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METHODS USED TO COMPILE REGIONAL ACCOUNTS

Denmark □ FR of Germany □ France
Italy □ The Netherlands □ United Kingdom

1984

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DE EUROPÆISKE FÆLLESSKABERS STATISTISKE KONTOR

STATISTISCHES AMT DER EUROPÄISCHEN GEMEINSCHAFTEN

ΣΤΑΤΙΣΤΙΚΗ ΥΠΗΡΕΣΙΑ ΤΩΝ ΕΥΡΩΠΑΪΚΩΝ ΚΟΙΝΟΤΗΤΩΝ

STATISTICAL OFFICE OF THE EUROPEAN COMMUNITIES

OFFICE STATISTIQUE DES COMMUNAUTÉS EUROPÉENNES

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INTRODUCTION

WHY REGIONAL STATISTICS FOR THE COMMUNITY?

When the European Statistical Office came into being, the harmonisation of national accounts was one of its first priorities. In cooperation with the Member States the European System of Integrated Economic Accounts was drawn up. Thus a valid comparison between the countries was possible, and the aim of harmonisation of living standards throughout Member States, as set out in the Treaty of Rome, had a statistical basis on which to evaluate economic and social policies.

Another aim set by the signatories to the Treaty was "to strengthen the unity of their economies and to ensure their harmonious development by reducing the differences existing between the various regions and the backwardness of the less favoured regions". As the work progressed, it became obvious that in order to combat the increasing gap between the richer and poorer areas of the Community, a specific regional policy was needed. It became necessary to have comparable regional statistics, to support regional, economic and social policies.

WHAT IS THE ESA-REG?

The ESA-Reg was formally approved by the Directors-General of the national Statistical Offices in May 1972 and is the system used for the production of European regional accounts. It is based on the European System of Integrated Economic Accounts (ESA), ensuring harmony between the national and regional accounts, and that the data can be used for valid comparison between the regions.

The regional economic territories are defined by reference to the Nomenclature of Territorial Statistical Units (NUTS). There are three levels of definition of regions:

I. the European Community regions (RCE) which were derived from the major socio-economic regions of the Community as defined by the Conference on Regional Economics of 1960;

II. the basic administrative units (UAB), corresponding to the basic regions as defined also in 1960;

III. the subdivisions of the basic administrative units (SUAB).

The ESA-Reg mainly deals with Level II of the NUTS which consists of 118 UAB for the Community (FR of Germany - 31; France - 22; Italy - 20; Netherlands - 11; Belgium - 9; Denmark - 3; Greece - 9). For the United Kingdom there is as yet no level II , the Standard Regions (Level I) being taken as also being level II; Ireland and Luxembourg, due to their size, are considered as UAB, and national figures are used in regional studies.

An additional extra-territorial region is also defined for areas outside the regions - territorial waters, the continental shelf, territorial enclaves, etc. - to which certain units and flows have to be allocated.

The ESA-Reg follows the ESA distinction between branches (units of homogeneous production) and sectors (institutional units). Two types of analytical unit, the industrial/economic (branches), and the behavioural relationships between broad sections of the economy (sectors) can therefore be identified at a regional as well as a national level.

The availability of statistics at regional level is more limited, and the NACE-CLIO delimitation used for the national accounts, which defines 44 main branches, has been reduced to 17 for regional accounts, with a further simplification to 6 branches. These are given below:

<u>Regrouping of the 44 NACE-CLIO branches into 6 and 17 ownership branches</u>

R6		RR17
01	Agricultural, forestry and fishery products	01
06	Fuel and power products	06
30	Manufactured products	
	Ferrous and non-ferrous ores and metals, other than radioactive	13
	Non-metallic minerals and mineral products	15
	Chemical products	17
	Metal products, machinery, equipment and electrical goods	24
	Transport equipment	28
	Food, beverages, tobacco	36
	Textiles and clothing, leather and footwear	42
	Paper and printing products	47
	Products of various industries	50
53	Building and construction	53
68	Market services	
	Recovery, repair, trade, lodging and catering services	58
	Transport and communication services	60
	Services of credit and insurance institutions	69
	Other market services	74
86	Non-market services	86
69B	Imputed output of bank services	69B

Statistical tables at regional level are also, for the same reason, simpler than those at national level. For <u>branches</u>, the following aggregates are specified in the ESA-Reg.

Gross value added (at market prices and at factor cost)
Compensation of employees
Taxes linked to production; subsidies
Gross fixed capital formation, by branch and by types of goods
Occupied population
Wage and salary earners.
(The gross operating surplus is calculated as a balancing item).

For sectors the aggregates originally required were as follows:

Households - Gross and net disposable income
Final consumption by purpose

Local government - Gross fixed capital investment by function
Investment aids by function

More recently, policy decisions by the European Commission have necessitated a more detailed breakdown of the above aggregates, and simplified accounts have been developed for these two sectors. The regular provision of this data is now under way.

While it is possible for most Member States to provide the above tables at NUTS level II, more restricted data are requested at level III, i.e. gross value added by groups of branches (agriculture, industry, services) and total employment.

WHY THIS PUBLICATION?

At the outset of the ESA-Reg. the situation regarding regional statistics in the Member States was very different. Belgium, the F.R.Germany, and the Netherlands had already started the collection of such data for their own purposes, but for other countries it was a new development.

Ten years after the first scheme for harmonized European regional accounts was agreed, a conference was held in Luxembourg on the "Situation and outlook with regard to regional accounts in the Community". At this conference papers on various specific aspects of regional accounts were presented. EUROSTAT had also requested that methodological papers be produced following a detailed schema. This was to provide an outline of each country's development and organisation with regard to regional accounts, followed by a description of methodology at both national and regional level, the sources used and the interrelation between the two, with an appreciation of the reliability of the regional accounts. Six countries, Denmark, F.R. Germany, France, Italy, the Netherlands and the United Kingdom, presented such papers. Of the four countries who did not produce papers, Ireland and Luxembourg in any case do not provide regional data and those for Greece and Belgium are not yet to hand.

Much data is now harmonized, comparable, and of value as a basis for analysis. However, variations still exist, due to particular political, economic and organisational factors pertaining to each country. These methodological papers have been put together, so that interested people can have a deeper understanding of what lies behind the regional statistics published by EUROSTAT. This publication can also, hopefully, help those who are trying to establish a system of regional accounts in their own countries, by giving them an insight into problems encountered and ways of overcoming them.

The division responsible for the Regional Accounts within EUROSTAT is SOEC/B2. They initiated the studies in this document,and it goes without saying that they are available at all times to give what help they can in this respect.

D E N M A R K

Danmarks Statistik
Copenhagen

Regional accounts

Regional accounts are a fairly new development in Denmark because statistics of this type have only been prepared since cooperation with Eurostat began. Because of the country's small area and relatively uniform economic character, the need for such statistics **was previously not considered sufficient** to warrant the appropriation of Danmarks Statistik funds.

In the second half of the 1970s, work begàn on the regionalization of certain national accounting data in line with a contract with Eurostat, and the first results with figures relating back to 1970 became available in 1979. Compared with the range of tables to be found in ESA-REG, the Danish statistics are very limited in scope. This is for the most part due to the statistical means available for breaking down national accounting data by region, but it is also to some extent a reflection of the limited resources available for the calcuation of national accounts. One illustration of the limited statistical means at our disposal is that some of the statistics for the regions, dealing with income and employment, for example, refer to the home address of the persons concerned and not to their place of work. Other data, on the sales and manpower of establishments, for example, cannot be regionalized for establishments with more than one workplace since they refer to the establishment's head offices. However, Danmarks Statistik has since taken steps to improve the means of regionalizing data, particularly employment data, in the near future.

I General remarks on the regional breakdown of national accounting data

The Danish data with a regional breakdown comprise the following national accounting items:

A. Gross domestic product at factor cost

Total

NACE-CLIO RR 17	0111	Products from agriculture
"	06	Energy products
"	13	Ores and ferrous and non-ferrous metals, other than fertile and fissile
"	15	Ores and non-metallic ore-based products
"	17	Chemicals

NACE-CLIO	RR 17	24	Metal goods; machines; electrical equipment and appliances
"		28	Means of transport
"		36	Foodstuffs, drinks and tobacco-based products
"		42	Textiles, leather and shoes. clothing
"		47	Paper, paper goods, printed goods
"		50	Products of miscellaneous industries
"		53	Buildings and civil engineering works

B. Gross fixed capital formation in buildings and civil engineering works

The regional breakdown of these data consists in a sub-division into "amter" or counties, the largest regional administrative unit in Denmark. There are a total of 14 counties to which must be added the 2 municipalities of the capital, which is separate from the county system. For practical statistical purposes, as explained below, it was decided to combine the 2 municipalities of the capital and 3 adjacent counties into a single region. The division into counties in Denmark corresponds to level III of the Eurostat regional sub-division of Member States.

The data are broken down by region by breaking down the figure for the whole country with the aid of indicators. The national data on gross factor income, consumption and investments are computed mainly from the goods and service balance sheets (approximately 3 000) and this method of calculation does not include any direct breakdown of these national accounting figures by region, since the basic material: imports and exports of goods and services, sales of agricultural and industrial goods, provision of services etc., is broken down by region only in exceptional cases. Special indicators have to be calculated to obtain regional figures. On the other hand, this also means that the totals of the regional figures correspond to the national figures reported to Eurostat, and therefore they can be considered to be based on ESA definitions.

The regionally broken down data can be made available about 2 years after the period covered.

II Calculation of regional indicators

The sources and methods used for calculating the regional indicators are described below. This review covers the most recent years.

For the calculation of the first few years of the 1970s, it has been generally necessary to apply sources and methods which differ somewhat from those applied previously.

Total gross factor income

The basis for the breakdown of the total gross factor income is the income tax statistics. These can generally be used as an indicator for the regional breakdown of the personal factor incomes of both the employed and self-employed. Apart from data on income (excl. interest payments) from gainful self-employment and fixed assets, the statistics contain separate data on wage and salary income.

The personal factor income calculated or estimated in this way is broken down directly according to the income recipient's place of residence, whereas the notion of factor income in national accounts is linked with the place of production. The total income is then transferred from the place of residence to the place of work on the basis of the commuting inquiry contained in the general and housing census of 1970. With this inquiry it is possible to calculate a ratio to express the relationship between the workplace population and the population at the place of residence for the working portion of the population as a whole. The transfer is then carried out by multiplying the place of residence factor incomes by the temporary ratio, but in such a way that the part of the total income relating to income from fixed assets in the form of single and two-family houses is still recorded according to the place of residence.

Since the ratios which are applied only cover the conditions of 1970, when by far the greatest reciprocal fluctuations in these ratios are to be found between the **counties** and municipalities forming the region surrounding the capital, it was decided to provide information only for the entire area. This substantially reduces the degree of unreliability which the continuing use of the same commuting pattern could create for the breakdown of factor incomes in subsequent years.

Any appraisal of the calculations should also take into account the fact that the use of personal (net) factor incomes as a basis for breaking down the national accounts gross factor income also implies indirectly that the total public and private depreciation amounts plus net company appropriations should be broken down into counties or regions in the same way as the estimates for the personal factor incomes.

On the other hand, any differences between the actual and tax-based personal factor incomes will have an effect only where their relative importance for the separate regions or counties varies.

