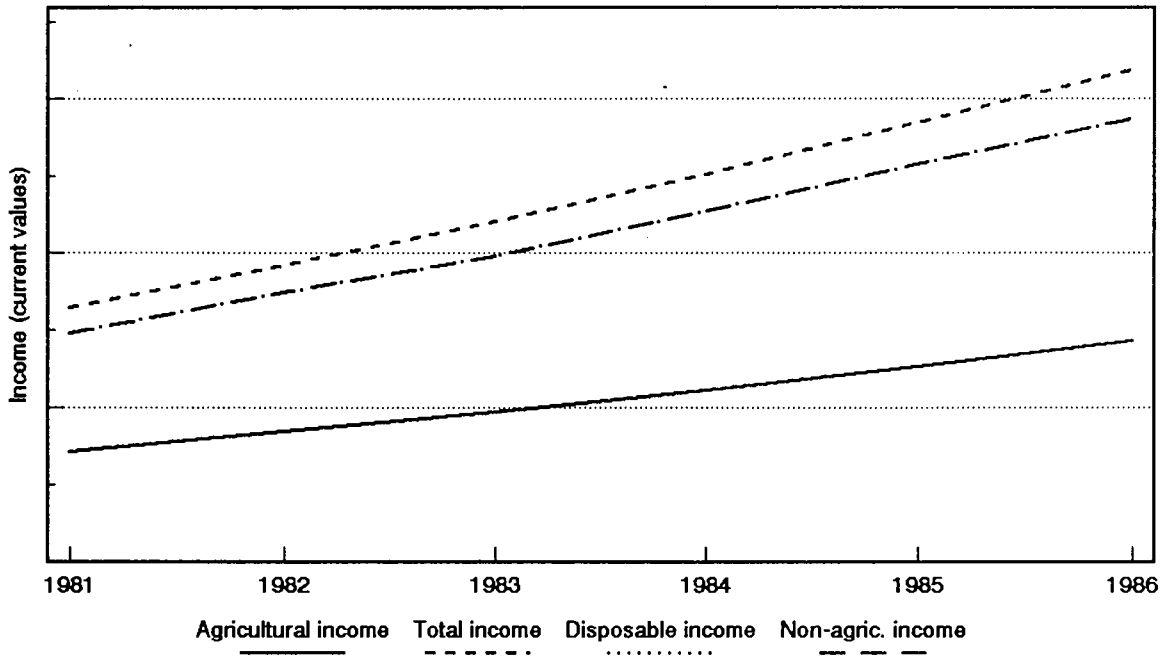
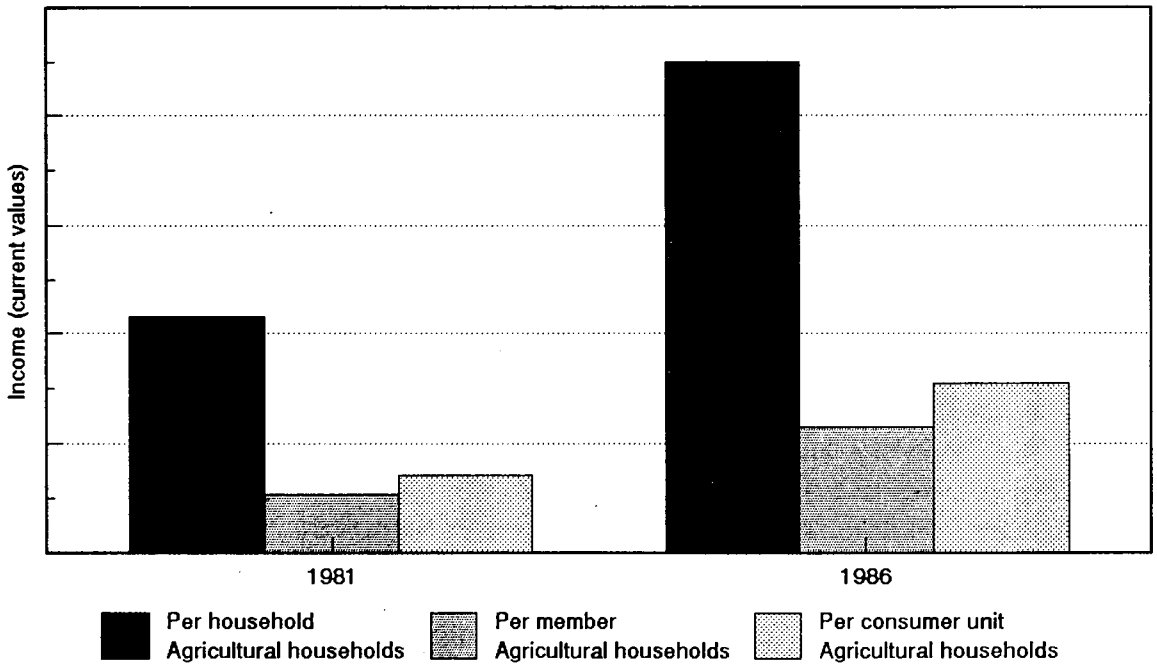


Figure ESP3 Spain: relative income levels.
Disposable income per unit. 1981 and 1986



FRANCE

Methodology:

General approach

Model 2 approach. The starting point is the income aggregates for the private household sector in the national accounts. Agricultural (gross) income is obtained from the Gross Operating Surplus of sole agricultural proprietorships by adding payments by cooperatives and subtracting interest on loans, rents and social-contributions. Subdividing the household sector account into socio-professional groups utilises mainly information coming from surveys of taxation revenue; this is used as the distribution agent for the allocating the economic aggregates relating to the whole sector. Other distribution agents are taken from surveys on "Financial Assets", the Family Budget Survey, on health spending and on housing.

The base year for the present calculations is 1984. For subsequent years the weight allocated to each type of household (in constructing national estimates) is adjusted using the annual employment survey. The components of income in the all-household account are adjusted using data from various sources (for example, the annual declaration of social data, retirement funds, national accounts). The main source of distribution agents (the survey on taxation information) is updated annually from its 1984 base, but the other surveys are not; it is assumed that the structures they showed in their various base years do not alter.

Household unit

Household: all occupiers of the same private fixed dwelling occupied as a main house, whatever the links between them.

Household classification

Based on the reference person; where the household consists of a single family, this is usually the husband. Grouping is made according to the industry in which the reference person declares himself/herself to be primarily active.

Treatment of reference persons who receive (or are eligible to receive) retirement (old-age) pensions: classification is according to the profession reported by the reference person. Persons are <u>not</u> automatically classed as "inactive" if they receive a retirement pension; this depends how they report themselves. There is evidence to show that farmers in receipt of a retirement pension whose income from farming is lower than the pension most frequently state that they are "inactive"; therefore their households will not be classified as being agricultural.

Equivalence scale

Reference person = 1, additional persons of 14 years and over = 0.7, children (less than 14 years old) = 0.5.

Years for which results are available: 1984 to 1989 (on a comparable basis)

Comments on the results:

The first report on the TIAH project (Hill 1988) found that an income account for the socio-professional group "farmers" has existed in France since 1956, and it is considered by the national statistical authorities as being relatively reliable and very consistent. Agricultural households form one of several occupation groups into which the household sector's distribution of income account is completely subdivided. A first series provided published estimates for 1956, 1962, 1965 and 1970. A second series, established in base 1971 of the national accounts,

provided estimates for 1970 and 1979 (with a non-comparable set for 1975). A further series was based on 1979 data and gave published results up to 1983. Figures for 1956 to 1983 were given in the earlier TIAH report. The latest set of results, given here and which form part of the TIAH project, is based in 1984.

There are some particular features of the methodology used in France which merit attention. First, as part of its disaggregation of the household sector, France uses a classification system in which agricultural households are those where the reference person declares himself/herself to be primarily active in this industry[1]. The criteria on which the reference person decides which is his main occupation cannot be known precisely, but it is felt that time rather than income is the predominant factor in the mind of the household head. This classification system is common to all the household surveys conducted by the Insitut National de la Statistique et des Etudes Economique (INSEE), including the population census. It therefore has the virtue of consistency. It is also less subject to fluctuations in numbers of agricultural households than systems which simply consider the proportion of income coming from farming; a reference person who considers his main occupation to be in agriculture is unlikely to revise his opinion in the face of short-term ups and downs in agriculture's technical or economic conditions. However, such a system, while appropriate in the context of making comparisons between socio-professional groups, is not capable of permitting income estimates to be constructed for all households which engage in agricultural production (a "broad" approach to what constitutes an agricultural household). In 1979 there were 860,000 agricultural households, against 1,250,000 family agricultural holdings, suggesting that about one third of all holdings were operated by households where the reference person felt that his main occupation was <u>not</u> in farming. By 1987 the number of agricultural households had fallen to 660,000 and the number of holdings to 912,000.

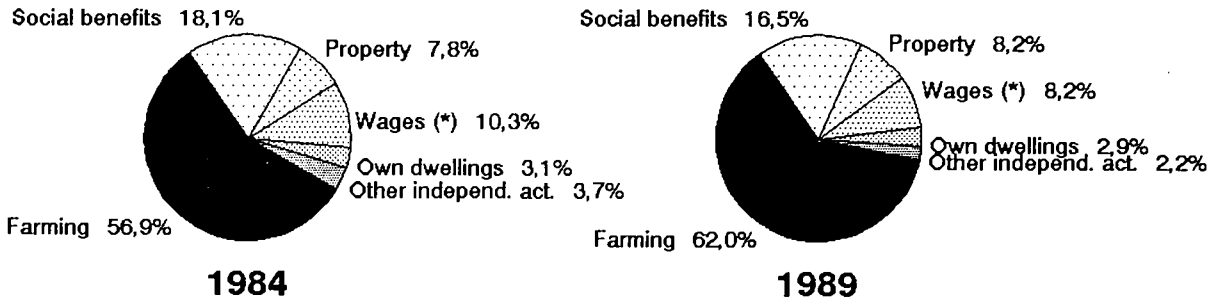
Second, the special treatment of social contributions in France (incomes are shown net of such payments) and of rents received and production from family gardens (see note to Table F2 below) means that caution has to be used in drawing conclusions about movements in the components leading to disposable income and, especially, the pattern of deductions. However, the final figure in the income calculation (Net Disposable Income) in France is in line with the definition set out in the TIAH approved methodology.

(a) Composition of income, and deductions

Despite the latter reservation, the results for France clearly establish that agricultural households have substantial amounts of non-farming income. Figure F1 shows the composition of income for the base year of the current series (1984) and the latest available (1989). Independent activity in agriculture accounted for only just over half the total in 1984 (57 per cent) and slightly more (62 per cent)

[1]Also includes forestry households; these are thought to represent not more than 4 per cent of total numbers of households in this socio-professional group.

Figure F1 France: Composition of total (*) income. Agricultural households. 1984 and 1989



(*) Net of social contributions

(62 per cent) in 1989. Social benefits formed the second largest source. It is not possible to show the income from dependent activity before the deduction of social payments etc, though such an adjustment would be expected to increase the relative importance of this source of income and to further reduce the share coming from farming..

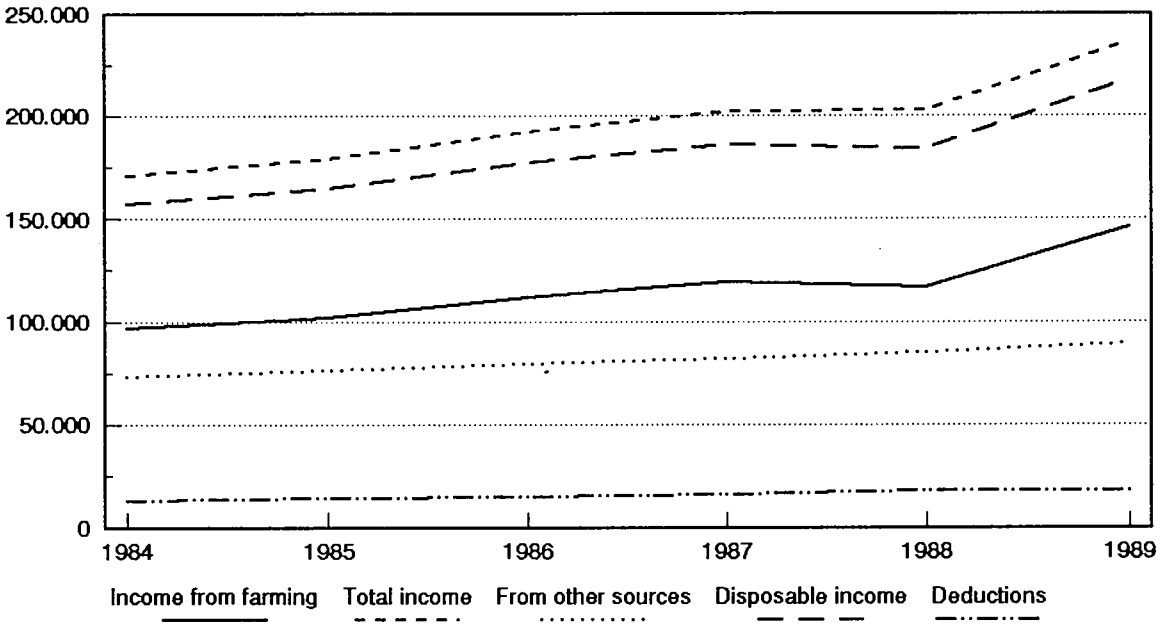
Due to the treatment of social contributions, the proportion of total income that remains disposable does not represent the ratio of disposable income to total income before tax and social contributions (as in other Member States), but the ratio of disposable income to total income net of social contributions. This treatment also raises the disposable proportion relative to the level which might otherwise be expected, though to an uncertain extent. Agricultural households retained 92 per cent of their income before tax as disposable income in both 1984 and 1989. This was almost identical to the figure for households in general (91 per cent in both years). An account showing the overall income position is given at the end of this chapter on France (Table F2)

(b) Developments of income over time

The several series of household income estimates in the French national accounts are not directly comparable, so a long time series (such as that for Germany above) cannot be constructed. In particular, the earlier series used Gross Disposable Income as their main income concept (that is, before the deduction of capital depreciation). The latest short series of comparable income estimates (1984-89) displays a fairly stable overall income situation for French agricultural households over the first five years, followed by a substantial rise in 1989. Figure F2 shows

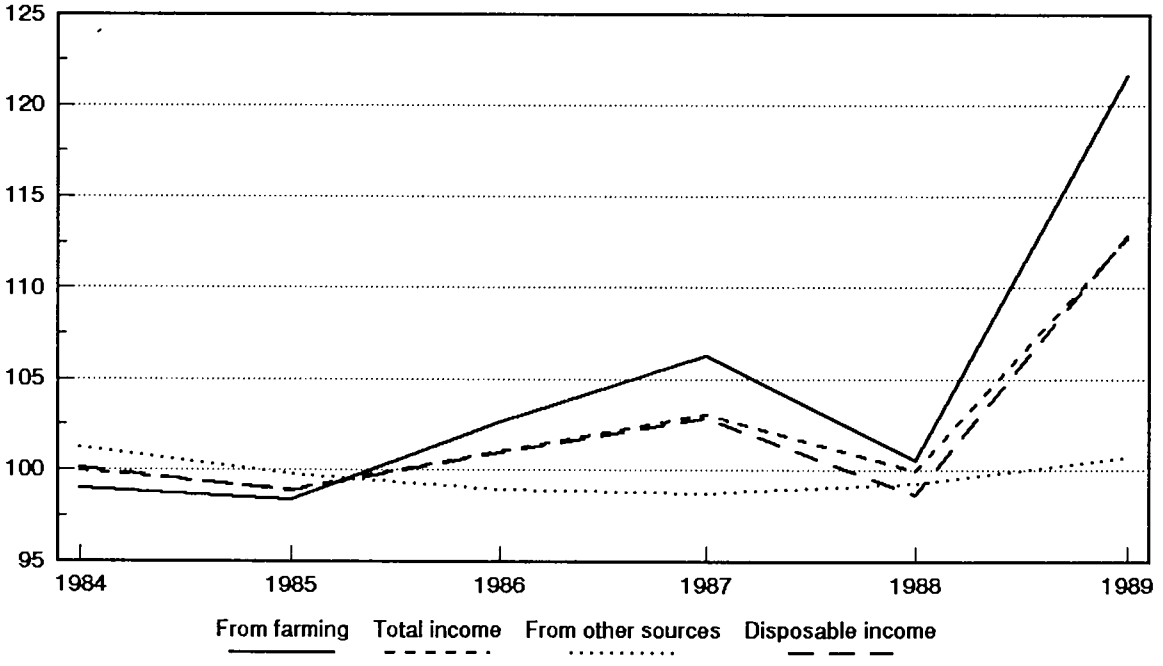
Figure F2 France: Income per household, 1984-89. Agricultural households.

FF (current values)



Indices of real income ("1985"=100)

"1985"=100



that, among agricultural households, the average income from independent activity in agriculture remained larger than that from other sources (the upper section of the Figure), and that the rise in the total reflected an upsurge in the income from farming in 1989. When expressed in real terms and in an index form ("1985" = 100), over the period the real income per household coming from other activities was fairly even (the lower part of Figure 2)[2]. As would be expected, total real income was more stable than income from agriculture alone. Disposable income was less stable than total income. When interpreting these figures it must be recalled that the number of agricultural households to which the average incomes relate has been declining, from 758, 400 in 1984 to 597,300 in 1989.[3]

The patterns shown by the household income measures from the TIAH project differ in several ways from those displayed by the established Eurostat indicators 1 and 3, developed from the economic accounts for the agricultural branch of the economy in France. This is probably more the result of what each attempts to measure than to changes in the numbers of agricultural households; Eurostat indicators also reflect the declining amount of labour (in Annual Work Units) engaged in agriculture. Indicator 1 (NVA/AWU) showed a downward trend from 1984 to 1988 (Figure F3). Indicator 3 was more stable from 1984 to 1987 but declined more sharply from 1987 to 1988. In contrast, total income and disposable income per agricultural household were tending to rise, at least to 1987. Income per agricultural household from agricultural activity followed that of Eurostat's Indicator 3, not surprising as the French TIAH estimates are constructed within the framework of national accounts. The pattern in the last two years in all the indicators is dominated by the very substantial rise in the income from agricultural activity. The important point in the present context, however, is that total income and disposable income per agricultural household show patterns which are not identical with the Eurostat indicators, even Indicator 3, being less volatile in the latest years because they reflect the non-farming income which agricultural households receive.

(c) Comparisons of incomes with other socio-professional groups

The information from France throws light on both the income position of agricultural household relative to a number of other socio-professional groups and the way that these relationships have behaved over time.