Agriculture

The breakdown of agricultural gross factor income is limited to national accounting sector 0111, i.e. agriculture as a whole, excluding horticulture etc. The calculations are based on the extensive material presented in annual publications of the regional committee for farm management of the Danish Cooperative Agricultural Association.

With this accounting data it is possible to produce statistics roughly in line with the gross factor income concept in national accounts. The accounting material, which is subdivided according to the size of the holding, is not directly representative, but by weighting it with the total number of holdings of different sizes in each county it is possible to obtain what can definitely be described as a reasonable relative breakdown, with the exception of the very small holdings. Any assessment of representativeness must also take into consideration the fact that the farms included in the accounts have a somewhat higher production and gross income per hectare than the average for all agricultural holdings. This situation, however, can be assumed to be generally true for the whole country.

Industry

The calculations are based on data from the annual industrial statistics on industrial wage payments (total wages) broken down by both industry and county. The ratio between the value added and total wages is calculated for each industry because these data are only available for the entire country. Assuming that the ratio between the value added and total wages for each industry does not vary sustantially from county to county, it is possible to calculate breakdown indicators for the gross factor income of the industries. These indicators are obtained by multiplying the value added: total wages ratios by the total wages data broken down by county and industry.

Building and civil engineering

The regional calculations of gross factor income in the building and civil engineering sector as a whole are a combination of separate breakdowns of the various activities forming this sector.

These activities consist of new building, various categories of civil engineering work as well as the repair and maintenance of buildings and civil engineering structures.

The breakdown indicators used are based on the production value in all cases. It is thus assumed when these indicators are used for breaking down gross factor income (value added) that the ratio between the production value and intermediate consumption (the input coefficient) for a given year does not vary substantially among the separate counties or regions.

The indicators used for the breakdown of new building are based on current building statistics which can be subdivided into counties. There are therefore several possibilities to choose from. The use of an average for commenced and completed floor area has several advantages, but also the major drawback that prolonged construction work which may commence prior to and not be completed until after a given period is excluded from the scope of activities of this period. It was therefore decided to replace it with an estimate for construction work in progress, calculated in floor area, at the beginning and end of the period. The average estimate for the whole year is calculated on the basis of the figures at the beginning and end of all four quarters. This generally eliminates the risk of building work not being included in the building work in progress because it was both started and completed within the period of calculation.

The breakdown of the value of repair and maintenance of buildings is based on a calculation of the total geographical position of the constructed area. An estimate of this can be obtained from the public property assessments since these include an official breakdown of the difference in value (construction value) calculated as the property value less land value.

For the purpose of breaking down the value of new civil engineering structures as well as repairs and maintenance of existing structures, a series of separate data is collected and processed which, when combined, easily cover most of the activity of this sector.

With regard to private civil engineering work, data for both agriculture and industry are available, which are among the most important sectors for private investment in this field. In the public sector, which by far accounts for the major portion of all civil engineering work, including repairs and maintenance, the breakdown by municipalities and counties does not give rise to problems because of the way the data are presented.

Those provided by the state are not absolutely complete, but they do include separate figures allowing them to be broken down into main items such as road construction (motorways etc) and the state railways.

There are also separate data on the national airports as well as national and municipal horticultural installations. An estimated breakdown of the civil engineering work of telephone companies is also supplied.
The rest of the civil engineering work, repairs and maintenance work which is not broken down accounts for only 4 to 5% of total production in the building and civil engineering industry. This remainder is therefore proportionally added to the total breakdown.

Gross fixed investments in building and civil engineering

The breakdown of these investments became **available** with the data serving as the basis for the calculation of production and gross factor income for the building and civil engineering trade. The difference between the two sets of data is mainly due to the fact that the value of current repair and maintenance work is included in building and civil engineering work but not in gross investments.

Available income of households

Income data from tax statistics makes it possible to break down the available income of households by region. In national accounting statistics, it has not yet been possible to calculate this figure on a national basis and, since it is known anyway that there will be a rather substantial difference between the two sets of data, it is not possible to break down the available income of households into separate **regions so that it corresponds** to the income figures given in the national accounts.

FEDERAL REPUBLIC OF GERMANY

Statistisches Bundesamt

Arbeitskreis Volkswirtschaftliche
Gesamtrechnungen der Länder

Wiesbaden

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0. Introduction

0.1 The processing of regional accounts at national level - origins and further development

It was fairly soon after the Second World War that the Statistical Offices of the Länder - largely independently of each other in accordance with the federal structure of the FRG - started various attempts to estimate economic aggregates for federal Länder or even at 'Kreis' level.

In April 1953 came the formal recognition on the part of these 'Land' offices (invited, together with other interested parties. by the Federal Statistical Office) that calculations of national product were necessary for the Länder and, in part, perfectly feasible. These calculations were to be based on the methods and concepts used at federal level, concentrate on the generation of income aspect and determine, initially, net domestic product at factor cost.

In May 1954, a 'Working Party for calculating the national product of the Länder' was formed at a conference of directors. The chairmanship was entrusted to Dr Hüfner, who was then President of the Statistical Office of the Land of Hesse. Before the first results on the generation of income aspect could be published, the directors of the Land offices, following preparatory work carried out by some of these offices, gave this Working Party the task in 1956 of drawing up a distribution account.

The first regional economic accounts for the years 1950 to 1955, prepared in accordance with uniform national methods, were published in 1957.

The decision to include accounts for regional units below the 'Land' level (Regierungsbezirk, region, Kreis) was taken by the directors of the Land offices in 1959 in respect of the year 1957; subsequent years were to be covered in a two or three-year cycle.

The chairmanship and management of the Working Party. the title of which became 'Working Party for Economic Accounts of the Länder' in 1970, became the responsibility of Baden-Württemberg in 1972.

As the Federal Statistical Office improved the level of detail of the economic accounts for the whole federal area, so also was it possible to make a finer breakdown of regional sectors and calculate further aggregates (see below).

The urge to substantially expand the economic accounts of the Länder in both the sectoral and regional aspects, which was still apparent in the middle of the 70s, was hampered by the rather low level of staffing of most of the statistical offices; in addition, the maximum potential for analyzing the statistical base material for the purpose of the economic accounts appeared to have been reached in many cases. It was not therefore possible to fully satisfy the requirements of the users of the economic accounts.

0.2 Organization of the accounts and distribution of effort within the Working Party on Economic Accounts for the Länder

Regional economic accounts are prepared in Germany by the Working Party on Economic Accounts for the Länder, the legal basis for this being the decision of the Land finance ministers of 1970 and of the Land agriculture ministers of 1980.

All the Land statistical offices, the Federal Statistical Office and the Statistical Office of the City of Frankfurt belong to this Working Party. The Federal Office participates mostly in an advisory capacity and by providing internal data. The statistical interests of the cities are represented in the Working Party by the Frankfurt Statistical Office. The chairman of the Working Party is the Head of a Land office who represents the Working Party externally and guides its activities in accordance with the 'principles for the activities of the Working Party on Economic Accounts of the Länder'.

Work on regional economic accounts is divided up over the various Land offices which have 'coordination assignments' - this means that certain aggregates or sub-aggregates are calculated for all Länder, with the exception of Berlin, by one single Land office on the basis of uniform criteria.

Information produced by the Working Party on Economic Accounts for the Länder in accordance with national concepts are converted by the Federal Statistical Office for the European Community's ESA-Reg.

The following list gives the distribution of tasks in the Working Party in simplified form.

- Summary of coordination assignments -

Land	Coordination assignment
Schleswig-Holstein	Primary-source calculation of gross production value/net value added at factor cost, general government (also deflated gross value added at market prices), consumption of general government (nominal, real)
Hamburg	Primary-source calculation of gross production value/gross value added at market prices, trade, external contribution
Lower Saxony	Primary-source calculation of gross production value/gross value added at market prices, agriculture and forestry (including deflation, only gross value added at market prices) Gainfully employed at Kreis level
Bremen	Primary-source calculation of gross production value/gross value added at market prices, transport and communications

North Rhine-Westphalia	Primary-source calculation of gross production value/gross value added at market prices, energy and water, mining; manufacturing industry; craft trades; gross fixed capital formation (nominal, real) Change in stocks, Description of methods, Calculation at Kreis level of gross value added at market prices/gross domestic product at market prices, gross domestic product at factor cost (methods)
Hesse	Primary-source calculation of gross production value/gross value added at market prices, credit institutions and insurance; subsidies, parts of indirect taxation, reconciliation of gross and net recording items
Rheinland-Pfalz	Primary-source calculation of gross production value/gross value added at market prices, building and rented accomodation, Production values for wine and wine must, Reference values (gainfully employed, wage and salary earners)
Baden-Württemberg	Machine processing of the generation of income account (nominal, real) Distribution of income account Rapid calculation and updating of net value added/ net domestic product at factor cost
Bavaria	Rapid calculation, updating and first half-year : gross value added at market prices/gross domestic product at market prices (nominal, real) Primary-source calculation : gross production value/ gross value added at market prices Other services: households and non-profit institutions: private consumption (nominal, real); redistribution account (households)

Saarland	Rapid calculation, updating, primary-source calculation of import duties (nominal, real) Primary-source calculation and updating of taxes linked to production
Berlin	Own calculation of almost all economic data for Berlin

1. The national system of regional economic accounts

1.1 Summary of the entire system

1.1.1 General remarks

In accordance with the principles underlying the activities of the working party, the results of the economic accounts for the Länder should be comparable with each other and with the national figures to the greatest possible extent. The regional results are therefore brought into line with those at federal level in respect of concepts, calculations and - as far as possible - methodology. The main economic variables for all the Länder are thus always calculated in accordance with standard methods agreed by all members of the working party.

There are, however, methodological and statistical reasons why the Federal Statistical Office's procedures cannot be followed in full, with the result that certain economic variables are not determined at Land level (or lower) or cannot be published as the calculation method is fraught with too many problems. On the other hand, the same demands cannot be made on the reliability and information value of Land results as on the corresponding national statistics. This applies both to the 'primary-source' calculations. made on the broadest possible data basis in the finest sectoral breakdown, and to the 'updating' calculations which are of course much more up-to-date but with a corresponding loss of reliability.

Calculations for the Länder

The special problems of calculating at Land level derive from the incompleteness of the data base and from the orientation of the base statistics which are often insufficiently suited to the requirements of Land accounting, not to mention the fact that certain economic phenomena cannot be measured by statistical means.

For example, legal units (enterprises) cannot be used as the smallest representational units in the Land accounts as they can in the national generation of income account; instead, local units must be used to improve regional delimitation. In addition, the results for the local units must correspond to those of the higher enterprise so that they can be brought into line with national figures in detailed breakdowns of the economy. There are only few base statistics which fully satisfy these requirements; they mainly relate to goods production.

In the distribution and redistribution accounts (based on the resident concept) the enterprise is used as the smallest representational unit, as at national level.

In the Land accounts, every attempt is made to determine values through methodological and statistical methods which are as close as possible to those of the Federal Statistical Office. Where this is not possible, national values are apportioned among the Länder with the aid of certain "keys" which are of varying suitability.

Apart from the use of apportionment keys, these calculations are normally only approximations making a subsequent adjustment for national values necessary (i.e. coordination). The aim here is to convert Land estimates, based mainly on business economic principles, to the national values which are based on national economic principles and also to eliminate the discrepancies arising from different Land and federal calculation methods. The Land approximations are brought into line with the corresponding national values, in respect of both concepts and mathematics, by apportioning the difference between the sum of the Land totals and the national figure among the Länder according to a weighting system. Though not particularly realistic, this global method of coordination must be accepted in the absence of any reliable information on the distribution of error in the Land accounts.

The reliability and information value of the Land results are therefore normally more restricted; the working party endeavours to compensate for this by publishing them in a less detailed breakdown than is employed for national results.

A few words on the smaller data basis at Land level : balance of payments is missing, many samples are taken only at national level, many purely national surveys or surveys not relating to "local units" (survey of cost structure, of materials input, tax statistics, social welfare insurance). different effects of the cut-off points for the various Länder statistics, regionalization problems in economic matters at national level and as regards the output of companies active in more than one Land.

Calculations at Kreis level

It is impossible to calculate GDP or gross value added for the various urban and rural administrative entities ('Kreise') at source from the gross production value plus intermediate consumption. This is due to what is in part bound to be inadequate basic material, which is not of a nature such as to allow such calculations to be done at source at Kreis level. Nonetheless, regional production data are calculated by dint of their importance in terms of regional economic policy. The method adopted is to divide up the Land gross value added data for the various economic sectors among Kreise in as detailed a breakdown as possible, using appropriate apportionment key series. It is assumed for this purpose that the Kreis values of the key variables retain the same ratios to each other as the Kreis values for gross value creation as calculated at source.

It is therefore important that the apportionment keyseries should correlate as far as possible with the gross value added data for the corresponding economic sectors, and this is something which requires careful consideration from the time, subject and regional angles. The idea of dividing economic sectors in considerable detail into some 100 key sectors is to ensure that the apportionment procedure is based on relatively homogenous sectors, with the result that the degree of correlation between the apportionment variable and gross value added is better in the individual sectors. In view of the lack of suitable key series, all 'adjusting items' such as tax previously charged on investments, the imputed output of bank services and import levies have to be regionalized with the aid of the gross value added data for the sectors in question. The key series have to be applied uniformly in all Länder, exemptions being granted only in cases where, as a result of land and administrative reforms in certain Länder, it proved impossible to calculate certain key data (e.g. census updating data) or where it can be shown that better material is available from Land statistics.

In view of the fact that the Kreis calculations are based to a substantial extent on value added tax statistics (and also to keep the amount of work down), these calculations are, generally speaking, made only at intervals of 2 years, in every even year. Within the forseeable future, there is little prospect of putting into practice the planned extension of the programme of work to Kreis level (apart from GDP at factor cost).

The Working Party's programme of publications

Reflecting the generally inferior material available at Land level, the Working Party on Economic Accounts for the Länder's publications programme is, in some respects, far more modest than that of the Federal Statistical Office. This is true of sectoral and subject analysis and the period covered by the time series. As a rule, it is impossible to revise data from much earlier years because of the quite considerable amount of work involved, the methodological problems, the likelihood that there will not be much call for such analysis and because of the need to concentrate on up-to-date data.

As a result, no recalculations are done for years preceding 1970, even if this should result in breaks in continuity.

For the period from 1970 on, the programme of publications is as follows [1].

Länder calculations

Generation of income account (eleven sectors) : Gross value of production, intermediate consumption and gross value added, consumption of fixed capital, production taxes less subsidies, net value added, compensation of employees at current prices (only gross value added at constant prices).

Distribution of income account :
Net national product at factor cost, compensation of employees, property and entrepreneurial income (including households).

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[1] Details of computational methods are based largely on the years 1970 et seq.

Redistribution of income account : Only for households and non-profit institutions : gross and net factor income, direct taxes and social contributions, net wages and salaries, current transfers received (net), non-assignable current transfers made, disposable income.

Use of income account : (in current and constant prices)
Private consumption, general government consumption, gross fixed capital formation on the basis of six special sectors (broken down into buildings and equipment).

Reference data :
Resident concept : residential population, gainfully employed and wage and salary earners (total in each case).

Territorial concept : gainfully active population and wage and salary earners by reference to five or ten sectors.

An attempt will be made to make the sectoral data more detailed in connection with the transition to the net system of recording income generation and reference figures.

Kreis calculations (even years, summarized versions for regions and government districts) :
Gross value added by reference to four economic sectors and gross domestic product at market prices and at factor cost in current prices.

Some Land authorities produce own calculations and estimates going beyond the Working Party's normal programme of work. For instance, West Berlin produces comprehensive calculations of its own reflecting its own peculiar statistical data situation. Baden-Württemberg has drawn up an input-output table for the reference year 1972, has produced a social budget (broken down on an institutional and functional basis) and has calculated its own capital fund with effect from 1970. North Rhine-Westphalia calculates annual Kreis-level figures for gross value added by reference to five economic sectors, also calculates gross factor income and households' disposable income and now also produces figures for gross capital formation (broken down into buildings and equipment) by reference to three economic sectors and for rented accomodation. The lowland Länder in particular have used more detailed economic classifications than the Working Party for certain years or for certain aggregates. A few Länder also produce long series at Land or Kreis level on their own account.

The results of these calculations are published at irregular intervals by the Working Party in the form of a joint publication on the part of the Länder Statistical Offices ("Länder Economic Accounts").

1.2 The accounts based on economic criteria

1.2.1 Statistical units and systems

For the purposes of the national system of computing GNP, the unit of presentation is usually the smallest institutions active on the market which themselves produce balance sheets (i.e. enterprises) or which produce their own budget and (where appropriate) capital accounts (e.g. central, regional and local authorities, churches and charitable organizations). Agricultural holdings are always regarded as an independent entity, even if run in conjunction with commercial businesses by a single owner. One exception to this general rule is rented accomodation which, appropriately categorized, embraces all accomodation let or occupied by the owner. The smallest presentational units (e.g. enterprises) are classified according to their main economic activity in the appropriate sectors of the economic activities classification system, 1970/1976 versions (goods-producing sectors), as laid down for the purposes of the national economic accounts.
In the national input-output accounts, on the other hand, the unit of presentation is 'homogeneous production units' based on production characteristics. These 'homogeneous units' are aggregated to form clearly delimited production sectors covering (exclusively and exhaustively) all the goods in a particular category. Classification is by way of the production sectors used in the input-output accounts, derived in turn from the economic activities classification system.

1.2.2 Definitions and differences between the concepts used for national economic accounts and for the European System of Integrated Economic Accounts

The concepts, categories and definitions used at national level for the economic sectors in the GNP accounts and for the product categories in the input-output accounts are fully integrated in the system of national economic accounts. The generation and use of income accounts for the purposes of GNP calculations, together with the input-output accounts, all reflect the production processes of commodities and services and the utilization thereof, as well as the income generated in the production process; however, the two sub-systems of the national economic accounts use different concepts, reflecting the different aims; for instance, GNP calculations are orientated predominantly towards the reflection of market processes, the aggregated results being transferable without further ado to the national system of economic accounts.

On the other hand, the input-output accounts complementing the system exist to bring out the detailed interrelations (from the point of view of commodities and production) between the various sectors and with the rest of the world. The concepts on which the input-output accounts are based comply very largely with the recommendations issued by the European Community for the formulation of internationally comparable input-output tables.

In accordance with the aims of the traditional GNP calculations for economic sectors (i.e. to reflect market processes), there are, in addition to the presentational differences described above, further differences vis-à-vis the ESA system as regards the delimitation of the processes covered and the systems used. The major differences are as follows :

- exclusion of certain internal deliveries and services on the part of firms (e.g. deliveries between parts of an enterprise regarded as belonging to different production sectors);

- net recording of commission processing (i.e. excluding the material value of the processed goods);

- gross presentation of trade (including the material input value of the goods concerned).

The above differences are of particular importance as regards recording the value of production and intermediate consumption on the part of the economy as a whole. However, taken in conjunction with the differences in the unit of presentation and systems used, they are also important from the point of view of the method of calculating ESA items by reference to production sectors.

The description of differences between the national and ESA systems is confined to only the most major of these, covering complete WZ categories on the one hand and complete NACE-CLIO groups on the other (cf. comparative table on page 66).

The national accounts sector 'Energy and water supplies, mining' equates roughly to the NACE-CLIO Sector 06 fuel and power products. The national accounts sector includes, unlike the corresponding NACE-CLIO sector, ore mining, potassium salt and saltmines and other mining (WZ groups 113, 115, and 118), but excludes mineral oil processing (WZ group 205).

The national accounts sector 'Processing Industries' (WZ-Section 2) is roughly comparable with NACE-CLIO-Sector 30 'Manufactured products'. Section 2 of the economic accounts system, unlike NACE-CLIO-Sector 30, includes mineral oil processing and specialist workshops for the repair of road vehicles, consumer durables, etc. On the other hand, NACE-CLIO-Sector 30 includes mining articles and publishing products, most of which are produced by enterprises coming under WZ-Groups 113, 115, 118 or 708.

The national accounts sector 'Trade and transport' is roughly comparable with those sections of market services which, according to NACE-CLIO R.R. 17, are performed by production sectors 58 (recovery and repair services, trade services, lodging and catering services) and 60 (transport and communications services). However, production sector 58 also includes certain services which, for the purposes of the national accounts, are usually entered under processing industries or service enterprises rather than trade and transport.

The national account sector 'Transport' is roughly equivalent to those sections of market services which, according to NACE-CLIO-R.R. 17, are performed by production sectors 69 (Credit and insurance services) and 75 (Other market services). However, unlike the two above-mentioned NACE-CLIO sectors, it does embrace hotels and restaurants (WZ-Group 700) and publishing, literature and journalism (WZ-Group 708).

1.2.3 Gross value added by sectors

General remarks

For the purposes of the national accounts, GNP is, from the point of view of generation of income, calculated by way of GDP. With effect from the revision of the national computations in summer 1982, the Federal Statistical Office now uses the net system of recording value added tax. However, until such time as the revised national data are adopted, the Working Party on Economic Accounts for the Länder will continue to use the gross recording system, whereby the gross domestic product embraces gross value added on the part of the various sectors plus the import duties levied by the Federal German Government and the European Community on imported goods. By adding gross value added from the enterprises' sectors, one obtains unadjusted data on gross value added on the part of enterprises as a whole, including such items as imputed output of bank services and value added tax prepaid on investments (where appropriate with investment tax deducted), but excluding import levies. By deducting imputed output of bank services and deductable tax prepaid on investment (less investment tax) from the unadjusted gross value added data for enterprises as a whole, one obtains the adjusted gross value added data for the business sector. The gross value added data for the economy as a whole are obtained by adding to this figure gross value added on the part of general government, households and private non-profit-making organizations.

Remarks on gross value added at Länder level

The computational information set out below relates to the primary-source calculations which are usually completed 2 years after the reference year. The economic classification on which these calculations are based is highly detailed (as far as possible for the two aggregates gross production value and intermediate consumption or for gross value added separately) according to the method used by the Federal Statistical Office. Application of this method is not feasible, however, in some of the sectors, with the result that the appropriate national data have to be regionalized using the same key apportionment data.

There is no specifically Länder basis for the data on deductions of prepaid tax on investment or for the imputed output of bank services; in these cases (as for certain of the production taxes and subsidies), the national data are apportioned to the Länder with the aid of gross value added data for certain specific sectors.

Unlike in the national accounts, deflation is only possible for gross value added, highly detailed deflators being used from the economic accounts drawn up for the entire federal territory.