Figure F4 shows the income per household of a range of occupations for the period 1984 to 1989. In each year the average disposable income of agricultural households was above the all-household average. Putting aside the large Inactive group (8.0m households in 1989, which would include many small or single person

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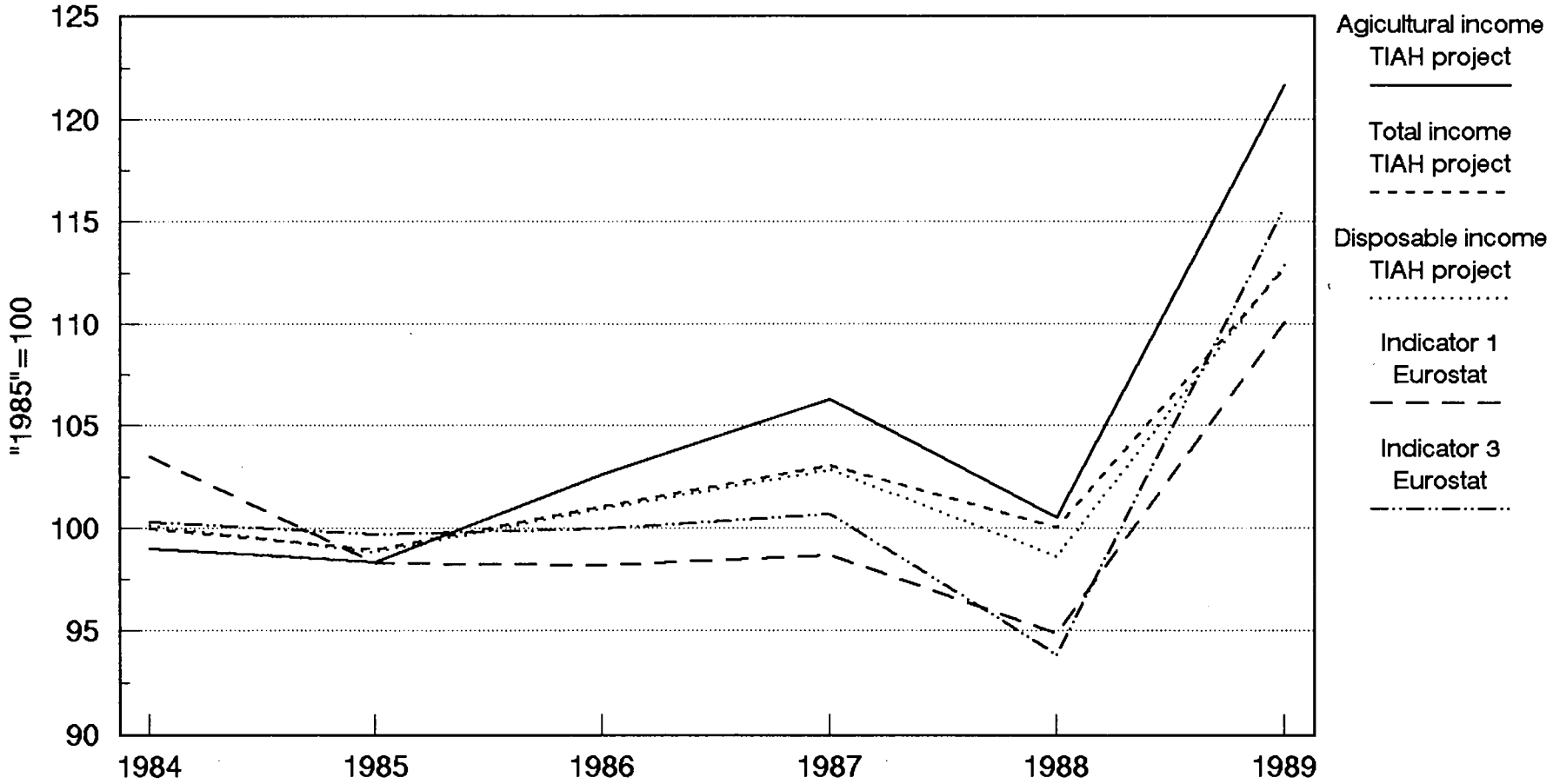
[2]When considering the information from France, it must be recalled that income from independent and dependent activity is shown net of social contributions.

[3]Estimated numbers of agricultural households are as follows:(1984) 758,400; (1985) 716,100; (1986) 700,400;(1987) 660,400; (1988) 640,000; (1989) 597,300.

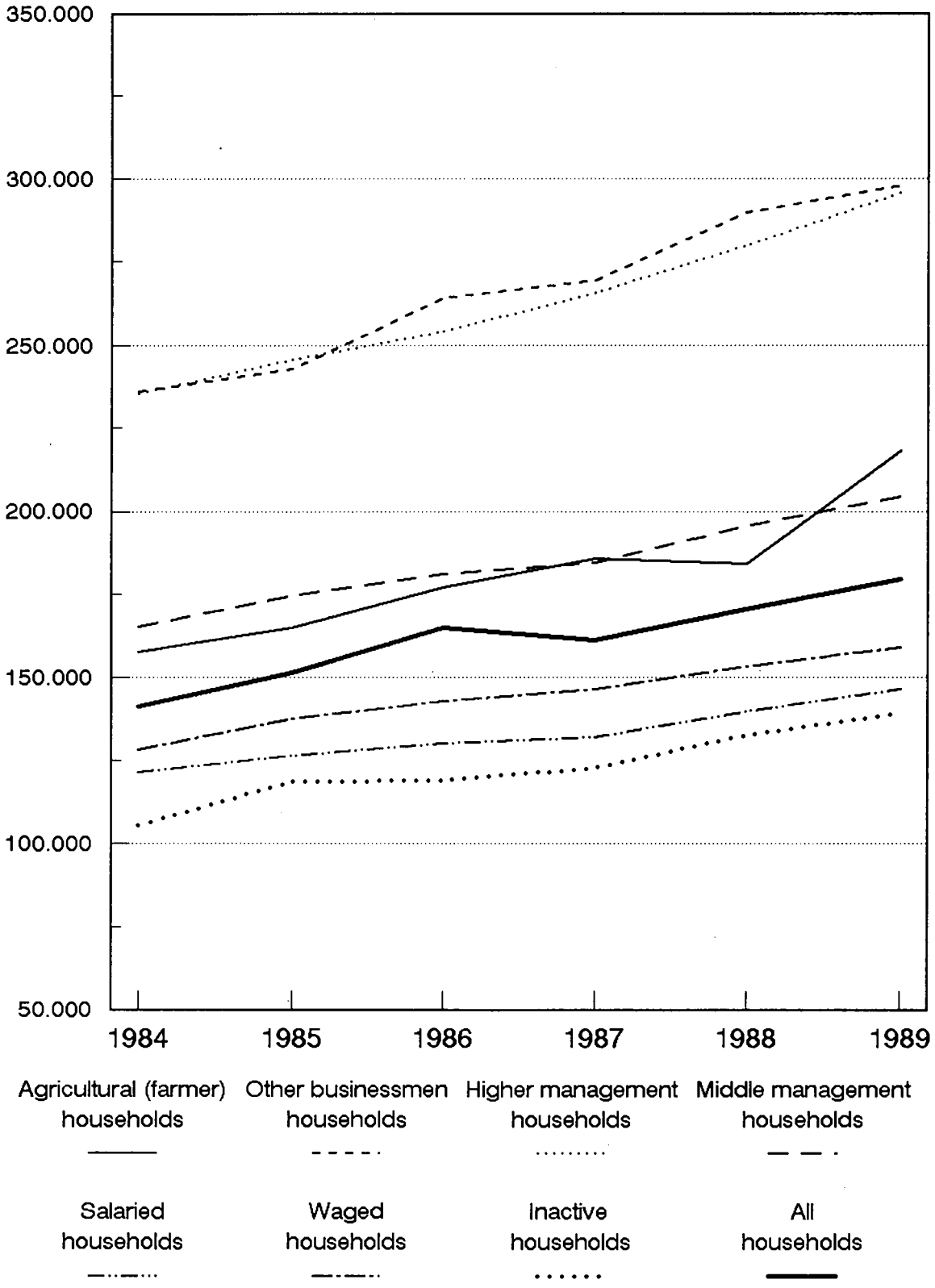
Figure F3 France: Alternative income indicators.
Indicators from TIAH project and from Eurostat, 1984-89.
Indices of real income ("1985"=100)



TIAH indicators; per household
EUROSTAT income indicators; per AWU of total labour (Ind.1) or family labour (Ind.3)

Figure F4 France: Relative incomes, 1984-89.
Disposable income per household.
Agricultural households and other groups.

FF, current values



households consisting of retired people), the 0.6m agricultural households had an average disposable income substantially higher than those of two large occupation classes - the households of wage earners (4.6m households) and salaried workers (2.3m households). The income level of farmer households was lower than that of other independent businessmen (1.8m households, including the professions) and higher management (1.7m), but similar to that of the households of middle management (2.7m) and exceeding them in 1989.

In terms of the relative income position of farmers, the TIAH estimates for France are consistent with the longer-term trend seen in national accounts and described in the Hill (1988) report. These showed a deterioration in the position of agricultural households since 1970[4]. The average disposable income of farmers' households as a percentage of the all-household average was as follows: 1970, 125 per cent; 1979, 119 per cent; 1983, 113 per cent. The years from 1984 to 1989 saw figures which were lower, ranging from 106 per cent to 112 per cent but with no very clear trend within the period. Although in 1989 agricultural households again had relatively high average incomes (121 per cent of the all-household average), this is likely to be seen retrospectively as an exceptional year[5].

Figure F5 shows the average disposable income per household, per household member and per consumer unit in 1989 for each socio-professional group into which the household sector is subdivided in the national accounts for France. (Figures for 1984-9 are given in Table F1). As has been noted in other Member States, though income per household is higher than the national all-household average, the larger size of agricultural households results in income per household member and per consumer unit being lower than the average, even in 1989 when farming incomes made a strong recovery. Only the households with heads classed as wage earners were consistently below those of farmers in terms of disposable income per member or per consumer unit. Farmer households achieved an income per consumer unit very close to that of salaried workers in most years. Other groups clearly had higher incomes per member or per consumer unit. The smaller size of the households in the Inactive group meant that, although their average household income was only about two-thirds of that of agricultural households, their income per consumer unit was greater (14 per cent in 1988, and marginally higher than the agricultural household average even in 1989).

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[4] However, the Hill report also noted that, according to an earlier series of calculations, between 1956 and 1970 the relative position of households headed by a farmer had improved; over that period the mean farmer-household income rose by a factor of 3.87 compared with an all-household factor of 3.32. (This earlier series is not directly compatible with that which started in 1970, though both share 1970 as an overlap year).

[5] Results for 1989 are provisional and should be interpreted with caution.

Figure F5 France: Relative incomes per unit.
Agricultural households and other groups. 1989

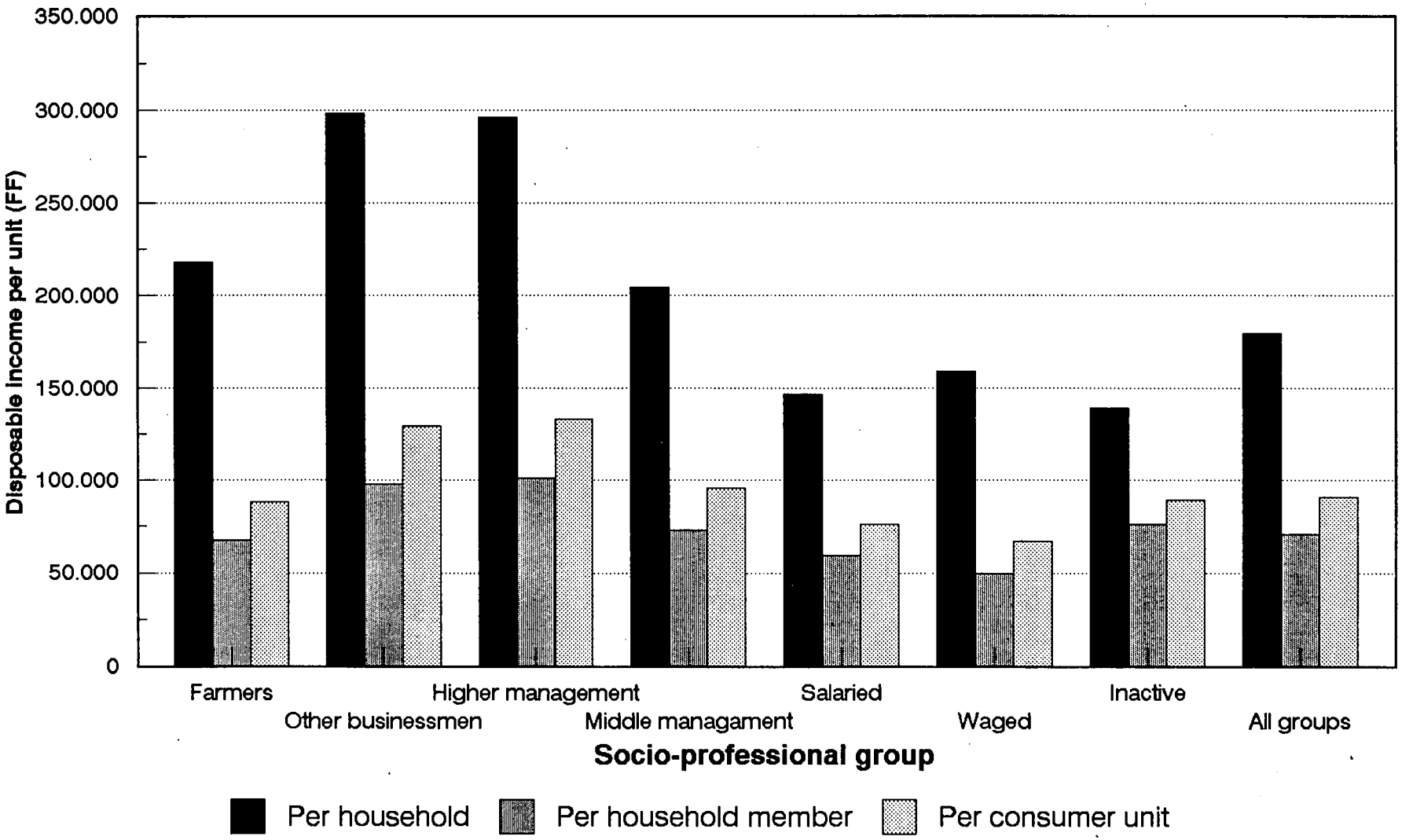


Table F1 France: Average disposable income per unit, 1984-89
Currency: FF per unit

(a) Per household

YEAR	Farmers	Other business -men	Higher manage-ment	Middle manage-ment	Salaried	Waged	Inactive	All
1984	157870	236350	235680	165350	121470	128260	105600	141350
1985	165090	243040	245920	174800	126530	137690	118550	151720
1986	177190	264100	254420	181170	130070	142980	118990	165120
1987	185950	269490	265960	184610	131980	146640	122820	161160
1988	184300	290090	279920	195930	139680	153370	132580	170640
1989	218210	298080	295950	204670	146710	159160	139110	179610

(b) per household member

YEAR	Farmers	Other business -men	Higher manage-ment	Middle manage-ment	Salaried	Waged	Inactive	All
1984	47408	77747	79354	57815	49178	38985	57705	54575
1985	49876	78909	82523	61767	51435	41979	65137	58806
1986	54021	86026	85953	64245	53748	43725	65022	64500
1987	56348	87497	89458	65932	53650	45259	67484	63200
1988	56883	95424	95863	69975	56551	47630	72846	67181
1989*	67349	98053	101353	73096	59397	49429	76434	70713

(c) per consumer unit

YEAR	Farmers	Other business -men	Higher manage-ment	Middle manage-ment	Salaried	Waged	Inactive	All
1984	62399	102316	104747	76198	63266	53000	67261	69975
1985	65773	104309	109298	80926	66246	56897	75510	75483
1986	71161	113836	113580	84265	68820	59083	75790	82560
1987	74084	115661	118612	86266	69099	61100	78731	80985
1988	74615	125580	126090	91556	72750	64441	84987	86182
1989*	88344	129039	133311	95640	76411	66874	89173	90712

* In the absence of estimates of numbers of household members and consumer units per household in each socio-professional group for 1989, coefficients for 1988 have been used to calculate average disposable income per member and per consumer unit. For most groups this implies a slight under-statement of incomes in 1989.

Table F2 France: Composition of total income, and deductions*

1984 (base year) and 1989 (latest)
FF per household

	Item / Household group	agric. 1984	all 1984	agric. 1989	all 1989
1a	Independent agric. activity				
	- Operating Surplus	-	-	-	-
	- Income	97338	4230	146680	5090
1b	Independent non-agric. activity				
	- Operating Surplus	-	-	-	-
	- Income	6292	13170	5100	16660
1c	Owner dwellings	5350	4330	6940	6140
2	Dependent activity	17670	73160	19350	87250
3	Property and entrepreneurial income	13410	11980	19400	16550
4	Accident insurance claims				
5	Social benefits	30960	49120	39050	65120
6	Other current transfers				
7	Current receipts				
	- based on Operating Surplus				
	- based on Income				
8	Distributed property and entrepreneurial income				
9	Net accident insurance premiums				
10	Current taxes on income and wealth	13150	14640	18310	17200
11	Social contributions				
12	Other outgoing current transfers				
13	Disposable income	157870	141350	218210	179610
	Number of households ('000)	758	20373	597	21545
**	Number of household members(")	2644	54117	1935	54725
**	Number of consumer units (")	1949	41765	1475	42659
13	Disposable income per unit				
**	- per household member	47408	54575	67349	70713
**	- per consumer unit	62399	69975	88344	90712

* The manner of presentation of data for France means that, though Disposable Income follows the TIAH definition, several of the individual items leading to its calculation do not. The main differences in this respect for France are that (a) Incomes are recorded net of social contributions, so nothing is shown under Item 11. This also means that no figures should be shown under Item 7. (b) Under Item 1c the French methodology places "the income from production of pure households". In addition to the rental value of owner dwellings, this includes actual rents received (which for other Member States is in Item 1b) and the production from family gardens (which would be in Item 1a).

** See note to Table F1

IRELAND

Methodology:

General approach

Microeconomic (Model 1) approach. The 1987 Household Budget Survey (HBS) was the starting point, but with most (4/5) farm households cases taken from the National Farm Survey (which contributes to RICA) which was integrated with the HBS. Other cases came from the HBS. Results were grossed up to national level; they were broadly compatible with the economic accounts for agriculture.

No extrapolation is used at present; results are only available for 1987, corresponding to a base year. The long intervals between Household Budget Surveys (7 years) mean that coefficients for updating the base year results will be required. The most important components of income for which these must be developed are net income from agriculture, employees wages and salaries, and social benefits. Recent developments also suggest that other self-employment income and income tax should be monitored, at least in the short to medium term.

Household unit

Household: a single person or group of persons who regularly reside together in the same accommodation and who share the same catering arrangements. This implies that they need not be related by blood or marriage or be necessarily financially or otherwise dependent on one another.

Household classification

Three alternative classification systems can be used for experimental purposes: Variant 1, where income from independent agricultural activity accounted for 50% or more of the gross household income, or was the greatest single source; Variant 2, where income from independent agricultural activity formed the main source of income for the head of the household; Variant 3, where the head of household classified himself/herself as an active "farmer". Also a "broad" definition of agricultural households is possible, comprised of all those reporting some agricultural income. No specific instructions were given as to who was to be treated as the head of the household; almost invariably he/she was either the chief economic supporter and/or the owner or tenant of the house.

Treatment of reference persons (heads) who receive (or are eligible to receive) retirement (old-age) pensions; classification depends entirely on the declaration by the reference person (declared main income source or main occupation). Thus heads in receipt of pensions are <u>not</u> automatically classed as retired.

Equivalence scale

Head of household = 1.0; other members of the household aged 14 years or over = 0.7; children under 14 years of age = 0.5.

Year for which results are available: 1987.

Comments on the results

The basis of information on the disposable income of households in Ireland is the periodic Household Budget Survey (HBS). This Survey has been analysed on previous occasions according to the main occupation of the head of the household. Published results for 1973 and 1980 have shown the household income situation of farmers and some other socio-professional groups (including agricultural

workers). The detail with which income information was collected enabled the relative importance of the various components to be assessed for various sizes of farm, and a range of income indicators to be used.

One of the acknowledged problems of the HBS is the achievement of a satisfactory measurement of income from self-employment; the international experience is that levels tend to be understated. In the 1980 Survey this was met by requiring the medium and large farms encountered (those over 12 ha) to keep detailed farm accounts over one year. In the 1987 Survey this was rendered unnecessary by selecting agricultural cases mostly from households already taking part in the (annual) National Farm Survey (which contributes to the European Community's Farm Accountancy Data Network).

At present results for Ireland are only for one year (1987), though updating is under consideration. The weightings applied to agricultural households are different from those used in the HBS, and the results are best regarded as experimental at present. However, the degree of detail allows a comparative analysis using alternative definitions of an agricultural household; this throws light on the implications for the results of the choice of definition, a critical issue in the methodology of the TIAH project. Although the exact outcome of the analysis for Ireland may not be valid elsewhere, the importance of the choice is underlined.

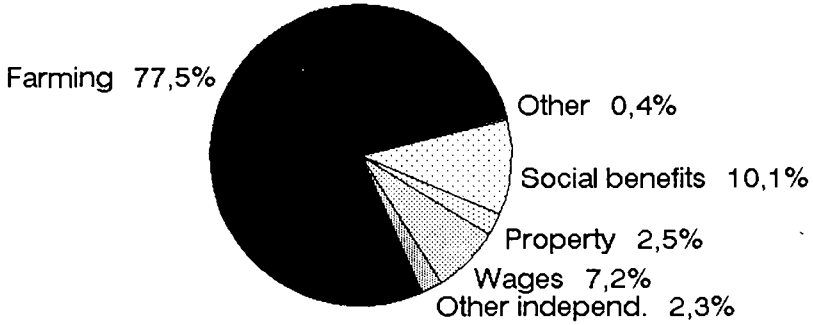
Three "narrow" definitions have been used (households where independent activity in agriculture is the main income sources of the entire household, where it is the main income source of the reference person, and where it is the main occupation of the reference person) and one "broad" definition (all households with some independent agricultural income). The (raised) numbers of cases corresponding to each have already been discussed in Part One (section 2.6 of the General Report). Here attention is focused on the incomes associated with them.

It is evident that the "narrow" definitions which involve an income criterion have the effect in Ireland of limiting the coverage of agricultural households predominantly to those operators on the larger and better-off farms. Classifying according to the main income of the household resulted in a total of 72,400 households (35 per cent of all households with some agricultural income), yet these accounted for 79 per cent of all the income from independent agricultural activity. The income criterion applied to the reference person produced 84,500 households, 41 per cent of the total number and 81 per cent of the total income. The average income from farming of these two "narrow" groups was at least double that of all households with some income from farming. Other evidence on numbers of holdings from Eurostat's Farm Structure Survey serves to underline this point concerning the nature of households selected using an income criteria.

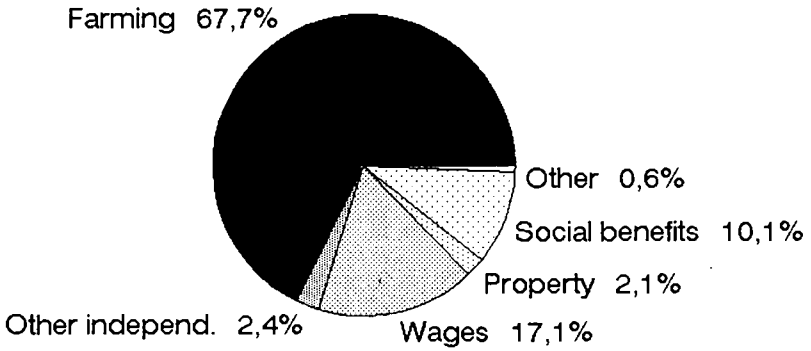
(a) Composition of total income, and deductions

Figure IRL1 shows the compositions of total income in Ireland using each of the four definitions of an agricultural household. As would be expected from the above observation, the composition (and as will be demonstrated later, the relative level)

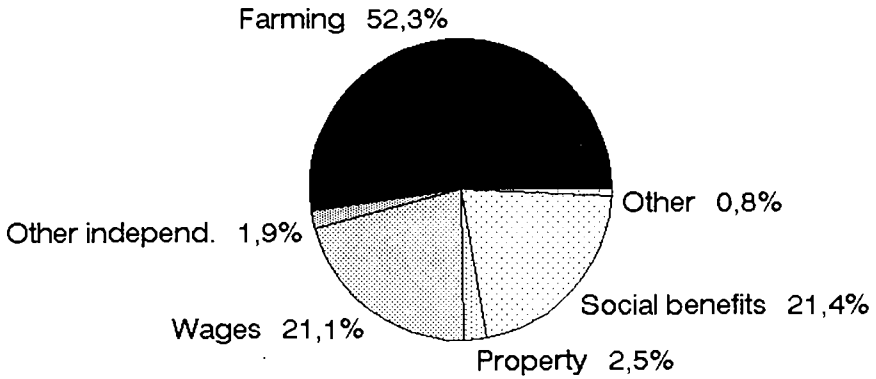
Figure IRL1 Ireland: Composition of total income. Four definitions of an agricultural household.
1987



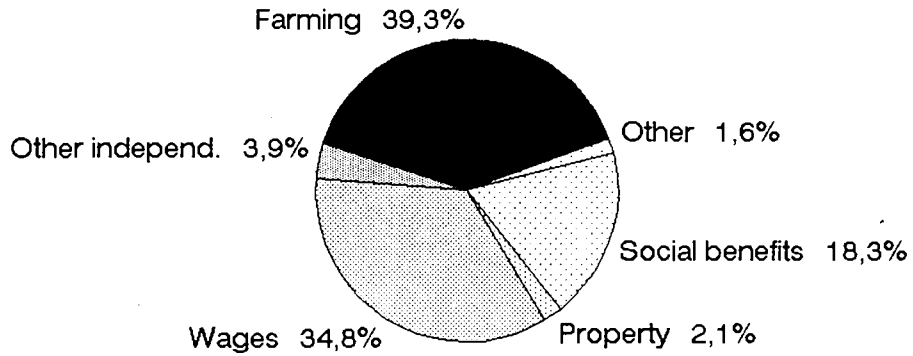
Main income of Household



Main income of Head of household



Main occupation of Head of household



"Broad" approach

For definitions see text

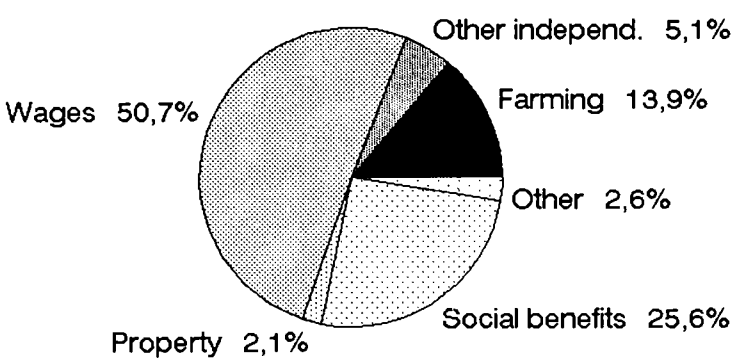
of income is sensitive to the definition of agricultural households adopted. For 1987 the use of the TIAH target definition based on the main income of the entire household produced the highest proportion of income from independent (mainly agricultural) activity (77%), whereas classifying on the occupation of the head of household (140,500 households) gave a much smaller share (52%). Using the head's main income source produced an intermediate percentage. The second largest source of income, whichever classification was used, was social benefits. It is clear that, in Ireland, classifying by main occupation brings into the coverage many low-income households receiving substantial amounts of social payments (including old-age pensions); overall 21% of the total income of households selected in this way was from social benefits. Among those households in Ireland where agriculture was the main occupation but not the main income source of the head (58,500 households), income from independent agricultural activity formed only a small part of total income (9 per cent for those aged under 65 and 15 per cent for those 65 and over); more detailed analysis of the under 65 group found that almost a quarter recorded a negative agricultural income in 1987, with a considerable depressing effect on the proportion of group income coming from agriculture and, as will be seen later, on the level of overall income. For the under 65s, wages generated 40 per cent of total income, but the biggest single source was social benefits. As might be expected, households falling into this category whose heads were aged 65 and over received an even greater proportion of their income from social benefits (59 per cent).

By definition, using the "broad" approach to what constitutes an agricultural household covers many for which farming is only a minor income source or not the main occupation of the head of household. By subtraction, it is possible to establish the income composition of these marginal households; that is, households brought in by applying the "broad" approach but which would not be included by using the "narrow" definition. This could be done for each of the three variants on the "narrow" approach, but here attention is focused on the variants using a reference person (variant V2 - main income, and variant V3 - main occupation) system. The households excluded from these "narrow" definitions are termed Marginal households 2 and Marginal households 3 respectively.

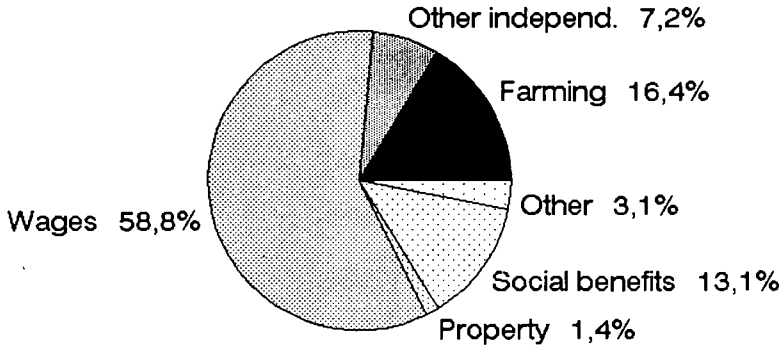
Marginal agricultural households are numerically important in Ireland. Households in which there was some farming income but where it did not constitute the main income of the head (Marginal households 2) formed more than half the total in the "broad" group in 1987 (122,000 out of 207,000). Farming only constituted some 14 per cent of their total incomes; the main source was wages (51 per cent), and the second most important source was social benefits (26 per cent)(Figure IRL2). Overall the impact of these marginal households was to reduce the proportion of income coming from independent agricultural activity for the entire "broad" group to 39 per cent, with wages and salaries accounting for almost as much (35 per cent). Social benefits were pushed into third place.

A very similar picture emerged among those households which had some farming income but where the head did not regard his main occupation as that of being a farmer (Marginal households 3). Though, with only 66,000 cases, numerically

Figure IRL2 Ireland: Composition of total income. Marginal farming households.
1987



Farming not main income of Head of household



Farming not main occupation of Head of household

For definitions see text

smaller than the Marginal households 2 type, there was a similarity in that only a small proportion of total income came from farming. However, among these households headed by a non-farmer, a somewhat greater proportion of total income came from wages, and much lower share from social benefits. This, and information on the levels of income presented below, is strongly indicative that households excluded when a main-income (or main-occupation) criterion is applied form sub-groups which merit special attention.

Turning to the deductions from income (Figure IRL3), tax and social contributions and others (together) accounted for from 7 to 12 per cent of total income for each of the three "narrow" definitions of an agricultural household. Using the "broad" approach, they took 13 per cent, or 17 per cent for each group of marginal households (types 2 and 3, as defined above). For all households in Ireland the figure was 21 per cent. One characteristic of the results is that there was a progression in the proportion of total income taken by tax and by social contributions; when moving from the all-household position through the "broad" agricultural household and though the three "narrow" definitions (to the most restrictive TIAH target definition), the percentages taken by each fell.

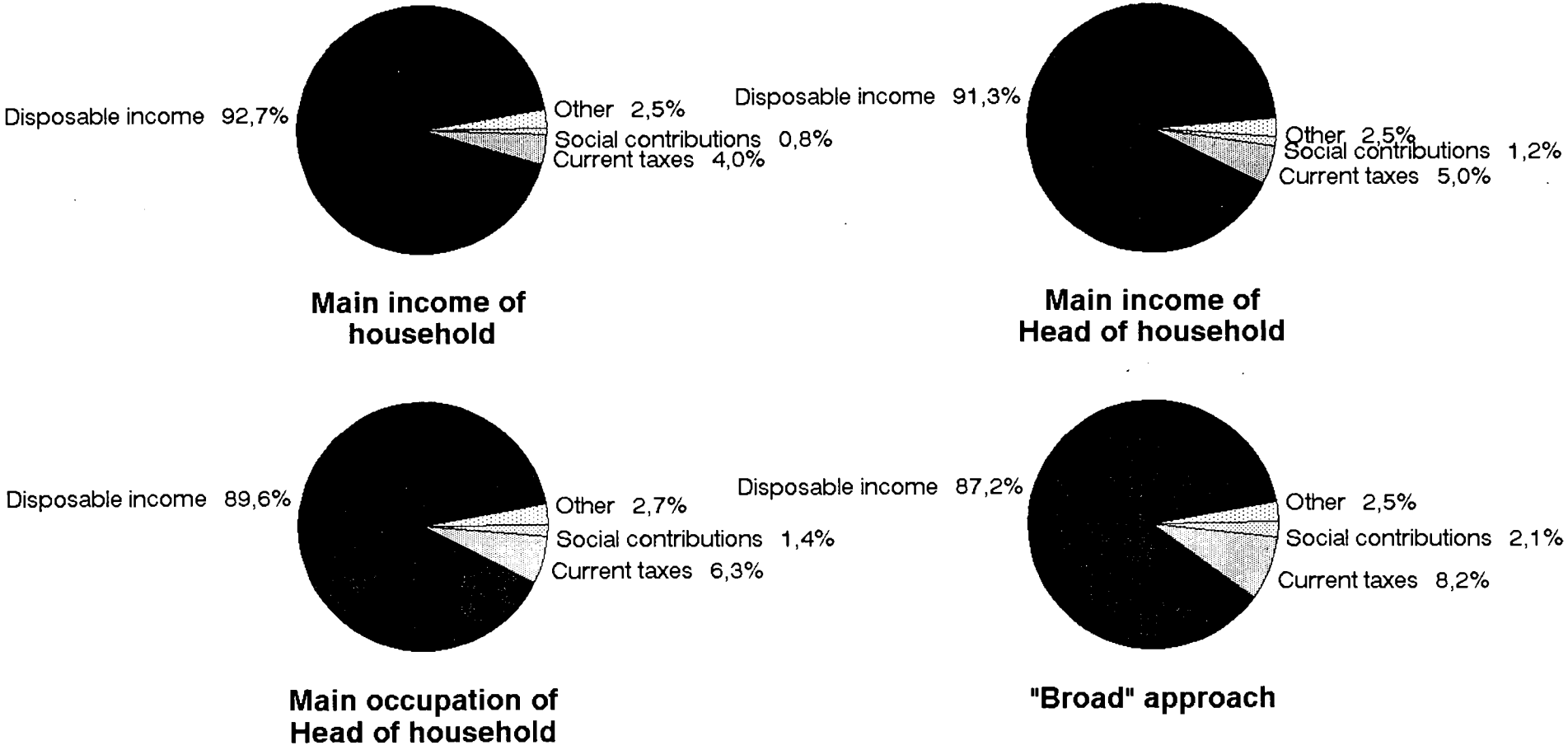
(b) Comparison of income levels

The experimental results from Ireland permit some comparison of income levels using the alternative definitions of an agricultural household. Figure IRL4 shows that, in 1987, the average disposable income per unit (household, household member, and consumer unit) was very similar when applying the income criterion to the entire household or to the reference person (variants V1 and V2 of the "narrow" definition of an agricultural household). Classifying according to the main occupation of the head (variant V3) produced substantially lower average income levels. Incomes per unit are given in Table IRL1.

In the section above, attention was drawn to evidence on income composition which indicated that households which are headed by a person who regards himself as a farmer fell into two distinct groups, numerically of similar sizes. One consisted of operators mainly dependent on farming for their livelihoods. The other was made up of people who called themselves farmers but who were mainly dependent on social benefits. Here we can see that they also had substantially different income levels. This is apparent from Table IRL1, where the average income of those households where the head satisfied both the income and the occupation criteria was almost double that where the occupation criteria was satisfied but the income criterion was failed, and that this applied both to heads below and above 65 years old.[1] The numbers of these low income farming households which would be excluded by applying a main-income criterion are substantial in Ireland and clearly have an important bearing on what classification system is appropriate for income measurement for policy purposes.