Despite the fact that gross value added in the generation of income account is the main subject of the work done by the Working Party on economic accounts for the Länder, it is not always possible (or at least not in all economic sectors) to find a satisfactory solution to the methodological problems arising in conjunction with regional economic accounts, as was described above. The reliability of the gross value added figures in the various economic sectors differs widely from the point of view of both basic material and computational methods.

In view of the fact that assumptions regarding the errors in the computational results can only be made with certain relatively severe reservations, there is no point in drawing up even a very rough-and-ready 'league table' of economic sectors by reference to the probable degree of error, especially as the results are likely to differ from Land to Land and even from year to year.

Agriculture. forestry and fishing

Statistical sources of Länder calculations

As far as agriculture is concerned, the Länder calculations are based on the annual gross production figures for all major crop and animal products. Data are obtained on harvest yields, quantities sold, areas cultivated, number of animals slaughtered and herd sizes, as a rule from the same sources as for the federal territory, and weighted with standard, nationwide prices (e.g. from 'Prices and marketing methods' issued by the Federal Ministry for Food, Agriculture and Forests).

Intermediate consumption is apportioned by reference to standard, national quotas, adapted on an estimated basis to take account of the varying shares of total production accounted for by crop and animal production in the Länder.

Uncoordinated gross value added data for the sector can be obtained by subtraction. Gross value added for forestry is obtained by applying average national intermediate consumption quotas to the gross value added data of the Länder, calculated in turn by data obtained from the various Land ministries, which keep a record of selling prices and solid cubic metres felled by type of wood and owner category.

The economic data for the sector covering fishing, commercial market gardening and livestock rearing are calculated on the basis of the same apportionment key as for gross value added and intermediate consumption, covering water surface area fished, net water surface area used for fish culture (derived from the freshwater fishing survey) and the VAT statistics [1].

Statistical sources of calculations at Kreis level

For the purposes of apportioning Länder data on agriculture and forestry at Kreis level, recourse is had to the appropriate standard gross margins from the agricultural returns, the corresponding freshwater fishing data being apportioned on the basis of water surface area (from the freshwater fishing survey) or number of persons employed (from the employment statistics) and the sea fishing data on the basis of gross turnover from the VAT statistics.

1) As regards regional turnover on the basis of the VAT statistics, it should be noted that the figures relate not to local units, but to enterprises or groups of enterprises, the region in question depending on where the enterprise has its registered office.

Goods-producing industry

Energy and water supply

Statistical sources of calculations at Länder level

Calculations for the energy and water supply sector are done separately on the basis of the subsectors energy, gas, district heating and water supply on the one hand, and energy, gas and district heating supply on the other, without any specific centre of attention.

The raw data are obtained from the monthly report of firms, the annual surveys of companies, the annual cost structure surveys of companies, the annual investment surveys of companies and firms in these sectors, the public water supply statistics and the results of the 1967 census.

In the interests of a better regional classification of economic activity, the output of companies established in a number of Länder is calculated separately from those producing in one Land only. As in processing industry, gross value added data (obtained from the cost structure survey) are divided up into work- and capital-related gross value added on the basis of the ratio of "Wages and salaries plus social welfare contributions" to "depreciation on physical assets plus interest on capital". The work-related proportion is regionalised on the basis of the wages and salaries paid by local production units, while the capital-related proportion is distributed among the Länder according to the investments made by the local production units. This apportionment exercise uses multiannual average investment data so as to eliminate what are on occasion marked fluctuations in annual investment activity.

The intermediate consumption of enterprises active in a number of Länder is calculated by a similarly complicated procedure, and the two sets of data together (i.e. intermediate consumption and gross value added) go to make up the gross value of production.

Gross value added on the part of enterprises active in only one Land is computed by deducting intermediate consumption from the gross value of production, both sets of data being obtained from the above-mentioned surveys at Land level, less the data for the enterprises active in several Länder.

Statistical sources of calculations at Kreis level

The Land data are apportioned at Kreis level by reference to five economic sectors on the basis of wage and salary data obtained from the monthly reports of firms involved in energy and water supply (according to each enterprise's main activity).

Mining and Processing Industries

Statistical sources of calculations at Länder level

The basic material for calculating the gross value of production and intermediate consumption for mining and processing industries and their 35 subsectors comprise the monthly report for firms (according to the firms' main activity), the monthly report for companies with a regular workforce of 20 or more, the quarterly craft trades report, the annual cost structure survey of companies, the annual investment survey of companies and firms, the annual incoming orders returns for firms and the annual survey of small undertakings in mining and industry.

For many years preceding the reform of the statistics on productive industry, the value of production and the consumption of material were calculated on the basis of the results of the 1967 census.

As in the case of energy and water, a distinction is also drawn in the mining and processing industries, whereby the various aggregates are divided up on the basis of companies active in only one Land or in several Länder. The aim is to divide up value added and intermediate consumption into their specific work- and capital-related proportions for each company active in more than one Land. However, as it is not as yet possible to machine-process the key apportionment data for each such company at Länder level, the method used at present is to base apportionment on national average proportionate data for each branch of economic activity.

The resultant data for local units belonging to enterprises active in more than one Land are amalgamated to form uncoordinated gross value of production and intermediate consumption data for each Land and each sector, using the corresponding data for companies active in only one Land. Gross value added statistics are calculated by subtraction.

In the mineral oil processing sector, the figures for gross production and intermediate consumption (dealt with separately as processing and trade) are regionalized with the aid of crude oil flow data obtained from the trade association or based on non-industrial turnover.

Statistical sources of calculations at Kreis level

The Land data for processing industry and mining are subdivided in great detail using, as a rather rough-and-ready apportionment key, the corresponding ratios for industry proper and the craft trades. The division of gross value added in processing industry at Kreis level is based in part on overall turnover, but mainly on wages and salaries. The craft trades aspect of the processing industries, on the other hand, is apportioned on the basis of turnover (according to the census of craft trades), updated to some extent on the basis of VAT statistics.

Building industry

Statistical sources or calculations at Länder level

In the building industry, subdivided into building proper and finishing trades, the data are obtained in part from the annual investment survey of companies in the building trade, the annual survey of the finishing trades and the cost structure survey. Most of the information needed for the calculations before the reform of the statistics in the productive industries was obtained from the 1967 census (in particular the net Land proportions and wages and salaries information for use as a value added apportionment key).

In the building trade proper, the gross value of production (i.e. the annual figure for building work done, including miscellaneaous other turnover) is obtained from the annual investment survey of companies employing 20 or more persons, and extrapolated to all companies using the figure for persons employed from the overall survey of the building industry. Subsequently, separate calculations are made of intermediate consumption for companies which are and are not included in the cost structure survey. The gross value added of each category of companies is calculated by deducting intermediate consumption from the gross value added for the building trade proper. Parallel to the calculation of the three aggregates for enterprises (i.e. gross value of production, intermediate consumption and gross value added), the figures are converted by way of a conversion factor based on the number of persons employed to the level of local production units.

The basis for the calculation of gross production value in the finishing trades is the craft trades census of 1976, the results of which are updated using data from the annual survey of the finishing trades. Intermediate consumption apportionment is calculated on a national basis, while gross value added is calculated arithmetically (i.e. by subtraction).

Statistical sources of calculations at Kreis level

For the purposes of calculations at Kreis level, the Länder data in the building trade proper are calculated by way of wages and salaries data, and for the finishing trades by reference to the results of the craft trades census (turnover), updated in part to take account of turnover trends (as reflected in the VAT statistics).

Trade and Transport

Statistical sources of calculations at Länder level

Trade

Detailed information to act as the basis of calculations of the gross value of production and intermediate consumption, again in great detail, is obtained from the trade and catering censuses for 1967 and 1978, with data on turnover and goods input. These data are in turn used to apportion the national figures among the Länder, and form the basis of the updating exercise until the next full census. Changes in stock levels have of necessity to be ignored in these computations.

The gross value of production as regards wholesale trade and intermediate agents is updated by reference to the turnover figures (or comparable turnovers for the years between surveys) from the VAT statistics. The apportionment of intermediate consumption, on the other hand, has to be kept constant until the next full census.

Updating in certain sectors of the retail trade is by way of the results of the monthly/annual retail trade statistics, yielding both turnover data and gross trading profit margins. The latter are adjusted (nationally) to take account of other intermediate consumption, these details being obtainable from the four-yearly cost structure survey conducted among retail trading companies. In the absence of any further information, the margins accounted for by other intermediate consumption have to be kept constant until the next survey results are available.

Transport and communications

In view of the inadequate amount of data available in the transport and communications sector, it is very largely impossible to calculate intermediate consumption and gross value added separately when computing the Länder figures for the gross value of production. In fact, the gross value of production and the gross value added for the various subsectors can only be calculated by applying the same apportionment key as in the corresponding national figures, or by using the same updating methods as in the previous year. In every case, intermediate consumption is the difference between the value of production and the gross value added.

The apportionment key or updating reference data used are the following data available on a Länder basis from the official statistics or business statistics; persons employed by the German Federal Railways or private railways; goods turnover in inland waterways ports (in the inland waterways, transport and ports subsector); DM and foreign currency receipts on the part of German marine shipping and goods turnover in seaports (in the marine and coastal shipping and seaports subsector); receipts from scheduled and unscheduled transport (in the passenger road transport subsector); freight receipts (in the goods road transport subsector); persons employed by air transport companies and transport services provided by German civil airports (in the air transport, airports subsector); receipts from scheduled and unscheduled passenger road transport and freight receipts for goods road transport (in the haulage, storage and transport broking subsector); persons employed by the German Post Office (in the communications subsector). In the years for which VAT statistics are available, the data used for the calculation of the gross value of production, gross value added and intermediate consumption on the part of the Länder are calculated from this source for all subsectors within the transport and communications sector, with the exception of railways, marine and coastal shipping, air transport and communications.

Statistical sources of calculations at Kreis level

For wholesale and retail trade, the gross value added figures for Kreise are calculated on the basis of the gross profit margins from the trade censuses, updated by reference to trends in gross turnover figures as revealed by the VAT statistics.

The gross turnover figures from the VAT statistics in turn provide the apportionment key values for the sectors dealing with intermediate agents and marine and coastal shipping and seaports.

The key series for inland shipping, etc. and for other forms of transport are the wages and salaries data from the census of places of work, updated by reference to turnover trends from the VAT statistics. Labour force data and average earnings for the sectors dealing with railways and the German Post Office are obtained from the federal authorities' labour force statistics. A recent development has been the increased used of the data on earnings on the part of social insurance-paying workers for the purposes of calculating Kreis figures for the wholesale and retail trades.

Services, general government, etc.

Statistical sources of calculations at Länder level

Service enterprises

In the economic sector covering credit institutes and insurance companies, there are only very few surveys giving rise to statistics at Land level. Given that these companies cover a very wide geographical area, it is of course difficult to regionalize their economic performance data.

Estimated national apportionment data for the gross value of production and intermediate consumption on the part of credit institutes at Länder level are produced for seven categories of banks (generally speaking by way of credits granted to, and deposits by, non-banks). The (estimated) gross value of production on the part of the German Central Bank (Bundesbank) is regionalized by reference to the number of persons employed by the Directorate and the Land central banks. All the information required for the purposes of calculation can be obtained from the reports issued by the Bundesbank, the Land central banks and the building societies' association.