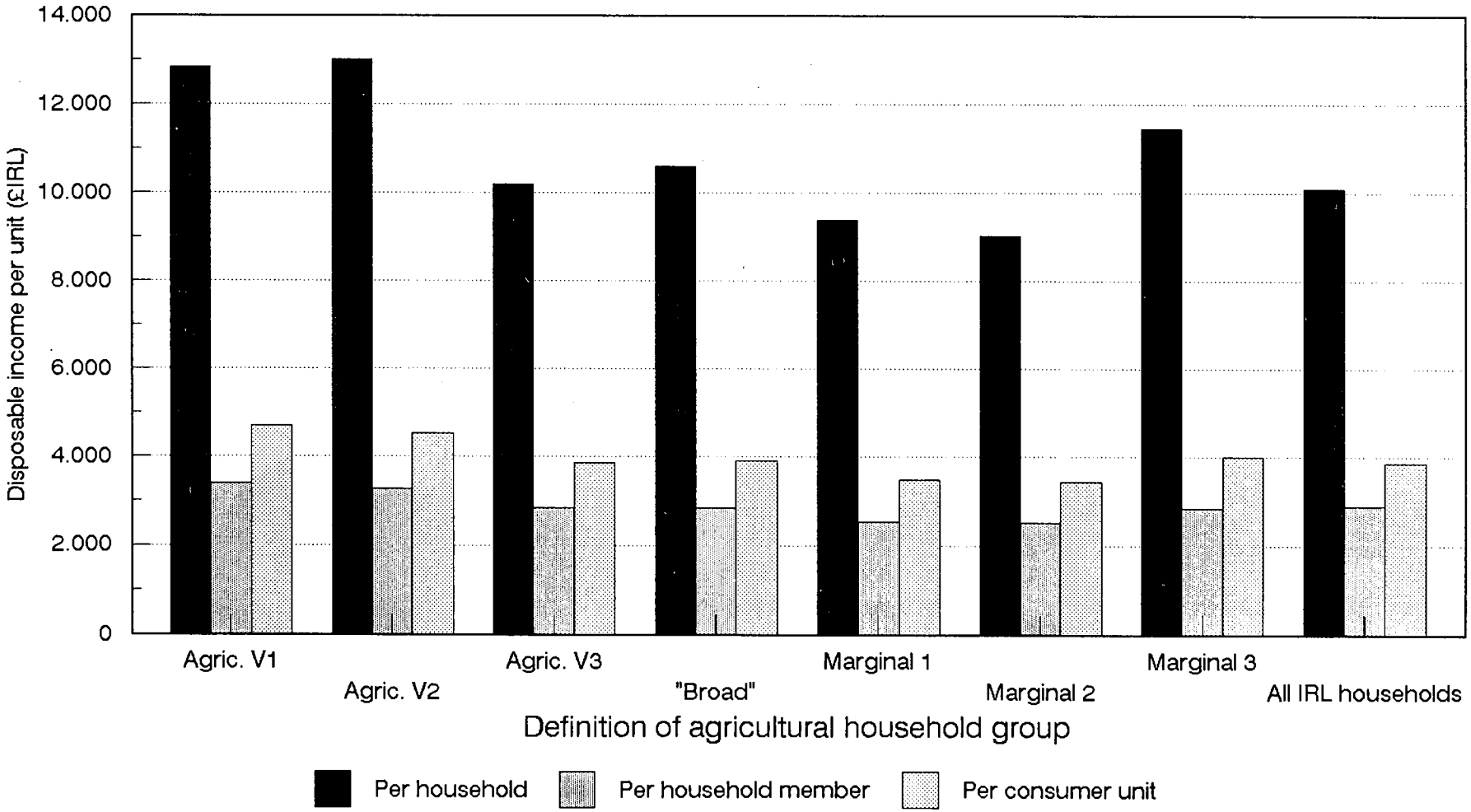
[1] Of the 84,500 households in which the head's main income source was from independent agricultural activity, all but 2,500 declared that their main occupation was as an active farmer.

Figure IRL3 Ireland: Deductions from income.
Four definitions of an agricultural household.
1987



For definitions see text

Figure IRL4 Ireland: Disposable income per unit.
Alternative definitions of agricultural households.
1987



For definitions see text

Table IRL1 Ireland: Numbers of households and average disposable income per unit for alternative definitions of an agricultural household. 1987

Classification criterion	Households (000)	Income per household £IRL	Per household member £IRL	Per consumer unit £IRL
Household income criterion: Variant V1	72.4	12841	3389	4695
Reference person: income criterion: Variant V2	84.5	12867	3266	4529
Reference person: occupation criterion Variant V3	*140.5*	*10196*	*2833*	*3857*
Of which: Also V2				
under 65	*70.5*	*13137*	*3209*	*4504*
65 and over	*11.5*	*11137*	*3607*	*4553*
Not also V2				
under 65	*31.6*	*6866*	*1771*	*2456*
65 and over	*26.9*	*6011*	*2731*	*3273*
"Broad" definition	206.7	10600	2837	3910
Marginal households 1 (Broad minus V1)	134.3	9392	2533	3481
Marginal households 2 (Broad minus V2)	122.2	9032	2512	3447
Marginal households 3 (Broad minus V3)	66.2	11467	2845	4015
All households in Ireland		10101	2882	3854

Adopting the "broad" approach found that the average disposable income of all households with some farming income was below that of either of the two "narrow" approaches which involve applying income criteria, though marginally above the households headed by a person who declares his main occupation to be that of a farmer. This situation is explained by examination of the income levels of households which fell outside either of the "narrow" definitions but which still had some income from farming. In Table IRL1 it can be seen (in the line Marginal households 3) that households where the head did not claim to be a farmer had an average income above those that did so claim. As was seen above, these households were primarily dependent on wage earnings.

When the incomes of agricultural households in Ireland are compared with the national average, it is clear that the outcome depends very much on the definition of agricultural household being used. Applying an income criterion to either the whole household or to a reference person produces a group of agricultural

households whose average incomes per unit were about one quarter to one fifth higher than the all-household figure; the premium was greatest when measured per household but was still evident on a per household member or per consumer unit basis. Among the households headed by a person who declared his occupation to be a farmer, one group (those with farming as their main income) had incomes well above the national average, but the others (those where farming was not their main income) had incomes much lower than the all-household level. Using the "broad" definition gave levels which were close to the national average.

Finally, as supplementary information, some broad indications regarding the relative income position of farmer households can be taken from the HBS. It should be stressed that these results are not directly comparable with those given above, since different weightings are used for agricultural households. Farm households (classified on the main occupation of the reference person) in 1987 were shown as having an average income some 27 per cent higher than other households in rural areas, 8 per cent higher than urban households, and 12 per cent higher than the national average.

ITALY

Methodology:

General approach

Model 2 approach. The calculation uses a general disaggregation method, distributing the general household account to agricultural and non-agricultural subsectors. Agricultural branch data are used to evaluate the agricultural Operating Surplus accruing to the household sector and then this is distributed between subsectors using a variety of microeconomic data sources, including a (now biennial) household survey by the Banca d'Italia and an annual household survey by ISTAT on family budgets. Both classify households into socio-professional groups and deal with income and expenditure. The distribution agent for the Operating Surplus from agricultural activity is the estimated labour input to agriculture from agricultural and non-agricultural households. Note that the main income item (operating surplus from agricultural activity) is distributed gross (of capital consumption), with this item being estimated independently for agricultural households based on the total for all households. Compensation of employees is also distributed in proportion to the hours worked.

Separate estimates are available including or excluding fishing; the latter is adopted in this report.

Household unit

Households are defined as in the ISTAT survey of the labour force. As given for the Family Budget Survey, it consists of persons linked by ties of marriage, family (in the broad sense) or affection, who live together and have their permanent address in the same municipality, and who normally provide for their needs by pooling all or part of their earned or unearned income. Households include staff and other persons who for many reasons habitually live with the family.

Household classification

Agricultural households are those headed by self-employed farmer. The income capacity of the person is generally taken into account when identifying the head. Heads declare the branch in which they pursue their main activity. Both time and income factors are taken into account. Agricultural households can be defined so as to include or exclude fishing. Italy can sub-divide its non-agricultural households into those whose heads are mainly in independent, dependent or "non-professional" activity. Studies are in hand in Italy to define agricultural households in a way which excludes with greater consistency those households which derive substantial income from non-agricultural sources.

Treatment of reference persons who receive (or are eligible to receive) retirement (old-age) pensions: heads of households in receipt of pensions who continue to carry out business activities in agriculture can be considered as reference persons. Classification of the household will depend on the way that the reference person declares himself/herself in the family budget survey.

Equivalence scale

Head of household = 1.0; other members of the household aged 14 years and over = 0.7; children less than 14 years old = 0.5.

Years for which results are available: each year from 1984 to 1988

Comments on the results:

Italy did not undertake estimates of the disposable income of agricultural

households (or other socio-professional groups) before the TIAH project was initiated. Calculation of results starts from the household sector account in national accounts, and distribution agents are used to break down the aggregates into the components for agricultural households and other groups. A main source for this purpose is a survey of households undertaken by the Banca d'Italia; this survey has been established for a decade. A major review of its methodology has taken place, both in terms of the definition of the main variables and the sample; the new arrangements operated from 1986. The survey is carried out every two years (from 1987). It covers many aspects of households, including their social structure and economic behaviour patterns. Information on the income composition of each individual member of households is collected. Where appropriate other distribution agents are used; for example, the annual ISTAT household survey and taxation records. As these surveys take place relatively frequently (compared with household budget surveys in many other Member States), the basic methodology is capable of annually generating estimates of the disposable income of agricultural households without the need for specific updating techniques. From the estimates of income for the subsector formed by agricultural households it is possible to calculate income per household, per household member and per consumer unit. The initial phase of the TIAH project has involved reviewing and refining the alternative distribution agents, a process which is expected to continue.

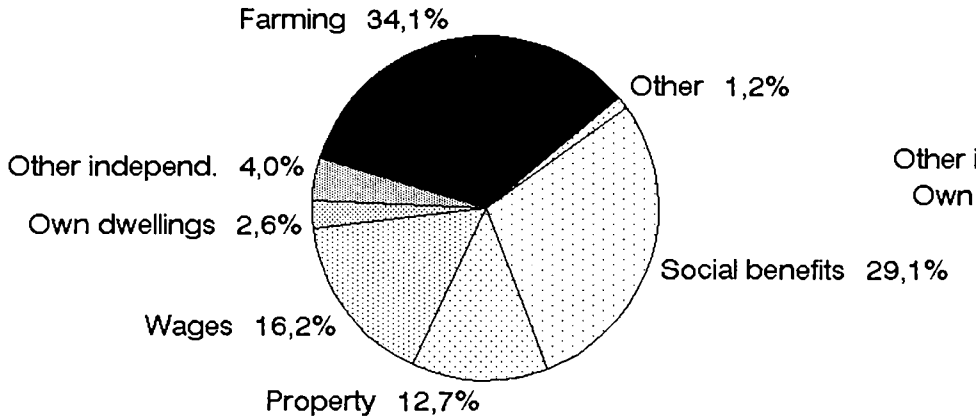
(a) Composition of total income, and deductions

Information on the resources flowing from independent (self-employed) activity from Italy has been provided in the form of Operating Surplus. In order to convert to an income concept, used principally in this report, interest payments and rent have been deducted. No subdivision is made in the basic data sources between the amounts of these distributed property payments which are associated with agricultural and non-agricultural activities, so allocation has been made in proportion to the gross Operating Surplus.

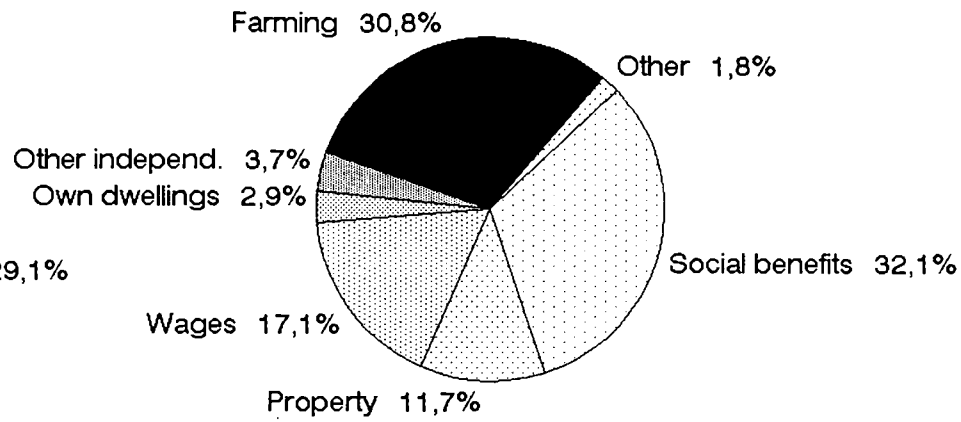
Figure I1 shows the income composition of agricultural households for the first and last years in the current series (1984 and 1988). Before commenting on the figures, it is worth noting that the group of "agricultural" households constitutes only a minority of those households which operate a holding. The number of households headed by a person who declared his(her) main occupation was that of being a farmer (689000 in 1988, excluding fishing), corresponding to only 25 per cent of the total number of farmers shown in the Farm Structure Survey (2.75m in 1987).[1] Nevertheless, this minority accounted for most of the agricultural activity. It was estimated that in 1984 the total operating surplus for the branch agriculture accruing to households (all types) was Lit 26 496 thousand

[1] "Farmer" in this context are those which are at the same time farm heads. Of the total in the 1987 Farm Structure Survey, 350000 were shown as working on their holdings for 100% of the annual working hours if a full-time worker. A further 492000 worked for from 50% to 100%. These two categories sum to 113% of the number of agricultural households in Italy, as shown in the results of the TIAH project (736350 households in 1987).

Figure I1 Italy: Composition of total income.
Agricultural households. 1984 and 1988



Agricultural households
1984



Agricultural households
1988

million. Of this, agricultural households accounted for Lit 20 059 thousand million (76 per cent).

Even in this fairly narrowly-defined group, corresponding to only one quarter of farmers, income from independent activity in agriculture (farming) formed only a third or less of the group's total income. Another third came from social benefits; these were the largest single source in 1988, providing more income than independent agricultural activity. The compensation of employees (labelled "wages" in Figure I1) was the third largest source in each year. The extent to which the non-farming income came from adults in addition to the farmer and spouse cannot be deduced from the results; the average number of members and consumer units per agricultural household (3.3 and 2.6 respectively) imply that such adults may form part of the explanation for the relatively low dependence on farming, as they do in all Member States to varying degrees. Whoever contributes the off-farm income, these figures underline the need, when assessing the income situation of households headed by a farmer, to include information on sources other than independent activity in agriculture. It would not be unreasonable to assume that, for the majority of farm families which do not satisfy the criteria for being classed as agricultural, income from farming is even less important in the household total.

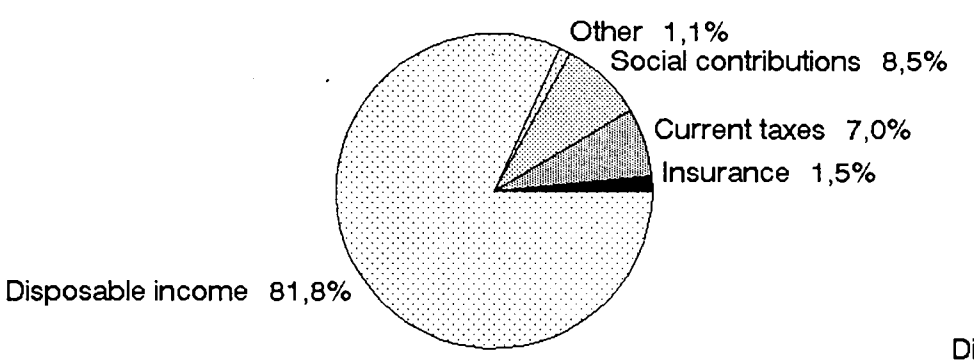
Turning to deductions from income, Figure I2 shows the situation for agricultural households and all households in 1988. On average, households in Italy contributed a greater proportion of their total income as current taxes than did agricultural households, and almost double the level of social contributions. Consequently, a larger share of total income remained as disposable income among agricultural households than was the national household average.

(b) Comparisons of income per unit, and developments over time.

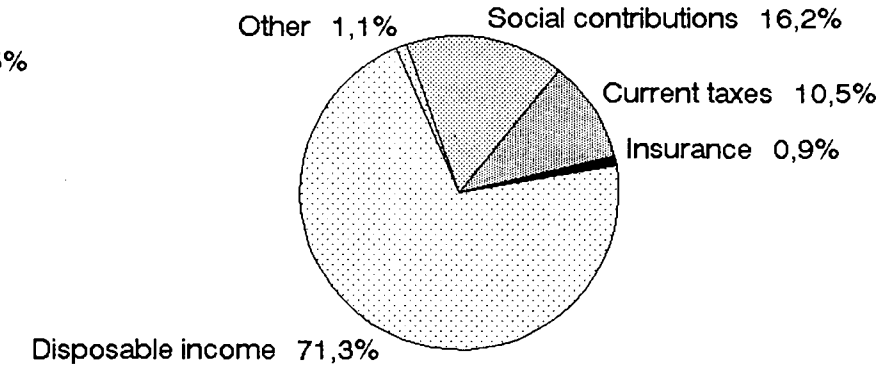
Figure I3 shows the disposable income per unit (per household, household member and consumer unit) for agricultural households and all households together, for the years 1984-88. On all three measures, agricultural households had higher incomes than the national average throughout the period. This is in contrast with the finding for some other Member States (see, for example, Germany and France above) where, though income per household was greater than average among agricultural households, incomes per member and per consumer unit were lower. Furthermore, the margin of superiority of the agricultural households in Italy increased over the period; in 1984 income per agricultural household was 131 per cent of the national average, and this had risen to 145 per cent by 1988. Income per member rose from 110 per cent to 119 per cent over the same period, and income per consumer unit from 110 per cent to 120 per cent.

Figure I4 shows the movement, in current Lira, of the main components of total income of agricultural households (aggregate figures, not per household). The figure for 1984 has been set as Index = 100. Social benefits appear to have shown a more rapid growth for the period 1984-88 than the other main components, and therefore rose faster than total income. Two items (wages and income from other

Figure I2 Italy: Deductions from total income. Agricultural households and all households.
1988



Agricultural households
1988



All households
1988

Figure I3 Italy: Disposable income per unit, 1984-88. Agricultural and all households.

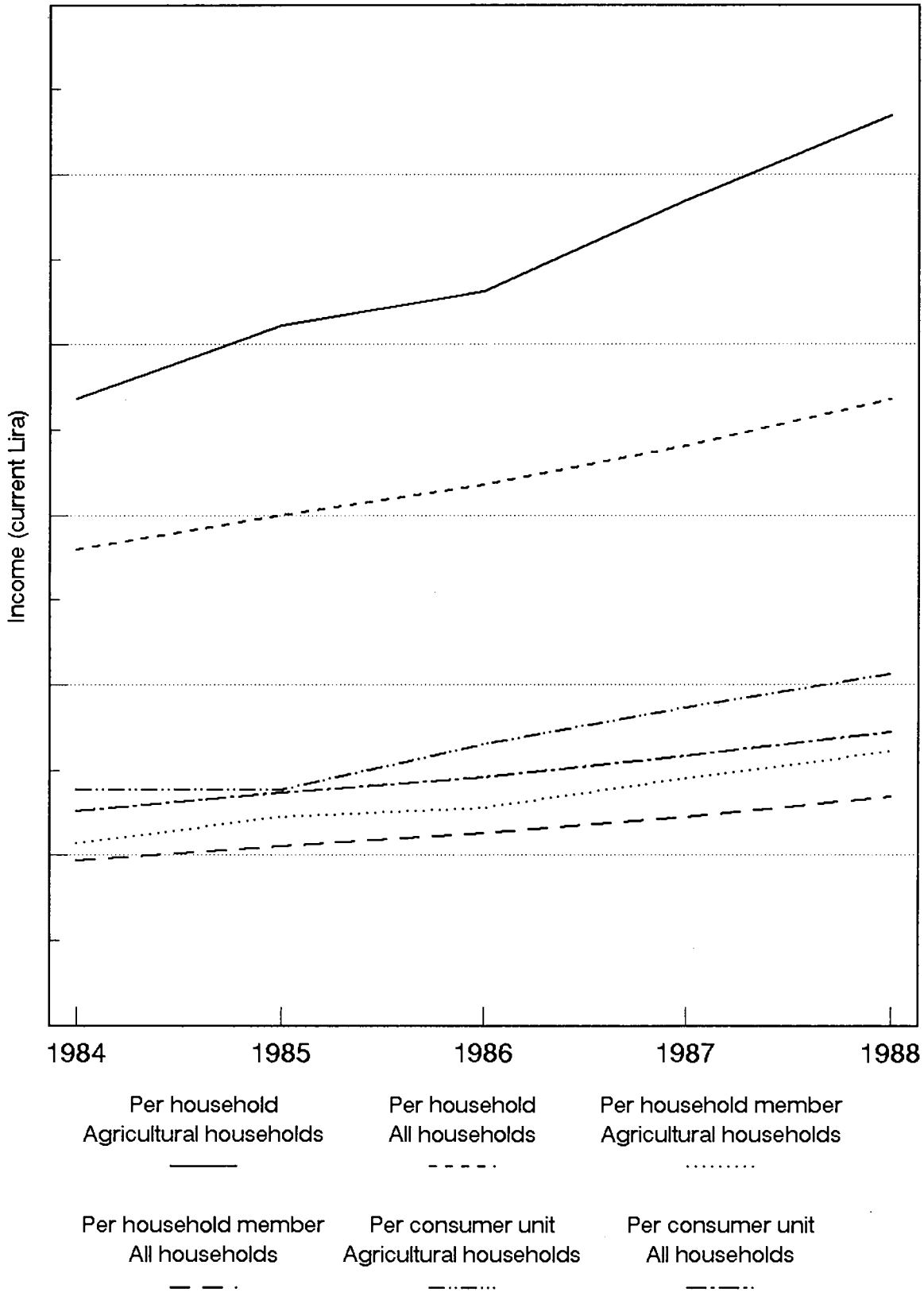
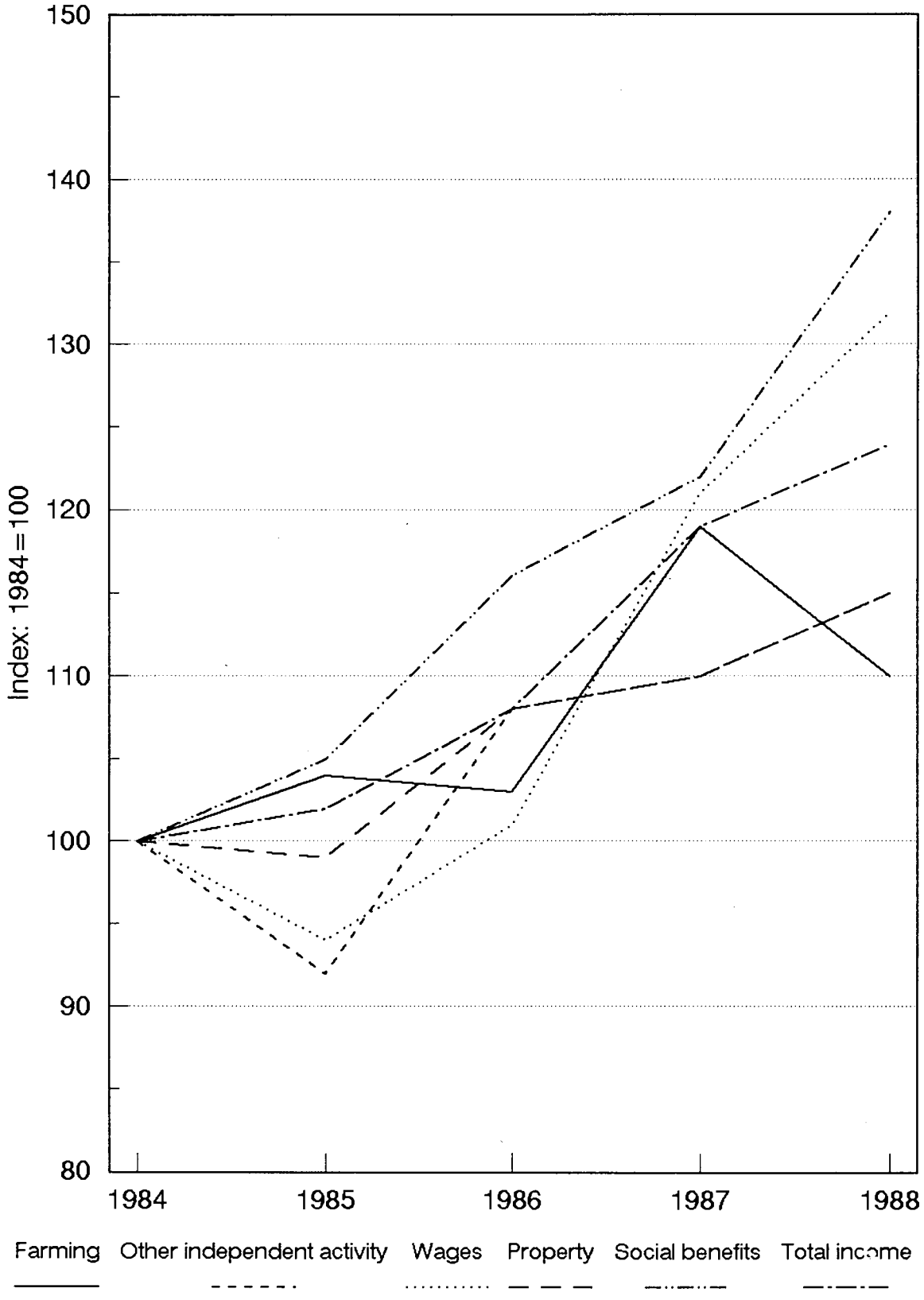


Figure I4 Italy: Relative change in main components of total income (current Lira), 1984-88.
Agricultural households.



independent activity) fell in nominal terms in the first few years, to be followed by a rapid rise in the latter ones. As would be expected, the income from farming showed less stability than total income; the substantial drop in the income which agricultural households received from farming in the last year of the series can also be found mirrored in Eurostat's Indicator 3 for the agriculture branch of the economy in 1988.

LUXEMBOURG

Methodology:

General approach

Model 3 approach. The income from agricultural activity is taken from the national accounts and distributed among farms operated by agricultural households and other households according to the proportion of standard gross margin found on these farms; the distribution agent is taken from the Farm Structure Survey. Data for other items (except imputed rental values, for which reference to a survey of rents is used) are taken direct from accounts of farms operated by agricultural households in the farm accounts survey and extrapolated to the national level. The questions contained in the farm accounts survey were specially enlarged to cover items of non-farm income for 1989.

Household unit

Household; includes other adults living in the household.

Household classification

Agricultural households are taken to be those which operate "professional agricultural holdings". These are holdings headed by a person who satisfies all the following conditions: the head of the holding works more than 50% of his time on the holding; he gets from the holding more than 50% of his income; he is affiliated to the agricultural social insurance; he has no other non-agricultural main activity.

Treatment of farmers who receive (or are eligible to receive) retirement (old-age) pensions: households with heads of 65 years and over are excluded from the agricultural group unless there is a younger successor (who is taken as the farmer). The excluded holdings (about 300) are known to be of very small size.

Equivalence scale

Scale used by STATEC in family budget surveys. Men aged 14-59 = 1.0; women 14-59 = 0.8; men and women 60 years or over = 0.8; children under 2 = 0.2, 2 to 3 = 0.3, 4 to 5 = 0.4, 6 to 7 = 0.5, 8 to 9 = 0.6, 10 to 11 = 0.7, 12 to 13 = 0.8.

Year for which results are available: 1989

Comments on the results:

Before the TIAH project was initiated Luxembourg had undertaken two special studies on the total income situation of its farmers, one related to the farm accounts survey and one to tax records. The first, for 1984/5, took the form of a supplement to the regular survey of the economic accounts of farms undertaken by the Rural Economy Department (SER) and the Luxembourg Office from Productivity (OLAP). Information about non-farming income was incomplete, and the sample was not representative, not adequately covering small and part-time holdings. For these reasons it was not possible to extrapolate the microeconomic data to the macro level. The second was a special analysis of tax records for 1971 (repeated for 1983), but likewise there was incomplete coverage of income (non-taxable welfare receipts were excluded) and incomes below the tax threshold were disregarded. Even in the absence of these gaps, income figures from this source would not have been a satisfactory guide to real levels because about 90 per cent of farmers were taxed on the "forfait" system, rather than on accounting profits.

Thus the new set of results forming part of the TIAH project are not directly comparable with earlier information. At present only estimates for agricultural households are available for 1989 (a good year for farming incomes), without any comparable figures for all households or other socio-professional groups (though comparisons from an alternative source are given below as supplementary information). A "narrow" concept of an agricultural household is employed, using both an income and a time criterion. The basic methodology would seem capable of using alternative definitions, including a "broad" approach. The present definition covers a field of observation of 2651 holdings; together these accounted for 89 per cent of the total agricultural standard gross margin in Luxembourg. To put them in context, the 1989 Farm Structure Survey found 3,803 holdings in Luxembourg, of which 3,280 were of more than 2 ha (Utilised Agricultural Area).

(a) Composition of total income of agricultural households, and deductions

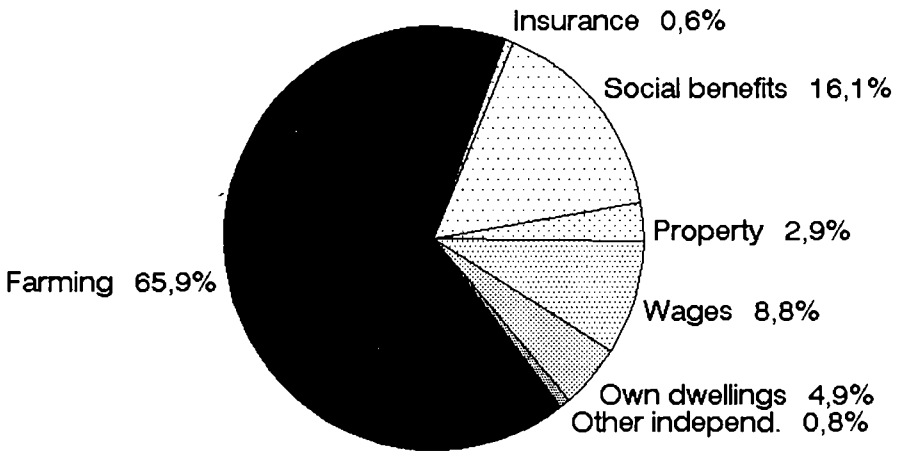
Figure L1 shows the composition of total income of agricultural households in 1989. In the conversion of the rewards from independent activity from Operating Surplus to income, distributed property income (rent and interest) have been distributed between agricultural activity (farming) and non-agricultural activity in proportion to the Operating Surplus from these two sources. Income from dependent activity (wages and salaries, called "wages" in the Figure) are shown net of social contributions and of direct taxes on wages. Some two-thirds of the total income of agricultural households in 1989 came from farming. The second largest source was social benefits. Some 88 per cent of total income remained as disposable income, though this figure would be a little smaller if wages and salaries were not shown net.

(b) Additional background information

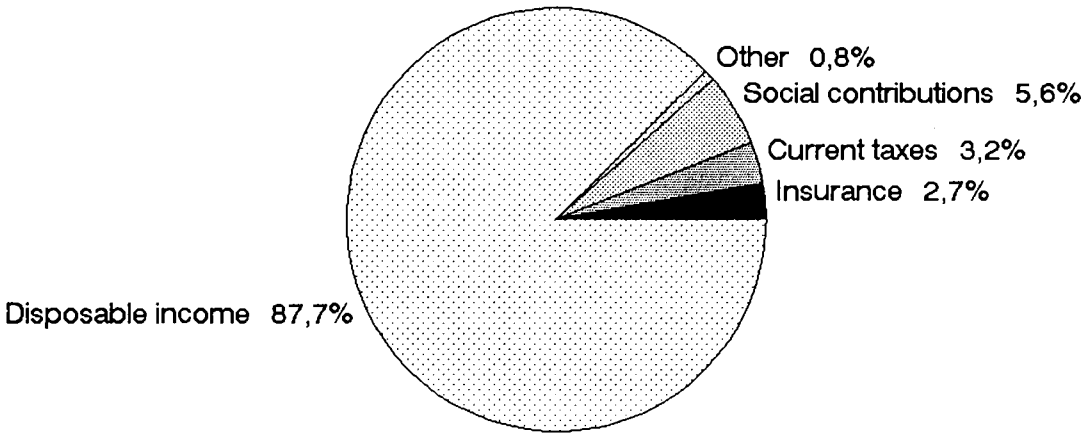
No comparisons are possible at present for Luxembourg under the TIAH project between farmers and other socio-professional groups. As an interim measure, it may be helpful to look outside the TIAH framework for background information on the relative income position of agricultural households. The Centre d'Etudes de Populations, de Prauvreté et de Politiques Socio-Economiques (CEPS) has published comparable figures for agricultural and other households in its "Niveaux de vie et de bien-être économique des ménages en 1985". The nature of CEPS and its study of economic wellbeing were described in the Hill report of 1988 (Total Incomes of Agricultural Households). As in the TIAH project, the classification system used is one based on a reference person. However, the number of agricultural cases is smaller.

The average net disposable income of the households of self-employed farmers (and vine growers) per household and per consumer unit, together with other socio-professional groups, is given below in an index form (all households = 100) in Table L1. From these figures it is clear that the average household disposable income of farmers in 1985 was relatively high. It was greater than that of all self-employed households (together) and even exceeded the income of the liberal professions. The only group of households with higher incomes were those headed

Figure L1 Luxembourg: Composition of total income, and deductions. Agricultural households. 1989



Composition



Deductions

by employees of the EEC institutions (office workers). However, farmer households were in a rather different position when income per consumer unit was calculated; they fell below the all-household average.

The figures in Table L1 are not directly comparable with those which form part of the TIAH project. The years differ, and there are likely to be variations between the methodologies which must be taken into account. Nevertheless, the CEPS data seem to offer an interim means for filling the statistical gap concerning other household groups.

Table L1: Luxembourg: Disposable income (index of FLUX per month) per household and per consumer unit. 1985

Type of activity	Average per household	Average per consumer unit
Self-employed (independent)	122	111
- agriculture and viticulture	143	94
- industrial and commerce	108	116
- liberal professions	127	128
Employed (dependent)	97	98
- manual workers	81	80
- public	94	82
- state	94	92
- EEC	81	71
- private	79	78
- other	91	98
- NSP	58	34
- office workers	116	121
- public	115	116
- state	119	123
- EEC	157	130
- private	113	122
- other	99	87
Aided	83	86
All	100	100

NETHERLANDS

Methodology:

Two independent sets of estimates are available, one from the Central Bureau of Statistics (CBS) and one from the Institute of Agricultural Economics (LEI)

General approach

CBS. Model 2 approach. Figures are taken from the socio-economic accounts, now compiled annually. These form a general disaggregation of the household sector account within the framework of national accounting. The distribution agents for this disaggregation are taken from the personal income distribution statistics, derived largely from taxation data. It should be noted that these personal income statistics are also capable of generating national-level estimates of disposable income; the description of income generation is less complete but with a greater degree of detail for the items covered. Gaps in information can be made up by reference to the national agricultural accounts and to the "agricultural and horticultural production accounts" (which are in turn based on a sample survey of holdings and cover their operating results and a number of other income sources).

LEI. Model 1 approach. Grossing up of survey of farm accounts selected from the annual LEI accountancy network, with special supplementary survey of small farm businesses which fall below the network threshold. Some extrapolation is used experimentally relating to small businesses for 1987.

Household unit

CBS. Group of persons living together and having a joint form of household management; can comprise a single person. This definition accords with that used by the household budget survey and the personal income distribution statistics (see above).

LEI. Only the head of the holding and his partner; no information collected on other members.

Household classification

CBS. Main source of income of the household as a whole. Seven income clusters are used; independent activity falls within "profit prior to deduction of stock and capital" which in turn leads to class of business being determined. Agriculture includes forestry and fishing.

LEI. Main sample: holdings in the agricultural census on which the head of the household devotes more than half of his/her working time to the holding. Supplementary sample of small holdings; time criterion, but those where the head is over 65 are excluded. A second level of selection of the main sample is possible according to the income criterion; those holdings selected on the time criterion where more than half the total income is generated by agricultural activities.

Equivalence scale

CBS. None used

LEI. None used; whole household not covered.

Years for which results are available:

CBS (from the socio-economic accounts): 1981, 1983, 1985

LEI (from farm accounts survey): 1985, 1986, 1987

Comments on the results:

In the Netherlands two completely different methodologies can be used to construct estimates of the disposable income of agricultural households. As might be expected, there are variations in the results which can be accounted for by the alternative definitions and time periods employed, especially the choice of household unit for which measurement is made. It is not the intention here to attempt a detailed reconciliation of the two approaches. This will be the subject of further discussions between the institutions involved and with Eurostat. Rather, at this stage it is sufficient to report the results coming from each.

Part One: CBS estimates

Estimates provided by the CBS for 1981, 1983 and 1985 are taken from the socio-economic accounts for the Netherlands; these are now compiled annually, so a regular series of results for agricultural households is in prospect. The aim of these accounts is to describe the way in which incomes are obtained, distributed and spent by various categories of household (52 categories). The socio-economic accounts are based on the account for the private household sector in national accounts, but differ in a number of ways. As has been pointed out in Part One (General Report), within the framework of national accounts the distribution of income account for households combines the production and consumption activities of households. Essentially, the socio-economic accounts for the Netherlands view the household only as a "consumption entity", splitting off the production element. Hence independent activity (such as farming) is reflected in the socio-economic accounts solely as the resultant income to which it gives rise (that is, net of interest on commercial loans, rent on commercial property, indirect taxes and levies, subsidies and indemnity insurance premiums etc). Income and expenditure belonging to non-profit institutions are not included in the socio-economic accounts, so payments by households to them have to be recorded separately. Voluntary contributions to churches and other similar institutions are not deducted in reaching disposable income, but are treated as ways in which households chose to spend that income. Treatments given to pension and life insurance transactions and medical goods and services (and other items) are also not the same as in national accounts, with the removal of elements which do not form part of the actual spendable money income of households or have an influence on that income. The aim of these changes is to produce a disposable income concept which is a better reflection of households' spending potential. In this respect, the socio-economic accounts for the Netherlands are in advance of the approach currently employed by Eurostat's TIAH project.