For the regionalisation of gross value of production, intermediate consumption and gross value added in the insurance sector, recourse must be had to the employment figures from the Länder economic accounts.

The basis on which the gross value of production in the rented accomodation sector is calculated is the full census of buildings and dwellings (last carried out in 1968). This particular survey is a source of highly differentiated data on the number, surface area, age, financing, use and rent per m^2 of dwellings.

The accomodation statistics are updated (ignoring accomodation losses, in part at least) by adding to the previous year's housing stock the annual new dwellings figures from the statistics of housing completions.

The annual rent is updated by reference to the national average trend in rents as reflected in the consumer price statistics. The resultant gross value of production data are reduced by the amount of standard national intermediate consumption margins, the gross value added data being the difference between the gross value of production and intermediate consumption.

Calculations of the economic performance of the sector covering miscellaneous services are based mainly on the bi-annual VAT statistics, yielding gross turnover figures and comparable turnover figures for the intervening years. These data are converted in a somewhat rough-and-ready fashion into "turnover per local unit", on the basis of the ratio of persons employed in local units to those employed by enterprises. The initial data for this exercise are taken from the census of places of work (most recent census 1969).

Intermediate consumption is calculated in great detail using national margins taken from the 4-yearly cost structure survey of companies in the hotels business, publishing, craft trades and professional vocations, as well as with the aid of the corresponding data for radio and television stations. In some subsectors, it is possible to use the results of the trade and catering census.

General government

The generation of income account for the general government sector is based on government expenditure on staff, equivalent to the proportionate contribution to the net domestic product at factor cost. By adding indirect taxation and government consumption of fixed capital, one arrives at gross value added on the part of general government.

In the subsectors dealing with the Länder and commune authorities, the regionalised net value added at factor cost is calculated on the basis of detailed Länder data taken from the annual public finance statistics. In the subsectors covering the federal authorities (both civil and defence) and social welfare insurance, the Länder apportionment key is the number of civil servants or employees of social insurance institutions accounted for by each Land, these data being based in turn on the annual labour force statistics of civil service authorities and the number of soldiers and civilians employed by the Bundeswehr as specified by the Defence Ministry.

The apportionment key for the consumption of fixed capital comprises personnel expenditure overall. Indirect taxation is apportioned according to a highly differentiated system by reference to types of taxation.

Households (domestic services) and private non-profit institutions

Calculations of the gross value of production of households (domestic services) and private non-profit institutions are based on the wages and salaries figures from the census of places of work (most recent census 1969). Whereas these figures are kept constant until the next such census in the case of households (domestic services) (and are interpolated once the results of the new census are known), the figures for private non-profit institutions are updated by reference to trends in the annual receipts of the Länder administrative authorities (taken from the Länder finance statistics), whereby (with effect from 1977) employment trends as reflected in the economic accounts of the Länder are included in the calculations. Standard national intermediate consumption margins are deducted from the gross value of production data for the Länder.

Statistical sources of calculations at Kreis level

The Kreis apportionment key in the services sector comprises data for the credit institutes and insurance sector for recent years on compulsorily insured workers, these figures being obtained from the employment statistics kept by the Federal Institution for Labour.

The cost of rented accomodation, calculated by reference to the results of the 1968 census of buildings and dwellings, and updated by reference to the housing stock, is used as the apportionment key in the sector covering rented accomodation.

Wherever available, turnover data from the trade and catering census, wages and salaries figures and, to some extent, employment figures from the census of places of work (updated by reference to turnover trends from the VAT statistics) are used for other services. Länder which, as a result of boundary changes, found it impossible or extremely difficult to update Kreis data had no option but to make greater use of turnover data from the VAT statistics or employment figures from the employment statistics.

The main computational key in the general government sector is annual labour costs. Staffing level statistics from the public authority budgets form the basis of material of the sectors dealing with federal authorities, Länder and social insurance institutions. The national defence figures are regionalized with the aid of troop strength data provided by the Defence Ministry. The Länder figures for gross value added on the part of households (domestic services) are apportioned by reference to the employment data from the 1970 occupational census, and the corresponding data on the part of private non-profit institutions by way of employment figures from the employment statistics.

1.2.4 Taxes linked to production and subsidies by sectors

General remarks

The primary-source calculations of taxes linked to production are, as a function of the timing of the initial statistics, as well as for reasons of work load, carried out only every four years or, with effect from the reference year 1976, every 2 years.

Until the next primary-source calculations are available, provisional updating for something like ten types of tax is on the basis of trends in taxation receipts by Länder; once the new calculations are available, the updating figures are used for the purposes of interpolation.

Even in the case of primary source calculations, there are substantial problems of a conceptual, sectoral,time and regional classification nature, with the result that a considerable proportion of the national data can only be apportioned among the Länder and the various economic sectors by way of analogous apportionment keys or freehand estimates. In the case of subsidies, on the other hand, it is usually possible to carry out annual calculations, given that conceptual and sectoral classification by way of type or purpose of subsidy will probably be adequate (even bearing in mind the magnitude of the figures involved).

Statistical sources of calculations at Länder level

Taxes linked to production are regionalized according to type of tax and on a sectoral basis by reference to a number of sources, including the relevant data from the monthly and quarterly taxation statistics, turnover data from the VAT statistics, the monthly report or the quarterly production survey in the mining and processing industries and data from the excise duties statistics, the motor vehicle statistics and the standard value statistics.

To some extent, company trading returns (e.g. taken from the VAT statistics) are converted into local unit figures with the aid of worker ratios taken from the census of places of work, the aim being to improve regional classification. Details of gross production values, intermediate consumption and gross value added from the Länder economic accounts are also used for apportionment purposes, as is the case for instance with the spirit and mineral oil excise duty and the coal levy.

As the size of subsidies is not surveyed at Länder level, the national data have to be apportioned to the Länder using a highly differentiated apportionment system, requiring data to which the subsidies can be related (in terms either of value or quantity) or which are closely correlated to the computational basis on which the subsidy was granted. Suitable sources of such information are, for instance, data on turnover from the monthly report on the mining and processing industries, the VAT statistics, data on tractors used in agriculture, forestry and fishing (from the motor vehicles and trailers statistics), agricultural area utilized (from the preliminary land use survey), new housing stock (from the housing completion statistics) and unadjusted gross value added in economic sectors (from the Länder economic accounts).

1.2.5 Compensation of employees

General remarks

Calculations of gross compensation of employees at Länder level have become increasingly important recently both from the point of view of the users of national economic accounts (e.g. concerning factors affecting demand, the proportion of overheads attributable to labour costs and unit costs) and as a plausibility indicator for gross value added in the Länder accounts.

Generally speaking, an attempt is made to calculate (uncoordinated) data for gross wages and salaries according to economic sectors in as detailed a classification as possible. The difference between the resultant wages and salaries data and the gross compensation of employees is calculated by way of national margins and 'coordination'.

If annual data on gross wages and salaries are not available (or similar information based on full censuses - i.e. updated), the basic procedure is to multiply employment figures from the Länder economic accounts by average income data for each Land from the appropriate specialized statistical series.

Very often, given the detailed nature of the calculations, employment figures can only be estimated very roughly as sectoral, subject and time coordination is not fully adequate, with the results that annual trends can be assessed only inadequately. The results of various earnings surveys at Land level are also sometimes of only limited use because of the level of computational detail.

Once the results of a new census of places of work are known, the difference between the updated figures and the figures calculated at source in the census year is usually apportioned on an overall basis by means of geometric interpolation.

Statistical sources of calculations at Länder level

Agriculture, forestry and fishing

The calculations for the subsectors covering agriculture, forestry and freshwater fishing are based on the 1971 agricultural census and the 1972 freshwater fishing survey. These two surveys yield data on regularly employed non-family workers by reference to four or three categories of occupational qualifications, the resultant data being weighted with the corresponding contractually agreed wages and salaries. Updating and backdating is done by means of the employment figures from the Länder economic accounts and by reference to data on contractually agreed wages and salaries trends in Länder. In certain of the smaller Länder, special calculations have to be made because of the particular structure of the area and the comparative paucity of statistical material.

The base year for calculations of gross wages and salaries for the subsectors covering services at agricultural and forestry producer level, high-seas and coastal fishing and commercial market gardening, livestock farming, rearing and care is 1969, the year for which the 1970 census of places of work contains details of gross wages and salaries and of the labour force. In subsequent years, for lack of adequate information, the labour force figures are kept constant and the wages and salaries figures are updated by reference to pay trends in agriculture.

The resultant uncoordinated gross wages and salaries figures for the Länder calculated for specific sectors can only be coordinated with gross compensation of employees for the whole of the Federal Republic in terms of the economy as a whole.

Goods-producing industries

The basic reference data for calculations in the goods-producing sector are the Sypro-converted figures from the census of places of work (conducted in 1970; reference year 1969) and the first results (following the reform of statistics in the goods-producing sector) for 1977. For this particular reference year, it was possible, by using the data on gross wages and salaries from the monthly report in the processing industry and the building industry and from the craft trades census, to draw up comprehensive figures.

On the other hand, in the sector covering electricity, gas, district heating and water supply, the figures were updated from 1969 to 1974 by reference to trends in gross wages and salaries paid by public electricity and gas supply companies. Following discontinuation of these statistics, the annual average trend in gross monthly wages and salaries from the quarterly earnings survey in industry and trade were taken as a basis until 1979, labour force figures from the employment statistics being used as a weighting factor.

With effect from 1979, the figures have been updated by reference to annual data on gross wages and salaries paid from the monthly returns for energy and water supply enterprises. Updating of the figures in the coalmining and other mining subsectors from 1969 on is by way of annual data on gross wages and salaries paid taken from the monthly returns for mining companies.

In the processing sector, calculations are made for 32 subsectors, compared with 2 in the building industry. Trends in the above key values are based on rates of change in gross wages and salaries paid in the manufacturing and building industries and extracted from the monthly returns. In the finishing trade, updating between 1969 and 1976 was based on trends in the labour force figures taken from the quarterly craft trades returns and the average wages and salaries paid in the building industry.

Updating in processing industry with effect from the reference year 1977 is by way of the annual figures from the monthly returns in the processing industry of local units run by enterprises with (as a rule) twenty or more workers.

In the building industry proper, the Länder apportionment key has, with effect from 1977, been the annual gross wages and salaries figures from the monthly returns in the building trade proper made by local units belonging to enterprises with, as a rule, 20 or more workers, the resultant figures being raised with the aid of the full survey to all the local units in the building trade proper.

With effect from 1977, statistical updating in the finishing trade has been by reference to trends in gross wages and salaries as reflected in the monthly returns in the finishing trade made by local units belonging to enterprises with 20 or more workers, and from the annual survey of the finishing trade, this time by reference to local units belonging to enterprises with ten or more workers (in June).

Trade and transport

The calculations in the economic sector trade and transport are based on gross wages and salaries data from the census of places of work and the employment statistics, with the aid of average wages and salaries data.

The resultant figures are updated once only in the three transport subsectors by reference to trends in the employment figures from the Länder economic accounts and the average gross monthly salaries of office workers, taken from the quarterly survey of earnings in trade and industry. It should be noted, however, that the employment statistics for the sector covering intermediate agents (taken from the census of places of work) are kept constant.