The classification system used in the socio-economic accounts corresponds essentially to that of the agreed target for the TIAH methodology; households are allocated to socio-professional groups on the basis of the main source of income of the entire household. Alternatives to this system are not used within the accounts. The key used to disaggregate the accounts is the personal income distribution statistics for the Netherlands; these statistics, derived largely from taxation data, use a reference person system (income based) and are also capable

of being raised to national level, though their coverage is not as complete as the socio-economic accounts. Nevertheless, they can be reconciled with the estimates in the socio-economic accounts by making allowances for the differences in coverage. These personal income distribution statistics are capable of providing information on the income situation of farm households which operate their farm businesses in corporate form; they accounted for 2.3 per cent of agricultural households and 2.2 per cent of household members but 3.3 per cent of total income. In the socio-economic accounts such households are included with households in which wages earned in the private sector form the most important source of income. At present no estimates are produced from the CBS using the "broad" approach to what constitutes an agricultural household.

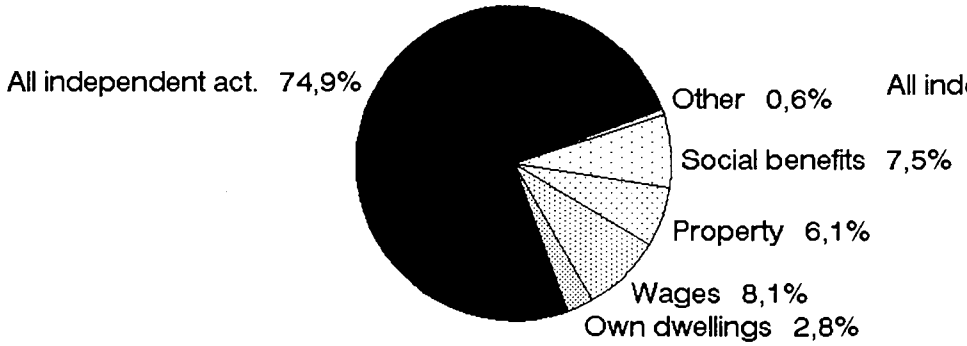
Figures from the 1981 accounts differ in some respects from the later sets in their classification of households and treatment of a number of items. Important in the present context, in the 1981 typology households in which there was at least one member aged 65 or over were included in the 65+ households, even if the major source of income of the entire household was profits from a farm business. This was changed from 1983, and such households were classed as agricultural, with a consequent increase in the number of households and a rise in the income they received from social security benefits. In this report, estimates for the first year are not considered.

(a) Composition of total income, and deductions

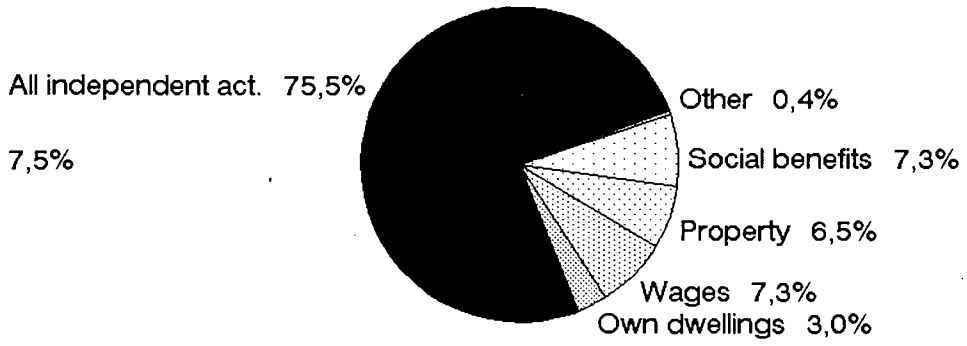
Figure NL1 shows the composition of total income of agricultural households in 1983 and 1985. Some three-quarters came from independent activity; this includes both farming and other forms of self-employment, as no separation is possible in the CBS estimates. The second largest source was wages (dependent activity) followed closely by social benefits (at the same level in 1985). Judged against the preliminary estimates from other Member States, sources other than farming seem to contribute a rather low proportion of total income in the Netherlands. This is compatible with the relatively low incidence of other gainful activities among holders returned in the 1987 Farm Structure Survey (at 23 per cent of holders the lowest in the EC, with the exception of Luxembourg).

Turning to deductions (Figure NL2), taxes and social contributions (together) absorbed just over a quarter of total income, leaving a little under three quarters as disposable. In the Netherlands it is possible to isolate interest and rent for commercial purposes; these have already been deducted in the process of estimating income from independent activity, so that the interest element shown in Figure NL2 corresponds only to private (consumer) credit and other credit, including loans for own dwellings. Compared with the all-household average in 1985, agricultural households retained a greater proportion of their total income as disposable income, paying about the same proportion as current taxes but only about half the share taken by social contributions.

Figure NL1 Netherlands: Composition of total income.
CBS estimates (socio-economic accounts).
Agricultural households. 1983 and 1985

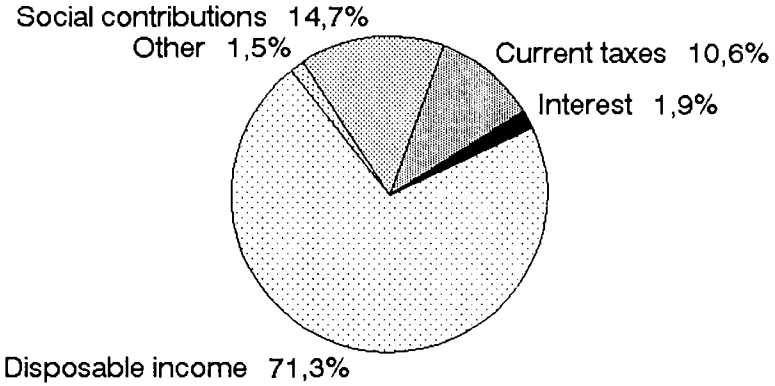


Agricultural households
1983

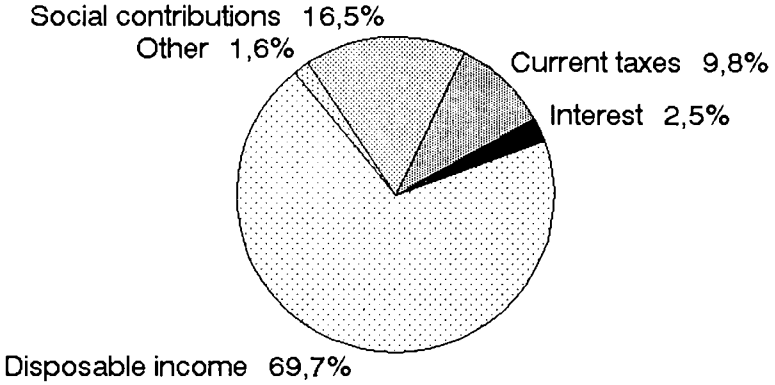


Agricultural households
1985

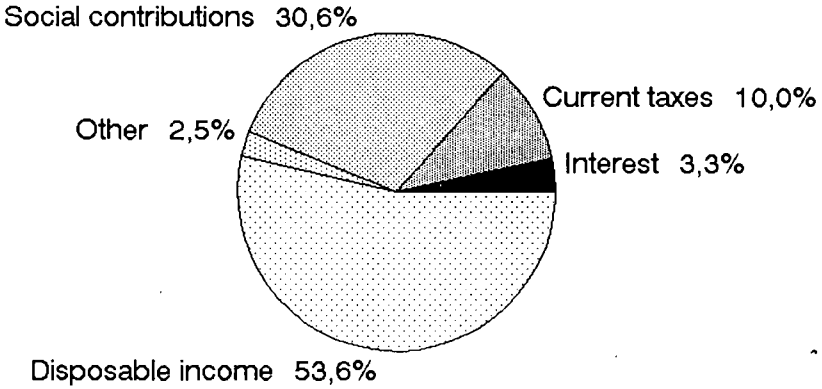
Figure NL2 Netherlands: Deductions from total income.
CBS estimates (socio-economic accounts).
Agricultural and all households. 1983 and 1985



Agricultural households
1983



Agricultural households
1985



All households
1985

(b) Comparisons of income with other socio-professional groups

In the socio-economic accounts agricultural households are one group within a range of occupational groups. Here, however, the comparison will be confined to the relationship between farmer households and the all-household average (the CBS results for the Netherlands are only supplied at present in this form). Figure NL3 shows the income per household and per member for 1983 and 1985. At present no information using consumer units is available. In 1985 both the levels of disposable income per household and per household member for agricultural households were substantially above the all-household figures. Agricultural household income was more than double the national average (228 per cent of the all-household figure) and income per member was 151 per cent of the all-household level.

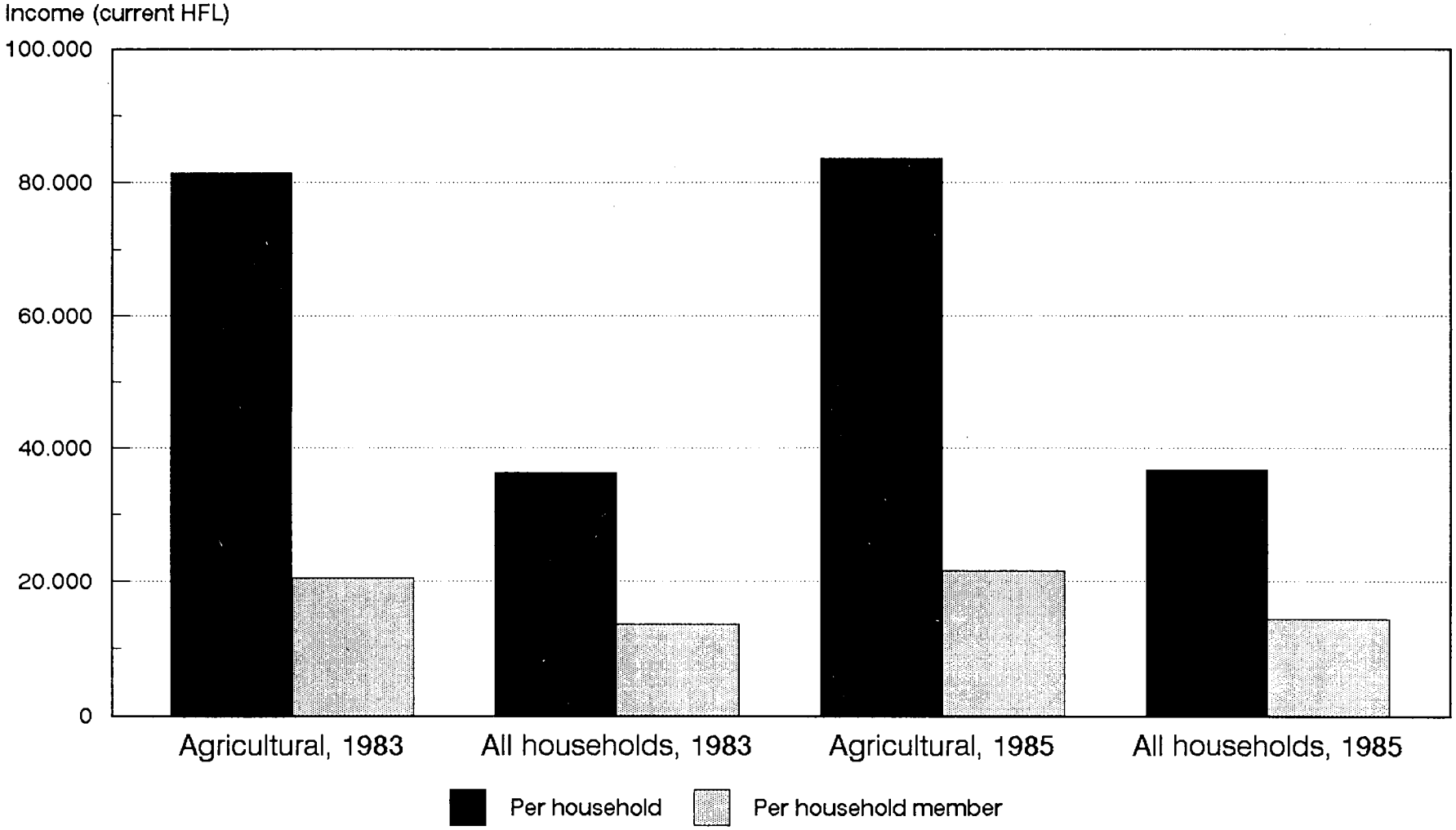
A similar comparison emerged from the tax-based personal income distribution statistics, though the relative position of farmer households was not so markedly superior. Agricultural households (excluding those with farms run as corporate bodies) had an average incomes per household and per member which were 160 per cent and 107 per cent respectively of the all-household figures in 1985. Perhaps surprisingly in view of the frequent supposition that farms arranged as companies tend to be the largest and successful businesses, the income per household of these farms was almost identical with that of other agricultural households, and income per member was only 6 per cent greater.

Part two: LEI estimates

The LEI estimates are the result of grossing up data from farm accounts. The starting point was the annual CBS agricultural census, which covers all holdings (with minor exceptions involved in chicken farming, furbearing animals, fish farming, forestry) above a nationally-determined threshold of 10 Standard Farm Units (SFUs), corresponding to a little more than 2 ESU. The LEI farm accountancy data network is representative of holdings of 79 SFU and over (70 SFU for horticulture and market gardening) and was used as the source of data for holdings above this size. For smaller holdings a special supplementary survey was held. Thus the process started from the population of agricultural holdings, not from the population of households. The number of agricultural households found on the sample holdings (there could be more than one on some holdings) was only available directly for parts of the survey; for the remainder it was estimated based on known ratios of holdings to households.

The main sample from the LEI farm accountancy data network applied a time criterion to a reference person; it covered heads of holdings who devoted more than half their working time to the holding. It was assumed that there were very few farms of 79 SFU and over which did not satisfy this time criterion, and any such cases were handled by making an adjustment to the results rather than by positive exclusion. Very large farms were not included; they represented only very small numbers nationally. The LEI also can apply a second level income criterion to the farming couple (farmer plus spouse) on those holdings which satisfy the

Figure NL3 Netherlands: Income per unit. CBS estimates. Agricultural and all households. 1983 and 1985.



time criterion; the impact of so doing is reported below. The sample for the supplementary survey of very small farms was selected on an income criterion and based on tax accounts.

The household unit used by the LEI was narrower than that of the CBS and of the TIAH target methodology. Information on income from agricultural activity covered all family members working on the holding, but for off-farm income this was confined to the holder and partner (spouse). Data on the total number of household members is not available. Of course, this methodology is not capable of generating estimates of income in other socio-professional groups for comparative purposes.

(a) Numbers of households and levels of income

The grossed-up estimates of numbers of households in 1985 produced by the LEI methodology are shown in Table NL1. Two figures are given, (a) for holdings which satisfy the time criterion, and (b) for those which satisfy both the time criterion and the income criterion. Corresponding average disposable incomes per household are also given. Equivalent figures for the CBS methodology are also shown. Using a single criterion results in more households qualifying as agricultural than in the CBS approach, but use of a double criterion gives a more restricted group. The double criterion gives a higher average income figure, but even so the level is far below that produced by the CBS. Likely explanations for this disparity in results include differences in household coverage, in the breadth of the household concept employed and in the assumed lives of capital goods.

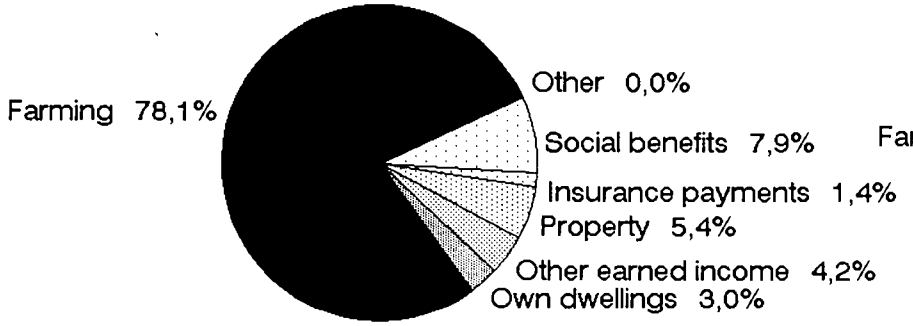
Table NL1 Netherlands: Numbers of agricultural households and average income for alternative definitions of an agricultural household. 1985

Source of estimate	Criterion applied	Number of households	Average disposable income (HFL)
LEI	Head, time criterion	115900	50765
LEI	Head, time criterion, then income criterion applied to couple	90000	62937
CBS	Household income criterion	96000	83634

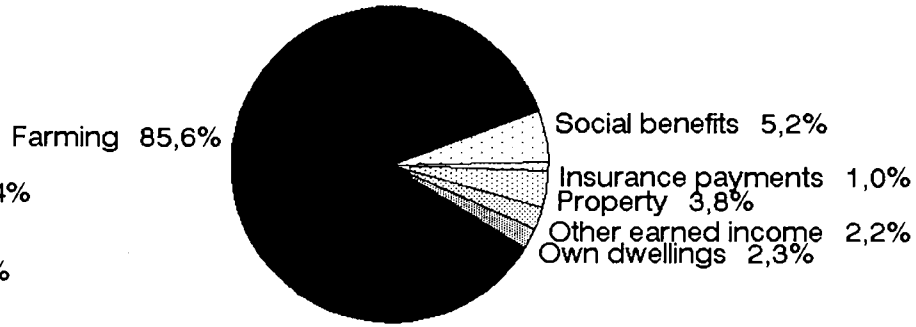
(b) Composition of total income, and deductions

The composition of total income on LEI agricultural households in 1985 is shown in Figure NL4. Differences in presentation between these LEI figures and those for the CBS given above must be borne in mind. The LEI shows income from independent activity in agriculture as a separate item, but combines income from independent non-agricultural activity with dependent income. On the other hand, the CBS combines income from both forms of independent activity but shows independent income separately. Nevertheless, it is clear that in the LEI estimates

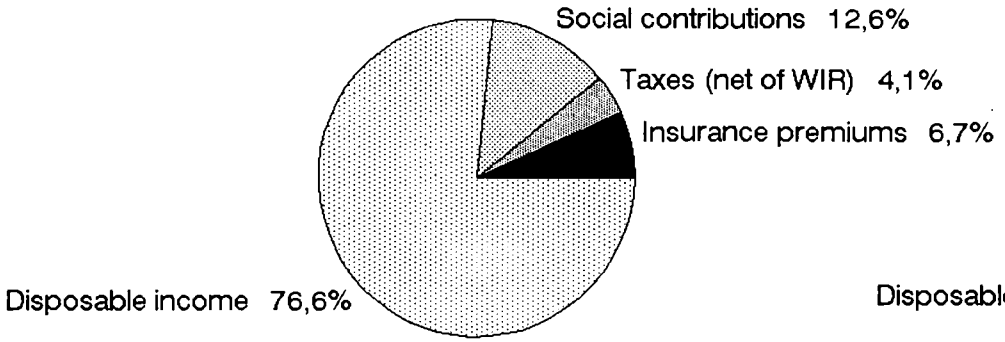
Figure NL4 Netherlands: Composition of total income, and deductions. LEI estimates. Agricultural households. 1985



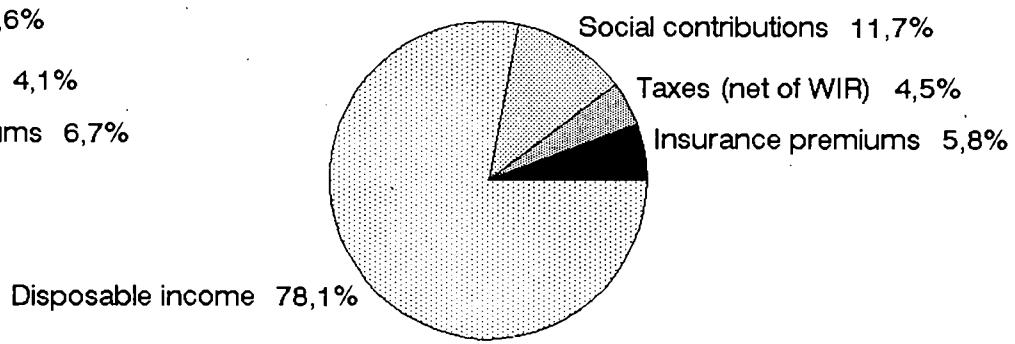
Composition
Time criterion



Composition
Time and income criteria



Deductions
Time criterion



Deductions
Time and income criteria

the proportion of income coming from farming was much higher than in the CBS estimates for the same year, especially for those households which met both criteria. Conversely, the proportion shown as coming from wages was much lower, no doubt a reflection of the narrower group of persons whose off-farm income is measured. Insurance receipts relate to personal insurance only; they cover insurance against incapacity to work and health care costs, and payments from pension funds an annuities. Among the deductions, insurance premiums relate only to personal incapacity to work and sickness; insurance of assets is covered elsewhere. The receipt of WIR premiums (an adjustment for a change in the way in which depreciation allowances may be calculated for tax purposes) are mainly handled by the tax authorities; in Figure NL4 taxes are shown net of these receipts. However, they were of substantial size, as is apparent from the basic data presented in Table NL2.

Table NL2 Netherlands: aggregate income of agricultural households
Currency units: m. HFL
Year: 1985

	Item / Household group	CBS agric.	CBS all	LEI agric. V1	LEI agric. V2
1a	Independent agric. activity - Operating Surplus - Income			- 6002.3	- 6211.6
1b	Independent non-agric. activity - Operating Surplus - Income			- *	- *
	All independent activity - Operating Surplus - Income	- 8698	- 32106		
1c	Owner dwellings	347	11288	230.1	163.4
2	Dependent activity	837	216368	322.8	161.4
3	Property and entrepreneurial income	751	20054	413.9	274.2
4	Accident insurance claims			105.4	70.2
5	Social benefits	845	96148	606.1	375.7
6	Other current transfers	45	4539	2.7	-0.3
7	Current receipts - based on Operating Surplus - based on Income	- 11523	- 380503	- 7683.0	- 7256.2
8	Distributed property and entrepreneurial income	285	12609		
9	Net accident insurance premiums			513.3	417.3
10	Current taxes on income and wealth	1128	38149	900.1 (-582.1)	784.5 (-458.9)
11	Social contributions	1899	116488	968.0	848.9
12	Other outgoing current transfers	182	9441		
13	Disposable income	8029	203816	5883.7	5664.4
	Number of households	96000	5554000	115900	90000
	Number of household members	372000	14222000		
	Number of consumer units				
	Disposable income per unit: - per household (HFL) - per household member	83635 21583	36697 14331	50765	62947

Notes on the table for the Netherlands:

(i) The CBS and LEI estimates use different methodologies and should not, at this stage, be compared directly. CBS uses the target TIAH classification system (based on the income composition of the entire household; LEI uses a reference person' system (see below). They differ in their ways of estimating some items, for example depreciation, valuation of dwellings, and in their coverage of social contributions.

(ii) In the CBS figures:
- some of the Sub-Items from Item 3 are included in Item 2.
- Item 8 includes interest on consumer credit. Interest on loans for farming (and other business) purposes are deducted under Item 1.

(iii) In the LEI figures:
- there are two definitions of agricultural household. V1 refers to agricultural holdings where the head of the holding spends more than half his/her time on the holding. V2 uses an additional, second-level criterion, applied to the composition of income of the farmer and spouse.
- income from independent non-agricultural activity is combined with income from dependent activity and shown under Item 2
- Item 10 contains WIR adjustments (concerning changes in the methods of allowing for depreciation) as these are handled by the tax system. These adjustments are large in relation to the tax payments, and their appropriate treatment is still under consideration. They could, perhaps, be treated as a flow of deferred income to households and appear under Item 1 or 6.

PORTUGAL

Methodology:

General approach

Model 2 approach. The starting point is the Household Sector account (S80) in national accounts for 1980 to 1990. Distribution of the aggregates in this account between agricultural and non-agricultural households uses keys. For the years 1980-85 these keys take the form of grossed up figures of appropriate microeconomic concepts estimated by taking amounts per household from the 1980/81 Survey of Household Income and Expenditure (SHIE), adjusted to correspond with the 1980 calendar year, and multiplying by the number of households in the 1981 General Population Census. For years 1986-90 a second set of keys is used, based on the SHIE of 1989/90. Capital consumption is not deducted in either series; all income figures are shown gross.

Household unit

Private domestic household: a group residing in a single housing unit and whose regular expenditure on accommodation and food is funded by a joint budget; a person occupying an entire housing unit or sharing it with others but not meeting the above definition.

Household classification

Households headed by a self-employed worker in agriculture, including both those with and without paid employees. The head is selected by the household. Agriculture is defined broadly, and also includes forestry, fishing and hunting.

Treatment of reference persons who receive (or are eligible to receive) retirement (old-age) pensions: classification as an agricultural producer means that the person has independent activity in agriculture as his/her main activity (main source of income, profession and situation) and is irrespective of whether he/she receives any type of pension or not. Theoretically it would be possible to establish how many agricultural households also receive pensions.

Equivalence scale

The ILO scale is used. Head of household and other men aged 14 to 59 = 1; other women aged 14 and over and men aged 60 and over = 0.8; children aged under 2 = 0.2, 2 and 3 = 0.3, 4 and 5 = 0.4, 6 and 7 = 0.5, 8 and 9 = 0.6, 10 and 11 = 0.7, 12 and 13 = 0.8.

Year for which results are available: 1980 to 1990 in two series (1980-85 and 1986-90)

Comments on the results:

The results for Portugal are best regarded as experimental at this stage. Estimates are derived from the household sector accounts by distributing the aggregates between agricultural and other households according to keys. These are taken from the 1980/81 and 1989/90 Surveys of Household Income and Expenditure (SHIE), weighted according to the population census. The SHIE gives the average (gross) income of households, broken down into agricultural and non-agricultural household groups, and shows the origins of this income and the deductions made from it. As is common in surveys of this sort, the reliability of information on income from independent activity is open to question and income is likely to be understated. At present it has not proved possible to verify the results by systematically reconciling with other sources, such as the economic accounts for

agriculture. Various options are under consideration for developing the quality of the data.

The results for 1981 to 1985 are estimated by applying the distribution keys for 1980 to the household sector accounts for each of these years. Thus it is assumed that the structure of (gross) income and expenditure have remained unchanged over the period 1980 to 1985. A further SHIE was held in 1989/90 and new keys derived from this information have been used in estimating results for 1986 to 1990; again, there is an assumption of a constant income structure. Within each series, changes from year to year in agricultural income, relative to all income, are therefore not reflected in the results as calculated at present. The household sector accounts for most years in the second series (1986 to 1990) are still provisional. Because structures are fixed within periods, attention here is focused on the base years of each series - 1980 and 1989.

(a) Composition of total income, and deductions

Figure P1 shows the composition of total income for agricultural households and all households for 1980 (the base year of the first series methodology), and the deductions from income to leave disposable income. In that year the population census estimated that there were 219061 households headed by a farmer (agricultural worker operating on his/her own account), some 8.5 per cent of all households in Portugal (2.584m households). Among these agricultural households, independent activity accounted for 70 per cent of total income in 1980; most of this would have come from farming. Wages formed the second largest source. These households retained a much higher proportion of their total income as disposable income than did households in general; only 2.4 per cent was taken in deductions, of which social contributions was the largest element, forming just over half of all deductions. In contrast, taking all households in Portugal together, some 21 per cent of total income was taken as deductions. The methodology currently in use means that this structure is assumed to apply up to 1985.

Figure P2 shows the structure of income and deductions for 1989 (from the second series, which uses the 1989/90 SHIE). In general the pattern is similar to those of 1980, though there are some interesting differences. Among agricultural households the contribution to total income coming from self-employment (independent activity) at 61 per cent was rather less than in the earlier series of results. Wages were again the second largest source of income. Among the other sources, the shares coming from property income and from the imputed rental value of owned dwellings both increased. Taking all households together, income from independent activity seems to have declined in relative importance. Though agricultural households again retained a much higher proportion of total income as disposable income than households in general, a somewhat larger share was taken by deductions; this was also a finding for the all-household group.

It is worth viewing differences between the two years against a broader background. The period 1980-89 was one of substantial change in Portugal's

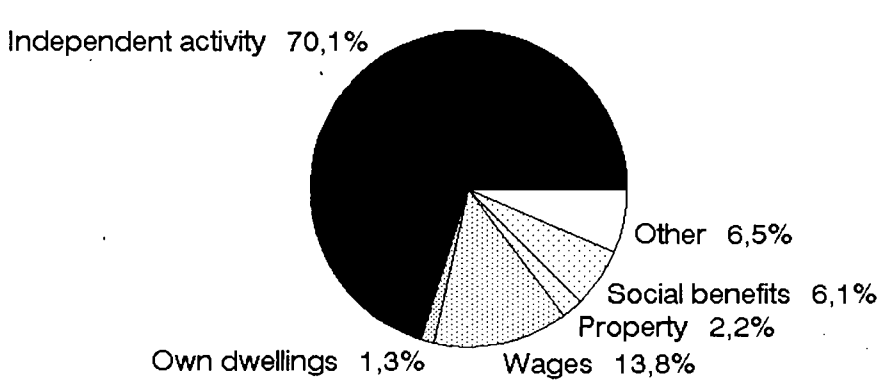
agriculture, so that the number of households to which the distributions relate was much less in the latter year. According to estimates published by Eurostat (in Agricultural Income 1990) the volume of agricultural labour fell by about one third between 1980 and 1989. However, once this labour change had been taken into account, the level of real net income from agricultural activity per annual work unit of family labour (Eurostat's Indicator 3) was very similar in 1989 to what it had been in 1980 (Index of 98.6 in 1980 and 97.0 in 1989, where 1984-86 = 100). Differences are therefore unlikely to reflect fluctuations in the income from farming and are more probably the outcome of other changes, such as shifts in the distribution of farming income among households, methodological improvements and so on.

(b) Comparative income levels

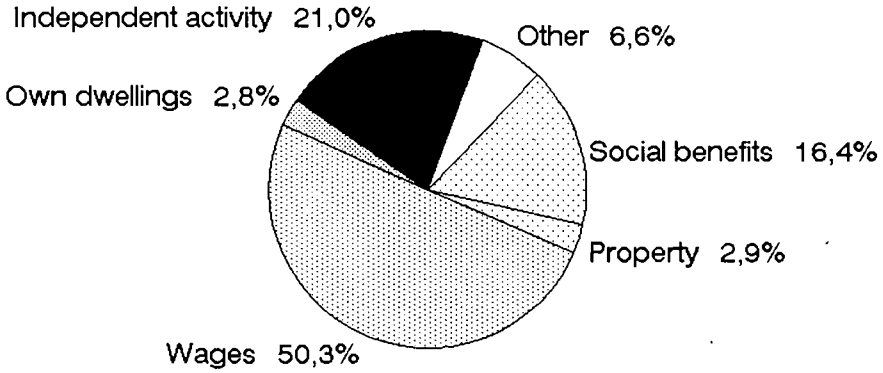
Unlike the pattern seen in many other Member States, where the average income of agricultural households was typically above the all-household level, the disposable income per household found on Portuguese agricultural households in 1980 was only 81 per cent of the national average (Figure P3). However, in common with findings elsewhere, the relative position when measured per household member and per consumer unit was worse (71 per cent and 72 per cent respectively of the all-household levels). Results for 1989 are not yet available on a per unit basis.

It should be remembered that, at present, the estimates of income from independent activity are not corrected for the under-estimation which is characteristic of information on this item coming from family budget surveys, often found to be of the order of 20 per cent. Income from independent activity was much more important to agricultural households than to households in general (61 per cent in contrast to 16 per cent in 1989). Thus the relative income position of agricultural households may be understated.

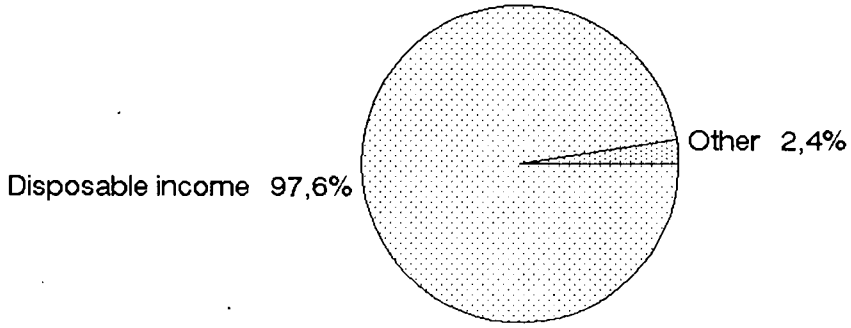
Figure P1 Portugal:
Composition of total income, and deductions.
Agricultural households and all households. 1980



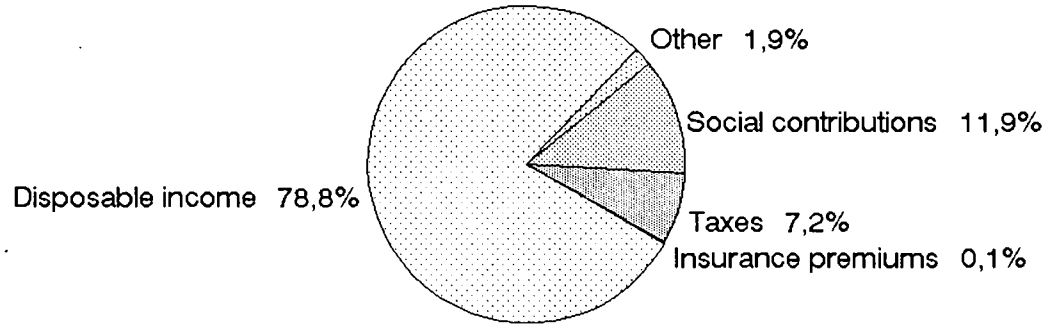
Composition
Agricultural households



Composition
All households

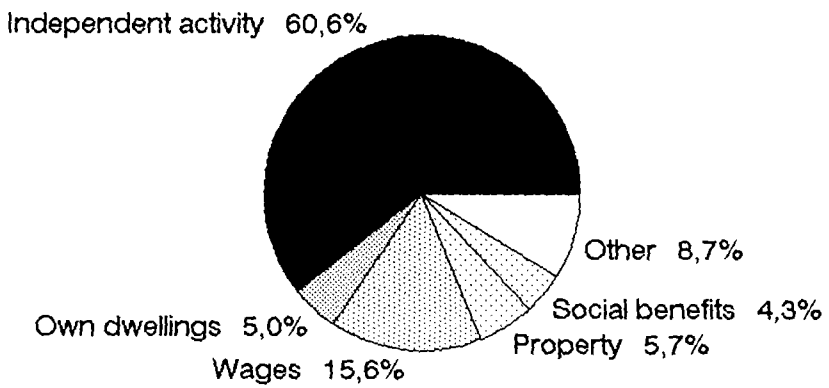


Deductions
Agricultural households

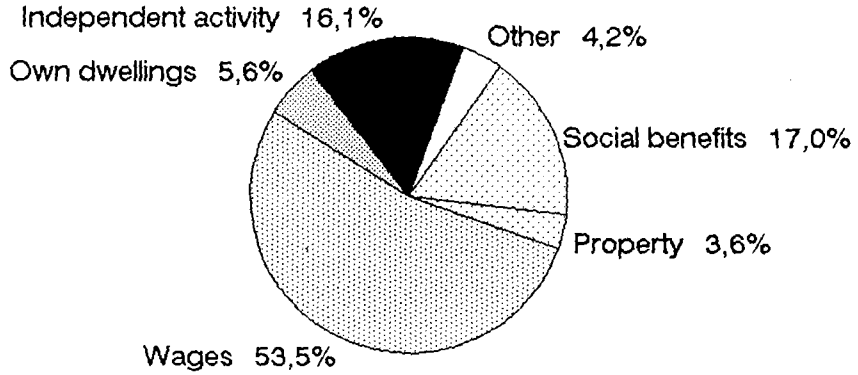


Deductions
All households

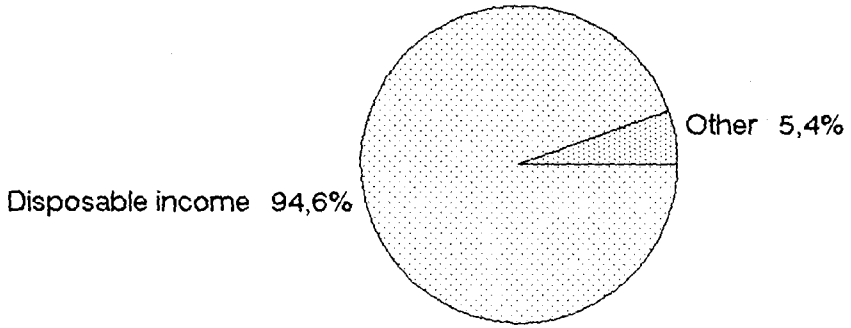
Figure P2 Portugal:
Composition of total income, and deductions.
Agricultural households and all households. 1989