There are two sources for the updating of subsectors covering transport and communications : the corresponding employment trends from the national accounts and staff cost trends derived from the Federal German Railways and the Federal German Post Office. The updated figures for gross wages and salaries for other aspects of transport are derived from the employment statistics in the Länder economic accounts and the average staff costs as returned by the railways and postal authorities.

Services, general government, etc.

In the services sector too, calculations are based on gross wages and salaries data from the 1970 census of places of work. The average wages and salaries data calculated for the census reference year are updated in the subsectors by reference to the trends in average gross monthly earnings on the part of office workers, taken from the quarterly earnings survey in trade and industry, and from the employment figures taken from the Länder economic accounts.

Gross receipts on the part of general government, etc. are identical to the net value added in the sector, and are derived from the generation of income account.

1.2.6 Gainfully employed and wage and salary earners by sectors

General remarks

Figures for the gainfully employed and wage and salary earners are calculated by the Working Party on Economic Accounts for the Länder not so much with a view to quantifying the gainfully employed population as a whole so much as to yield reference data for macroeconomic purposes, and to enable macroeconomic comparisons to be made on at least a reasonably accurate basis. These self-imposed limitations result from the fact that an adequate data base is not always available for all economic sectors, which means that fairly severe limitations are imposed on precise sectoral analysis and the observation of economic trends. And, in any case, the qualitatively highly heterogeneous range of work and the widely differing working times impose severe restrictions on a per capita comparison between Länder and economic sectors.

In the foreseeable future, there is practically no chance of calculating hourly productivity for the economy as a whole.

As regards the calculation of employment statistics, the usual computational basis is specific sectoral and Länder employment apportionment quotas based on the figures for the gainfully employed population and, to a very large extent, updated by reference to national average trends.

Statistics of the gainfully employed and of wage and salary earners at Kreis level and similar can only be compiled for census years and the years immediately preceding or following census years (i.e. the census of places of work).

Statistical sources of calculations at Länder level

Agriculture, forestry and fishing

Calculations of the gainfully employed population in this sector are based on the results of the population and occupations census and the census of places of work. Updating in the agriculture subsector is by reference to trends in the data on full-time family workers and regularly employed non-family workers on farms with an agriculturally used area of (as a rule) two hectares or more (data derived from the annual agricultural labour force survey). In the absence of any better information, the same statistical series is used to update the figures in the subsectors dealing with commercial market gardening, livestock farming, etc.

In the forestry subsector, the figures are updated by reference to the employment figures for state forests (labour force statistics).

In some cases, the gainfully employed data in the fishing and fish farming sectors are kept constant over a period of many years, although a number of Länder produce estimated figures with the aid of statistics drawn up by trade associations and the like.

Calculations of the average number of wage and salary earners are based on data derived from the agricultural census and the census of places of work as well as from the freshwater fishing survey. Only the agricultural data (in the narrow sense of the term) can be updated by reference to the annual labour force survey, the figures for the other subsectors remaining constant. In recent years, the employment quotas obtainable from the above calculation for agriculture as a whole have been updated by reference to trends in the employment quotas from the annual agricultural labour force survey.

Goods-producing industry

In the subsectors covering electricity, gas, district heating and water supply and mining too, the calculations are based on the results of the census of places of work. Whereas the figures in the subsectors are (in part only very imprecisely) updated on the basis of employment figures derived from the annual survey of public electricity and gas supply enterprises (1970 to 1974), the earnings survey in industry and the craft trades (1974 to 1976) and the employment figures compiled by the Federal Institution for Labour, with effect from 1977 (from 1970 as regards the mining industry), the annual results of the monthly returns for local energy and water supply and mining units are used for the purposes of updating. As regards the mining industry, recourse can also be had to the employment data yielded by the annual survey of small undertakings.

In the processing industry, the calculations are based principally on the results of the census of places of work, although (with effect from 1977) primary-source calculations have been made on an annual basis, based in turn on the annual results of the monthly returns of the productive industries, the annual survey of local industrial units with (as a rule) between one and 19 workers and the annual craft trades returns (classified by reference to 32 activity sectors).

Updating/backdating for the period 1970 to 1976 was based on trends in the employment figures derived from the monthly industrial returns for local units with (as a rule) ten or more workers, plus the employment data from the annual survey of small firms (in September).

Up to 1976, the results of the census of places of work were updated by reference to the employment figures from the partial survey of the building trade proper and the annual survey of the finishing trade; with effect from 1977, there are annual primary-source calculations in the building trade proper on the basis of the partial survey. The calculations for the finishing trade incorporate (with effect from 1977/78) the results of the annual survey of the finishing trade conducted among local units belonging to enterprises with ten or more employees and the employment figures from the craft trades census (covering enterprises with between one and nineteen employees). The figures are updated by reference to trends in the employment statistics from the annual survey of the finishing trade.

Employee quotas from the census of places of work, updated by reference to average national trends, are applied to the corresponding figures for the gainfully employed population.

Trade and transport

Calculations in the sector covering trade and transport are based on figures for the gainfully employed population derived from the census of places of work.

As regards the wholesale trade, updating is by reference to employment trends from the earnings survey in trade and industry (1971 to 1974) or trends in the employment figures from the wholesale trade statistics. In the absence of suitable reference figures for updating purposes, the basic data in the sector covering intermediate agents are kept constant for subsequent years. In the retail trade sector, trends in the employment figures from the annual retail trade statistics are used for updating.

For the transport sector too, data on the gainfully employed population derived from the census of places of work are used as the computational basis.

For the railways and communications subsectors data are updated by reference to the labour force statistics, unlike those for other forms of transport, which rely on returns of employees by civil airports (drawn up by the working party on German civil airports) or the employment statistics drawn up by the Federal Institution for Labour.

In the trade sector, proportionate data on wage and salary earners can be obtained from the trade and catering census, the figures for intervening years being calculated by interpolation. Proportionate figures from the census of places of work, updated by reference to national trends until fresh results are available (as for the trade sector) and subsequently interpolated, are used for calculating the wage and salary earners figures in the transport and communications sector.

Services, general government, etc.

The basic statistical material in this sector is the data on the gainfully employed population from the census of places of work.

In the credit institutes and insurance subsector, annual primary-source calculations have been made with effect from 1978, using the employment statistics compiled by the Federal Institution for Labour. The figures for the period between 1970 and 1978 were obtained by interpolation in the subsidiary sectors.

Some of the subsidiary sectors coming under other services cannot be updated, and have instead to be kept constant. Some can be updated by reference to trends in the official employment statistics, and others by reference to data on teachers employed in private schools (from the statistics of general and vocational schools).Other subsectors are covered by employment trend data derived from the craft trades returns.

The employment figures from the labour force statistics are used to update the data on the gainfully employed population in the central, regional and local authorities sector. Information required to update the military personnel details are provided by the Defence Ministry. For the time being, the information on persons employed in the social insurance sector and in households (figures derived from the census of places of work) have to be used for the purposes of apportioning the national figures among the Länder. As regards private non-profit institutions, on the other hand, it has been possible since 1977 to use data from the employment statistics for computational purposes. The details for the years between 1977 and 1970 are calculated by interpolation. Proportionate employment figures for the services sector are derived from the census of places of work, updating being by reference to national trends until such time as new Länder data are available. At a subsequent stage, the figures for the years between the full censuses are calculated by interpolation.

In the general government and households sectors, the figures for the gainfully employed population are identical to the wage and salary earners figures.

1.2.7 Gross fixed capital formation by sectors

General remarks

For the purposes of the primary-source calculations at Länder level, gross fixed capital formation is calculated exclusively by reference to the economic sectors effecting the investment (presently some 40 such sectors). There is no alternative to this method at Länder level, as calculations based on the commodity flow method, as used by the Federal Statistical Office, would not be feasible at Länder level because of the inadequate statistical material available on production, sales, imports and exports.

That is why there can be no hope of classifying gross fixed capital formation at Länder level in any more detail than by reference to two headings. Given the material available, it is possible only to effect a combined classification by reference to investing sectors and to the headings capital equipment and buildings. At Länder level, only purchases of new equipment and buildings are recorded directly for the majority of economic sectors.

Investment in residential accomodation is always classified under the "rented accomodation" sector (the only one defined on a functional basis), regardless of the sector to which the investor belongs. It therefore follows that, wherever reference is made in the subsequent text to "building investment" in sectors other than "rented accomodation", it should be borne in mind that investment in housing construction is eliminated and included in the sector "rented accomodation".

In view of the lack of adequate data, the balances of purchases and sales of used capital equipment are, as a temporary measure, estimated by reference to the corresponding proportionate national figures.

The limitations set by the nature of the basic data do not only affect the choice of computational method, but also set restrictions on the use of plausibility control techniques. There is no way in which the results could be subjected to alternative calculations using different methods as a form of checking and coordination.

Statistical sources of calculations at Länder level

Agriculture, forestry and fishing

The calculations in the agriculture, forestry and fishing sector accord with the national calculations in covering all holdings within Länder frontiers with independant agricultural and forestry production.

In agriculture and forestry, investment in capital equipment is apportioned on the basis of a "national capital fund", unlike in the fishing sub-sector, where the basis is gross value added from the Länder generation of income account. The "capital fund" for agriculture and forestry has been calculated for 1971 from data derived from the agricultural census of agricultural and forestry plant and machinery in the single ownership of agricultural and forestry holdings, together with the corresponding average prices. Updating is by reference to gross value added trends in the sector as a whole.

Building investment data for the sector are apportioned on the basis of the annual national net building costs of completed non-residential buildings, including completed building work on existing non-residential buildings, for the account of persons from this sector (derived from the building completions statistics).

Energy and water supply

Prior to the revision of the investment survey as a result of the law on statistics in productive industry of 6 November 1967, the 1967 census of productive industry was followed by conversion to local units and updating capital equipment and building investment on the part of companies in the FRG. This method was continued until 1974 in the electricity and gas supply sector (the figures being updated by reference to data from the annual investment survey of companies). As regards district heating and water supplies, the 1967 figures are updated by reference to statistics compiled by the trade association. With effect from 1975, statistics are available for all four subsectors in a sectoral classification based on the statistics of productive industry.

Mining and processing industry

Annual investment surveys have been conducted in the mining and processing industries since 1964. However, local units' results classified by reference to the main activity of the company were, until 1976, available only for the mining and processing industries proper (i.e. excluding the craft trades). However, it proved possible - without giving rise to any major inaccuracies - to base the data for the processing craft trades on companies' results instead on the grounds that local and legal units are usually one and the same in the craft trades.

As the investment surveys up to the reference year 1976 covered only firms employing 50 or more people, it was necessary to raise the results, using constant factors from the 1976 census or the 1968 census of craft trades. With effect from 1977, the figures for German local units of companies employing 20 or more people are raised by reference to the same information used for the calculation of gross value added.

Building industry

Separate calculations are made for the building trade proper and the finishing trade. For both of these subsectors, an annual investment survey has been carried out since 1974.

Apart from the problem of raising the results to cover all firms, it is very difficult to convert companies' results to local units. As in the mining and processing industries, the company results were, from 1967 up to the reference year 1976, raised by reference to constant factors from the 1967 census.

With effect from 1977, the results have been raised by reference to the ratio of the number of people employed by firms in the building trade proper to companies in the productive industries with twenty or more employees, including firms in the building trade proper with 20 or more employees belonging to companies outside the productive industry sector.

In the finishing trade, calculations up to 1976 were the same as for the processing craft trades. With effect from 1977. capital equipment and building investment data on the part of German companies with 10 or more employees (derived from the annual investment survey of companies in the finishing trade) are used for computational purposes. These figures are supplemented by estimates for smaller companies calculated by reference to updated employment figures from the 1977 craft trades census and weighted by investment data from the above investment survey.

Trade

In the trade sector, annual investment surveys have been conducted only since 1980, with the introduction of the new reporting system in the trade and catering sector. This means that primary-source calculations for earlier years were based on data taken from the 1968/70 trade and catering census and the results of the annual unofficial investment tests conducted by the IFO Institute. However, these sources yielded only data on investment on the part of companies or only national results, which is why the Länder economic accounts set out to convert the data from the trade and catering census on a regional basis into local units and to update the resultant statistics by reference to national data. Separate calculations are made for "wholesale trade including intermediate agents" and "retail trade". The proportionate average investment data calculated from the above census are updated by reference to national trends as ascertained by the IFO Institute's annual investment test and applied to the turnover figures from the generation of income account.

Transport and communications

Investment in the transport sector has so far been officially surveyed once only (as part of the 1962 transport census), which is at least more than can be said for investment in the communications sector. Because of the lack of information, the calculations at Länder level in these sectors must therefore be based primarily on the data compiled by institutes, ministrees and trade associations.

German Federal Railways/German Post Office : As regards the German Federal Railways, the apportionment figures are the data on direct expenditure on material objects for the maintenance and production of fixed capital assets, these figures being compiled annually for the Federal Ministry of Housing and Town and Country Planning by reference to regions and sub-regions as laid down in the federal town and country planning programme. As regards the Federal German Post Office, the same system was used up to the reporting year 1977, since when use has been made of characteristics or combinations of characteristics surveyed at main regional post office level and of importance as regards the regional apportionment of gross additions to fixed capital assets. One exception in both cases is investment in road vehicles, the data for which are regionalised on the basis of the recorded totals of new vehicles in the Federal Road Vehicles Office's registration statistics, weighted with average production values.

Private railways : Data on investment in capital equipment and buildings on the part of companies resident in the FRG are converted to local units on the basis of employment figures, the basic material for this exercise being the statistics drawn up by the trade associations and the results of the census of places of work.

Passenger road transport and goods transport : The level of investment in these two subsectors, including transport ancillary services (i.e. haulage, storage and transport broking) is estimated in a similar way to the Federal German Railways and Post Office. In this case, however, newly registered road vehicles are multiplied not by the average production values, but account is taken in this case additionally of the commercial and other services for which the investor is normally invoiced.

Investment in rolling stock and buildings for the road passenger transport subsector is quantified from the annual investment survey of tram and bus companies conducted by the Federal Transport Ministry. In the goods transport sector (including transport ancillary services), on the other hand, building investment is calculated by multiplying standard national investment figures by the corresponding values at Länder level.

Shipping and ports : Capital equipment and building investment on the part of companies in the FRG is converted into local units on the basis of the 1962 transport census by reference to the employment figures from the census of places of work, and updated by reference to national trends derived from the annual figures calculated by the German Institute for Economic Research for the transport sector. The various Länder shares of fixed capital investment are then adjusted to reflect the changes observed in the Länder shares of employment as indicated in the census of places of work.

Airports and airlines : Among other sources, the level of investment in capital equipment and buildings is derived from annual statistics compiled by the working party on German civil airports. The national figures for other civil airports are calculated arithmetically on the basis of the figures calculated by the German Institute for Economic Research, and regionalised by reference to the number of passengers boarding at other civilian airports according to the annual air transport statistics. Investment on the part of airlines is estimated on the basis of figures compiled by the trade association and recorded by reference to the location of the company's head office.

Pipeline transport : The basic material for this subsector was calculated with the assistance of the district heating trade association, the federal gas and water works' association and the mineral oil trade association, very largely in close cooperation with the companies in the sector.

Services and private non-profit institutions

The key apportionment figures for investment in capital equipment comprise gross value added and/or the size of the gainfully employed population as calculated for the purposes of the Länder economic accounts; the key apportionment figures for building investment comprise the net cost of non-residential buildings, including work done to existing non-residential buildings for the account of persons belonging to these two sectors. To a very large extent, the apportionment figures for building investment are taken from the statistics of building completions. This applies also to the rented accomodation sector, which covers all building work done on residential buildings in all sectors,despite the fact that recording of the said statistics is fraught with problems from the point of view of time, sectoral classification and values.

General government

The general government sector comprises central, regional and local authorities and social insurance institutions. The capital equipment and building investment figures on the part of commune authorities and commune authority associations, consortia of authorities and other legal persons representing inter-communal cooperation, Länder and cities of similar standing is equated with expenditure on the part of those institutions on the acquisition of movable assets and building work, according to the annual accounts or financial statistics compiled by the central, regional and local authorities.

No account is taken of expenditure relating to housing construction, business enterprises and general real estate.

Expenditure on new capital equipment and buildings on the part of the federal authorities and the social insurance institutions is regionalised by apportioning the national figures. Otherwise, the apportionment key is, generally speaking, gross value added. Building work undertaken by the federal authorities can be regionalised fairly accurately by reference to the federal budget.

Deflating

The figures in constant prices are calculated separately for capital equipment and buildings with the aid of highly detailed standard national deflators.

1.3 The accounts of the households sector

1.3.1 Differences between the sectoral definition of households and the definition used in the ESA

The sectoral definition of households in the ESA covers all sole proprietorships and partnerships without independent legal status other than those treated as quasi-corporate enterprises (i.e. all bodies without independent legal status which keep a full set of accounts and are very important at local level). A practical criterion for the idea expressed by "very important at local level" (reflecting the idea that, from a particular size on, firms tend to behave as corporate enterprises) was the number of employees, i.e. 20 or more in agriculture, 100 or more in industry and 50 or more in services.

The Federal Republic of Germany is unable to comply with this definition. In the FRG, the enterprises without legal status are much more strongly represented in the category "100 or more employees" than is the case in most of the other Member States (accounting for 44% of industry in 1970, by reference to the number of employees). To sub-divide enterprises without legal status according to the above criteria would be a fairly arbitrary move as far as the FRG is concerned, especially as the relevant taxation provisions provide for a distinction to be drawn between corporate and private assets for the large majority of enterprises. The definition used in the FRG's national accounts, whereby the households sector includes no enterprises, accords best with these circumstances, and that is the basis on which the statistics have been compiled so far.

If the ESA criteria were to be applied, substantial changes and additions would have to be made to the existing statistical material, changes which would not be feasible, especially in view of the secondary statistics which would have to be used. The same reservations apply to the financial accounts compiled by the German Central Bank (Bundesbank).

Another difference between the German national accounts and the ESA arises from the fact that, in combining the institutional entities into sectors, the private non-profit organizations usually have to be lumped together with households on the grounds that there are still no statistical data which would enable the private non-profit institutions sector to be dealt with separately. This explains why the private non-profit institutions' transactions are included in the various aspects of the households sector described below.

1.3.2 Disposable income

Constituent elements

The central element in the Länder conversion calculations is disposable income in the households and private non-profit institutions sector. Only these data are calculated and published for all the Länder, the result being disposable income data based on the households' share of national income, obtained by adding or subtracting the figures for transfers received or made.

Statistical sources of calculations at Länder level

Data on the regional apportionment keys for current transfers received (i.e. social benefits and other current transfers received) from the sectors covering general government, enterprises with independent legal status and households (including enterprises without independant legal status) and the rest of the world are obtained interalia from the following series published by the Federal Statistical Office :

Population status and trends, social aid, war victims' welfare, housing subsidies, central government budget calculations, local government budget calculations, social welfare and civil service staff statistics.

For computational purposes, additional information is obtained from the following institutions : Federal Ministry of Labour and Social Affairs, Federal Ministry for the Post Office and Telecommunications, Federal Institution of Labour, Federal Insurance Office, Federal Insurance Institute for Employees, Main Association of Trade Cooperatives, the Association of Agricultural Pension Funds and the Federal Association of Agricultural Health Insurance Funds.

A large proportion of current transfers received is accounted for by social welfare payments made by central government, e.g. the money paid out by workers' and employees' pension insurance funds. Originally, payments made by the workers' pension insurance fund were apportioned on a regional basis by reference to the payment figures in the annual report of pension payments compiled by the Federal Insurance Office, broken down by Land social insurance institution districts and payments made by supra-Länder institutes under the supervision of the Federal Insurance Office were classified under the various Länder by reference to the number of pensioners, but the situation now is that the data are supplied annually (almost exactly) on a Länder basis by the PTT Centre for one month at a time. Once the figures for the supra-Länder postal districts have been converted by reference to residential population data, the information is used as an apportionment key to give the annual figures. Payments made by health insurance institutions such as sick pay, pregnancy allowance and so on (net expenditure being derived until very recently from the insurance institutions' accounts) were used as the apportionment key at Länder level.

The corresponding data are now available from the annual reports of the health insurance institutes, with the results of the local, guild and agricultural health insurance institutes set out by Länder according to the place-of-business principle. The data can be converted to the resident principle by applying the proportion of gross compensation of employees accounted for by net expenditure (i.e. the territorial concept) to the corresponding income of households according to the resident concept. Any insurance institute data which is not available on a Länder basis can thus be apportioned by reference to the number of members of the fund or the number of pensioners.

Data on the payments made from the unemployment insurance fund by the various administrative districts are supplied by the Federal Institution for Labour. Payments made by the miners' pension insurance fund were originally reported by the appropriate administrative districts, and were broken down on a Länder basis by reference to the number of pensioners belonging to the fund. However, since the establishment of a national miners' insurance fund, the average payments made by the administrative districts (and updated by reference to Länder trends in the numbers of people insured) are now updated by reference to trends in the average national pension payments. Payments made by the family allowance funds are broken down by reference to the regional distribution of children aged less than 18 years. Payments made by the accident insurance funds are available on a Länder basis for the trade cooperative associations, but data on payments made by the agricultural trade association have to be broken down by reference to the number of members.

Social benefits paid by the other sectors covering enterprises with independent legal status, households and the rest of the world are broken down by reference to apportionment keys, as with other current transfers received. For instance, the payments made by life insurance companies and pension funds are broken down by reference to the social welfare contributions made to enterprises with independent legal status, payments made by company pension funds and the like by reference to company pension obligations, etc.

As regards direct taxation (which, together with social insurance contributions, constitutes the main element in current transfers to central government), the reference figure taken for the purposes of gross compensation of employees is a figure for income tax receipts from the taxation budget after the figures have been apportioned on a regional basis, to ensure that the regional distribution is accurate.

For the purposes of calculating direct taxation on income from entrepreneurship and wealth, reference is made to income tax receipts as assessed (derived from the taxation budget figures and based principally on the resident concept). Data on investment grants having the effect of reducing income from income tax as assessed are supplied on a Länder basis by the Ministry of Finance.

The calculations include a number of additional elements, such as the stability surcharge on income tax as assessed (breakdown by reference to income tax received) and the mortgage profit levy (the Länder breakdown being derived from the taxation budget figures).

As regards contributions to old-age and survivors' pension funds, contributions to health insurance institutions and other current transfers made (e.g. net indemnity insurance premiums, visa fees, etc), the basic material used is very largely the same as described above for other current transfers.