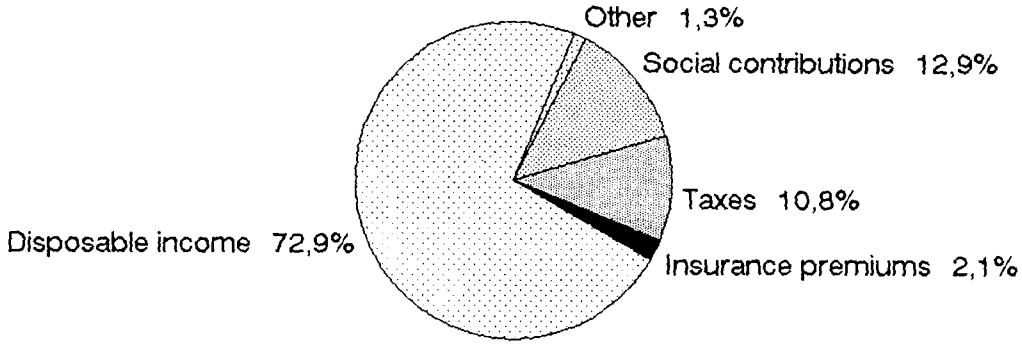
Composition
Agricultural households



Composition
All households

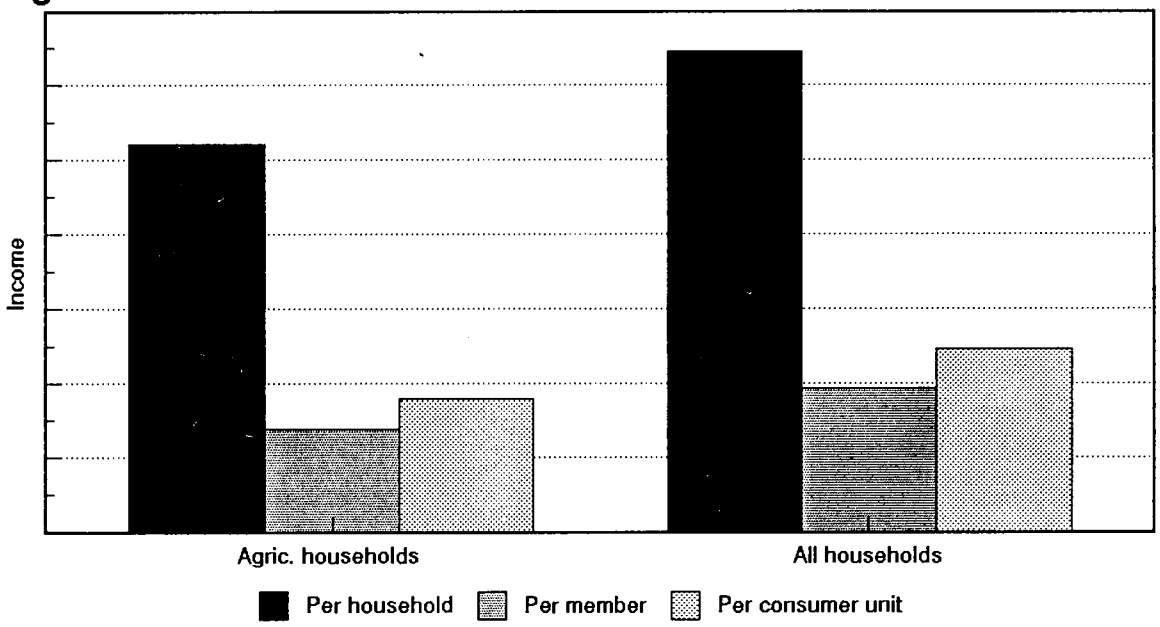


Deductions
Agricultural households



Deductions
All households

Figure P3 Portugal: Relative income levels.
Disposable income per unit.
Agricultural households and all households. 1980



UNITED KINGDOM

Methodology:

General approach

Model 1. Aggregate estimates of the total income situation of agricultural tax cases are grossed up from the Inland Revenue (taxation authority) Survey of Personal Incomes (SPI).

Household unit

Tax cases (single persons and married couples).

Household classification

On the basis of the income of the tax case (couple or individual). Agricultural cases are those in which self-employment (independent) income from agriculture or horticulture usually constitutes the main or principal additional source of *self-employment income* of single persons or husbands or the main source of self-employment income of wives. It should be noted that the classification system does not make use of a comparison of the income coming from independent activity in agriculture with total income, but only with that part coming from independent activity in all industries. Households which operate their farms as corporate bodies, and therefore receive income in the form of compensation from dependent activity rather than as income from independent activity, will not be treated as agricultural.

Equivalence scale

None used: coverage of household incomplete

Years for which results are available: 1980 to 1986, with partial information for 1987.

Comments on the results

The UK does not undertake a general disaggregation of its household sector into socio-professional groups within the framework of national accounts. No macroeconomic methodology is in place by which this could be done. Thus in order to generate information on the income situation of agricultural households for Eurostat's TIAH project, attention has had to be given to microeconomic data sources. There are several such sources, but only one (the Survey of Personal Incomes) which is capable of providing the required information for farmer households, with the possibility of comparable results for all households together. Of the others, the UK's household budget survey contains too few cases of households headed by a farmer to be useful for grossing up to national level. The Farm Business Survey (FBS), while it now (from 1988/89) collects some information on non-farm income of farmer and spouse by income band, does not cover deductions leading to disposable income and its sample is not necessarily representative of agricultural households; a comprehensive analysis of FBS findings for 1988/89 has been provided by the UK and is referred to later.

Thus the main source of information which the UK can provide to the TIAH project is that within the annual Survey of Personal Incomes (SPI), drawn from taxation records. The SPI does not cover the same set of cases each year; a fresh sample is drawn annually. Tax cases are classified as described above (see the Methodology section). It is understood that some discretion is used by tax

authorities in allowing for fluctuations in the income from farming before a household is reclassified. The SPI contains about 1 per cent of agricultural cases. Information from this source has been published for several years in the annual national report on incomes (first appearing in the 1986 edition of Farm Incomes in the United Kingdom) and the period covered now extends from 1977-78 to 1988-89.

The SPI approach differs from the target methodology in some important respects. Among these, perhaps the most significant relate to the sample and coverage of households. First, the classification used means that, as currently operated, the households which are described as agricultural do not correspond with either of the "narrow" definitions (where independent activity in agriculture is the main income source of the household, or where it is the main income source or occupation of the head). Rather, the UK's SPI approach is closer to the "broad" definition, but does not necessarily cover all households who operate holdings. Second, not all members of the household are included in the tax case, and this can affect both the amounts of income recorded and the numbers of households (when a household income classification system is in use). Third, households which operate their holdings as corporate bodies are not included within the agricultural group (unless the farmer or spouse happen to have some other income from self-employment in agriculture). These are important in the UK context. In 1983 just under one quarter (24 per cent) of the Net Operating Surplus of UK agriculture was estimated to have been generated on corporate farms. Evidence from a range of sources point to these farms as tending to be found disproportionately among the larger-size groups but, despite their size, the overwhelming majority would also be owned and managed by families. The SPI cannot provide a separation of the corporate farms into "family businesses" and "other". The omission of the households associated with these farms represents a significant gap in the SPI coverage.

There are also problems of a more technical nature. The basic data in the SPI refers to income *assessed for tax* in particular tax years (beginning 6th April) and not to the incomes *earned* in any particular calendar year. Differences between the taxation arrangements applied to various types of income mean that the income assessed for tax contains a mix of earning periods, that from self-employment assessed in 1988-89 largely having been earned in 1987 but that from other sources relating to the (tax) year of assessment. For the TIAH project the results for the UK have been adjusted to correspond to the calendar year shown; for this reason figures reported to the TIAH project are not identical with those given in national publications. The SPI incomes from self-employment take into account taxation conventions; they are net of capital allowances, stock relief, superannuation contributions (a social benefit contribution), expenses of employment and business losses (if there is sufficient income against which they can be offset). Items which are not part of taxable income (such as the imputed income from owner-occupied dwellings) do not appear in tabulations taken from the SPI. Disposable income is not a concept in use and, though income after tax could be calculated, this does not currently appear. In addition, while the earnings of spouses from the agricultural business should be included within the total, some

employment, there often being a tax advantage in some spreading of the incomes between spouses and this may be the means chosen.

The nature of the source of information for the UK means that particular caution must be exercised when interpreting the results. In their current state of development they should only be regarded as experimental. At present the results from the UK do not contain estimates for all households together or for other socio-professional groups by which comparison of the income situation of agricultural households could be made. This would appear to be technically possible. Also, national UK reports contain separate sets of results (not adjusted to calendar years) for tax cases in which self-employment income in agriculture and horticulture was the main source (261,000 cases in 1987/88, against 280,000 cases where it was the main or principal additional source, as described above). These "main source" cases had an average income from agriculture and horticulture which was 6 per cent higher than for all cases, but a total income which was 6 per cent lower. The existence of such estimates suggests that alternative approaches to what constitutes an agricultural case may be feasible within the UK's contribution to the TIAH project.

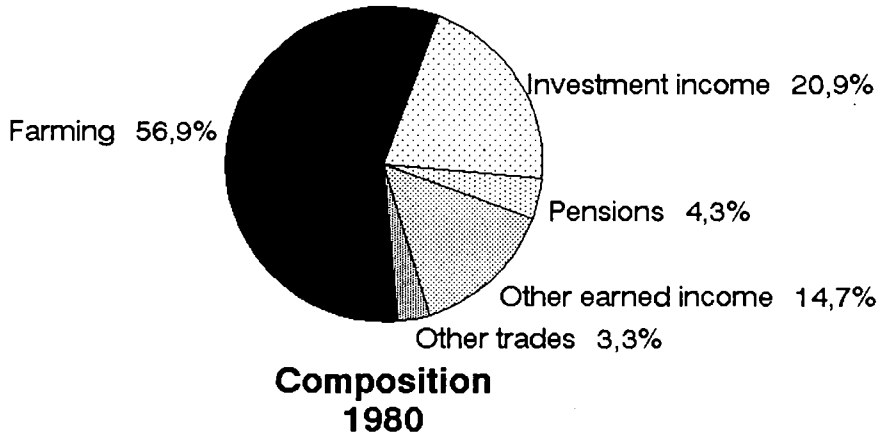
(a) Composition of total income

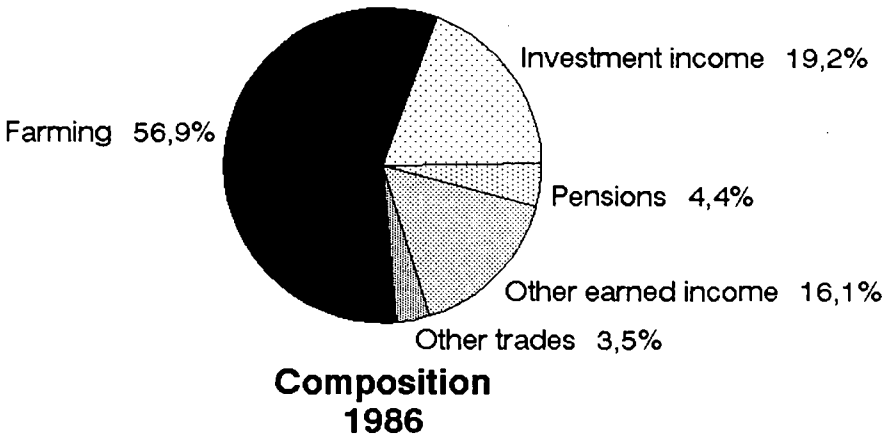
The composition of total income (assessed for tax) for 1980 and 1986 (the latest for which all items are available) for all agricultural and horticultural cases is shown in Figure UK1. Income from independent activity in agriculture and horticulture (labelled "farming") formed just over half the total (57 per cent) in each year. Over the period shown the share varied from 54 per cent (1981) to 61 per cent (1984). The second largest source was investment income.

Deductions are not given in the results adjusted to a calendar year basis. However, reference to the unadjusted figures in national publications finds that, in the taxation years 1978-79 to 1987-88, tax took from 20 per cent (1984-85) to 24 per cent (1981-82) of total taxable income.

Again using the unadjusted figures, it can be shown that in 1987-88 income from self-employment in agriculture and horticulture was relatively somewhat more important for middle income bands than for either of the extremes. For the very few agricultural tax cases with incomes of £50,000 and over it fell to less than half of total taxable income. Income from investments showed an obverse pattern, accounting for a quarter of total income among the lowest and highest groups but a sixth or seventh in intermediate income groups. Once past the lowest income band, the relative importance of pensions tended to decline as higher income bands were reached.

Figure UK1 United Kingdom: Composition of income assessed for tax. Agricultural and horticultural tax cases. 1980 and 1986





(b) Developments of income over time

The grossed-up figures of income for the period 1980-87 reflect, in part, changes in the estimated numbers of tax cases belonging to the agricultural and horticultural group. Numbers in 1985 seemed particularly high. Consequently, developments over time are best described using incomes per tax case. Figure UK2 shows movement in the components of total income over time (in current £ per tax case). No substantial differences are evident in growth patterns. By 1986 total income and the income from farming had both risen to 213 per cent of the 1980 levels; the smallest rise (to 195 per cent) was shown by investment income and the largest (to 232 per cent) by other earned income (wages). In no year in this period did the average nominal income from self-employment in agriculture and horticulture fall from one year to the next, though there was a slackening in the rate of increase between 1982 and 1983. This corresponded with falls in income from investment, from wages and from pensions, so that total income per case fell, though how much of this can be attributed to sampling error is not clear.

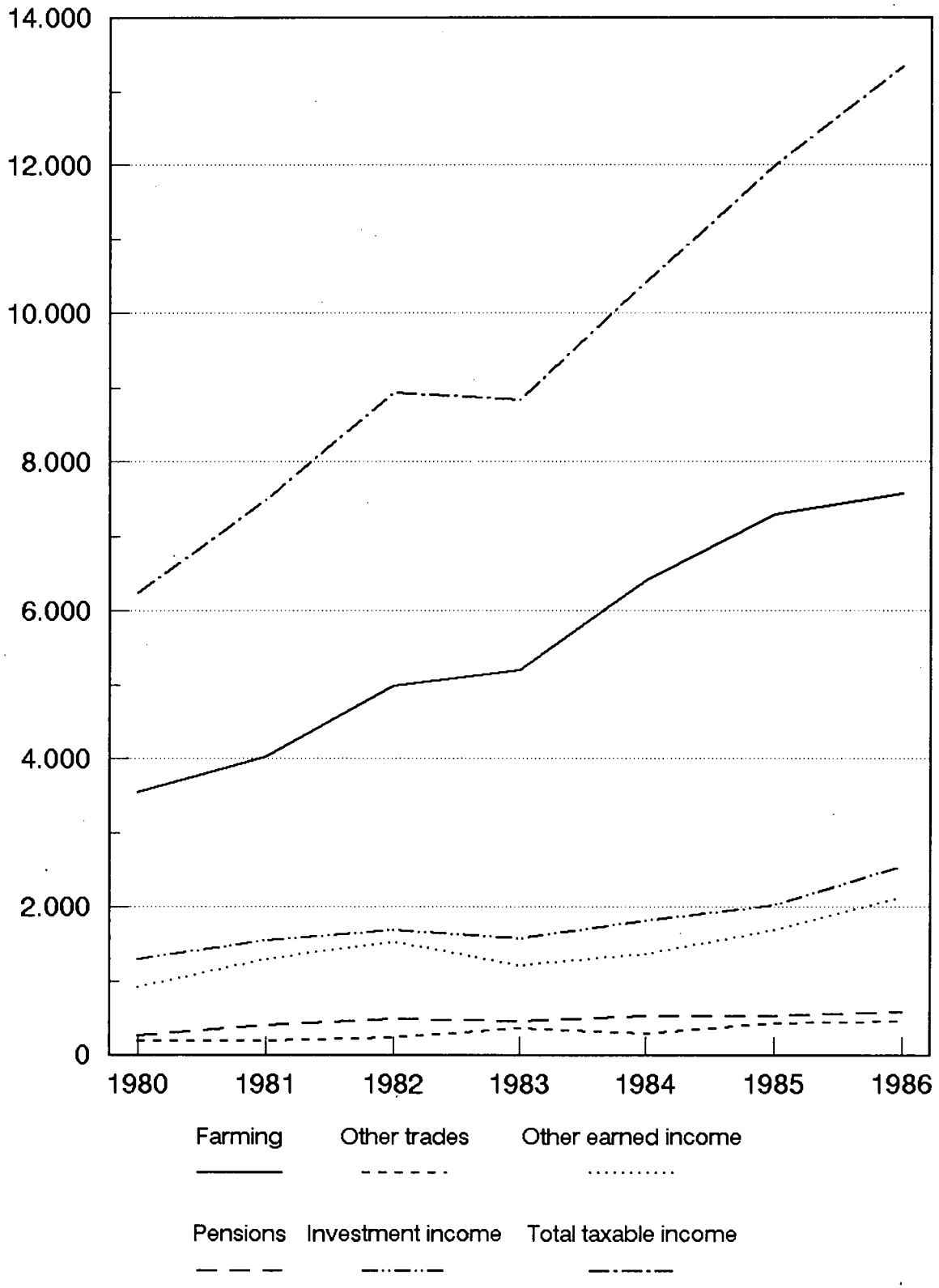
(c) Supplementary information from the Farm Business Survey (FBS)

Though not capable of contributing data to the TIAH project, information on the off-farm income of farmer and spouse coming from the UK's farm accounts survey (FBS) can cast light onto some important distributional issues. These are likely to become of increasing importance to agricultural policy, and a flavour of the information available can be given here. The average off-farm income (estimated using income bands) in 1989/90 in England was £3,600 compared with an income from farming (occupier's net income) of £14,700. Off-farm income was substantially lower than occupier's net income on most farming types; it was higher only on lowland livestock farms in England and on Less Favoured Area livestock farms in Northern Ireland. The level of other on-farm income (that is, generated on the farm but not by agricultural or horticultural production) was generally very low.

Only 35-40 per cent of farms reported no other income in England, Scotland and Northern Ireland (but 60 per cent in Wales). However, the earnings were unevenly distributed. In the former three countries only between 17 and 21 per cent of farms reported more than £5,000 in off-farm income (of all sorts); in Wales the figure was 13 per cent.

The potential of the FBS as an information source on the overall income situation of agricultural households is likely to be bound up with the integration of the TIAH project with parallel developments taking place in the European Community's Farm Accountancy Data Network (FADN, or RICA). Its relative importance will also increase when the introduction of independent taxation of husbands and wives (from assessment year 1990/91) starts to affect the statistics drawn from the SPI (from 1989).

Figure UK2:
Development of income, 1980-86. Income per tax case.
Agricultural and horticultural tax cases.



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