1.3.3 Private consumption

Constituent elements

Private consumption embraces purchases on the part of resident households for the purposes of consumption, and collective consumption of private non-profit institutions. In addition to the actual purchases of households, the sector includes notional purchases, such as own consumption of entrepreneurs' households and the notional value of the use of owner-occupied dwellings.

Statistical sources of calculations at Länder level

The basic material for the agricultural, forestry and fishing sectors comes, inter alia, from the relevant statistics, from the Ministry of Agriculture, Forestry and Food, from the VAT statistics and from general censuses. In the agriculture sub-sector, purchases on the part of the Länder (made up of own consumption, reduced-price purchases and direct purchases of households) are calculated for a variety of animal and crop products. For instance, the annual milk purchases of each Land are calculated by multiplying the recorded volumes (from the Federal Statistical Office's series 3/4.2 on agriculture, forestry and fishing) by the producer prices supplied by the ministry. Sales effected by non-agricultural market gardeners and livestock breeding stations are calculated by reference to turnover (from the VAT statistics) and a sales apportionment key worked out from the 1962 VAT statistics. Data on households' purchases of fuel wood from the forestry sector are based very largely on the results of the 1961 forestry survey (a primary source calculation having been done for 1961 only). Sales effected by the Land forestry authorities were calculated by multiplying the volume of fuel wood sold by the average prices (both sets of data supplied by the forestry authorities).

Data on purchases in the fishing sector were obtained from the 1962 freshwater fishing survey, the 1961 general census and the results of the 1961 economic accounts, the resultant data being used so far for only one primary-source calculation, for 1961. For instance, own consumption on the part of entrepreneurs' households in the freshwater fishing sub-sector was calculated by multiplying the number of local units from the 1962 freshwater fishing survey by the average household size and per capita consumption.

Purchases of households from the energy and water supply and mining sectors comprise sales revenue on the part of electricity and gas supply companies and reduced-price purchases in the mining industry. More recently, purchases from electricity supply companies have been based on earnings from the 'households' consumer category from the corresponding surveys. The calculations also include a percentage share of earnings from the agriculture, trade and transport consumer categories as private consumption, and account is also taken of the coal levy and value added tax (using the relevant percentage figures). Additional material is obtained in the form of data from the earnings survey of industry and trade, the industrial returns, the statistics of productive industry, etc.

Sales in the processing industry sector are based on the trade and catering census, retail trade turnover statistics, craft trades censuses, craft trades returns, VAT statistics, etc. Purchases on the part of industry proper are calculated from the turnover figures for own sales outlets (with the aid of the trade and catering census and the retail trade turnover statistics) and personal purchases (the per capita turnover for selected branches of industrial activity being estimated by reference to domestic sales and the residential population).

The sales figures for the craft trades and other productive trades were originally calculated by reference to the 1962 VAT statistics and the appropriate sales percentage figures supplied by the Federal Statistical Office. To obtain the sales figures for the base year 1967, the turnover figures were multiplied by the proportionate sales figures (based on the same classification) calculated from the results of the 1968 craft trade census. Updating/backdating is by reference to turnover trends from the VAT statistics and the quarterly craft trades returns.

Private households' purchases from the building sector are calculated by reference to turnover on the part of selected economic categories from the VAT statistics and by applying proportionate sales figures (based on the same classification), and are updated for years in which no VAT statistics are compiled by reference to turnover trends from the quarterly craft trades returns.

The basic material for the calculation of purchases from the wholesale and retail trade sectors comprises turnover data from the generation of income account and the Länder economic accounts, data from the trade and catering census, income and consumption sample surveys, census of places of work, etc.

For instance, calculations for the wholesale trade sector are based on the total turnover figures for 1962. Calculation of sales to households is based on proportionate national sales figures applied to the turnover data (based on the same classification). The sales figures were then converted to Länder level using specially corrected Länder figures based in turn on adjusted proportionate Länder consumption figures and data for disposable income for households per resident/Land.

Data for the transport and communications sector are obtained, for instance, from the German Federal Railways and Federal Post Office, from the VAT statistics, from the traffic census, the census of places of work, the road transport statistics and from the Post Ministry.

Purchases on the part of private households from the Federal Railways and the Post Office are reduced from a national to a Länder level by reference to differentiated regional data, private purchases from the Federal Railways being estimated first of all at national level by reference to the normal bookkeeping accounts, while the Post Office applies different consumption quotas for its various business elements (e.g. travel service, telecommunications, etc). For instance, in the national accounts, different consumption quotas are used for each reference period to calculate private telephone charges from the overall figures. The national figures are then apportioned to the various regions by reference to the number of public telephone kiosks and connections to the telephone network, these data being derived from the Post Office's own annual report. The final stage is to convert the postal region figures into Länder figures by reference to a factor representing the ratio between the residential population of a particular Land and the residential population of the postal regions in that Land.

The national figures in the rented accomodation sector are broken down by reference to the production values (largely identical to the gross rent figures) from the generation of income accounts in the Länder economic accounts. Important sources of data here are the statistics of housing completions and the buildings and accomodation census.

The figures for purchases of private households from the credit institutes and insurance sector are regionalized by reference to information on the gross income of private households, derived from the Länder economic accounts.

The basic material for the calculation of purchases of households from other services comprises mainly the gross turnover data from the VAT statistics, which are subsequently adjusted by reference to national average sales quotas. Additional information is obtained from the representative statistics of the hotel and restaurant trade, the quarterly craft trades returns, the gaming and betting statistics, the demographic statistics and data from the generation of income account in the Länder economic accounts.

The national figures for purchases from the government and households sector (domestic services) are apportioned at Länder level by reference to gross value added.

In the absence of suitable statistical material, the purchases of private non-profit institutions cannot be calculated at source at Länder level. Instead, the national data are apportioned by reference to the average residential population of the Länder.

In the travel sector, the main sources of computational data are the tourist statistics, the microcensus, data supplied by the Institute for Tourism, the general and occupational census and the consumer price statistics. Private consumption incorporates the balance between travel expenditure on the part of residents abroad (including in the rest of the FRG) and travel expenditure on the part of foreigners (including other residents in the FRG) in the FRG. The data are apportioned at Länder level by reference to the number of holidays, the length of stay and the type of accomodation in conjunction with average rates of expenditure.

In addition to the above sectors, there are the following 'special items'. Under the heading 'Less', we have consumption of business costs for the retail trade, transport and communications sectors along with the services, the costs incurred by residents/non-residents being apportioned among the Länder by reference to selected persons from the data on travel expenditure on the part of foreigners in the FRG or from the general and occupational censuses.

The 'Add' item covers purchases on the part of workers in works canteens, purchases of heating oil and motor fuel on the part of private households, purchases of new and used cars by private households and purchases of cigarettes and tobacco.

These data are derived from the census of places of work, the microcensus, the VAT statistics, the general census, the consumer price statistics, the coal trade statistics, the road transport statistics, the publications of the Federal Motor Vehicle Office, the Institute for Economic Research and the Deutsche Automobil Treuhand GmbH.

Own consumption on the part of private non-profit institutions is apportioned among the Länder by reference to the residential population, there being no suitable data for primary-source calculations at Länder level.

Private consumption at constant prices is calculated with the aid of national deflators (there being no suitable data at Länder level), deflation being by reference to supplying sectors.

2. Compilation of regional data by reference to the ESA-REG concept

2.1 General remarks (data requirements according to the ESA-REG)

The European Community set out its requirements in the regional version of the European System of Integrated Economic Accounts (ESA-REG) dating from 1972. In its work on the implementation of the ESA-REG, the Federal Statistical Office works on the basis of the calculations produced by the Working Party on Economic Accounts for the Länder which have been released for publication, and adapts the results to the ESA definitions. The current annual programme of work of the Working Party can in the main cope with the Community requirements at Länder level (level I) (with the exception of the degree of classification detail required for certain aggregates and with the exception of government investment subsidies by target sectors). However, at government district level (level II), only some of the ESA-REG requirements can be met, depending on the bi-annual Kreis calculations made by the Working Party. In attempting to comply with the current ESA-REG programme of tables, the Federal Statistical Office (see p. 64) is meeting with certain delays in that no working party data are available for Länder or government districts which can be reconciled with the latest national figures, e.g. in the wake of major revisions of the national figures. Delays resulting from correction work done by the Working Party on the regional figures for Länder and government districts often have an effect on the work of the FSO in that it is only once the adjusted regional figures are available that conversion to NACE-CLIO can take place and the results brought into line with the new NACE-CLIO figures for the country as a whole.

Comparison

of data requirements according to the ESA-REG and data supplied so far for the reporting years 1970 to 1978 (as at May 1982)

Requirements			Data supplied													
Tables according to the ESA-REG	System		Level I (Länder)									Level II (Government districts)				
	Title	No of aggregate subdivisions														
		Required	Supplied													
			1970*)	1971*)	1972*)	1973*)	1974	1975	1976	1977	1978	1970	1972	1974	1976	1978
T 1 Gross value added at market prices	NACE-CLIO R.R. 17	17	9	9	9	9	9	9	9	0	0	6	4	4	4	d)
T 2 Gross value added at factor cost	"	17	9	9	9	9	9	9	9	-	-	-	-	-	-	-
T 3 Compensation of employees	"	17	9	5	5	-	6	6	6	-	-	-	-	-	-	-
T 4 Taxes on production	"	17	9	9	9	9	9	9	9	-	-	-	-	-	-	-
T 5 Subsidies	"	17														
T 6 Gross fixed capital formation by investing branches	"	17	2	2	2	-	2	2	2	-	-	-	-	-	-	-
T 7 Gross fixed capital formation by type of goods	NACE-CLIO R.J. 5	4	2	2	2	-	2	2	2	-	-	-	-	-	-	-
T 8 Households' disposable net income	-	0	a)	a)	a)	-	a)	a)	a)	-	-	-	-	-	-	-
T 9 Final consumption of households	1)	2	b)	b)	b)	-	b)	b)	b)	-	-	-	-	-	-	-
T 10 Gross fixed capital formation of governments by purpose	2)	6	-c)	-c)	-c)	-	-c)	-c)	-c)	-	-	-	-	-	-	-
T 11 Government investment subsidies by purpose	2)	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T 12 Gainfully employed persons (territorial concept)	NACE-CLIO R.R. 17	17	9/4**)	5/4**)	5/4**)	-/4**)	4	4	4	3	3	-	-	-	-	-
T 13 Wage and salary earners (territorial concept)	"	17	9/4**)	5/4**)	5/4**)	-/4**)	4	4	4	3	3	-	-	-	-	-
T 14 Gainfully employed persons (resident concept)	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-

*) Data supplied before the major revision in 1977.

**) Data supplied after the major revision of 1977.
0 = only in total.

1) Classification and coding of the purposes of final consumption of households - ESA Annex 7. - 2) Classification and coding of the purposes of general government - ESA Annex 8.

a) Disposable net income of households including private non-profit organizations. - b) Final consumption of households including own consumption of private non-profit organizations, only in total. - c) Gross fixed capital formation of government as a whole is supplied only as a subdivision of Table T 7. - d) Only gross domestic product as a whole.

There are certain problems in the temporal comparability of the figures at level II (government districts). For instance, the figures, which are compiled at two-yearly intervals, are normally calculated at a time at which there are often no final figures for the Länder. The Working Party does not always have sufficient capacity to adjust the figures to take account of new Länder figures over a long period. As a result, comparability is confined, generally speaking, to the reporting year immediately preceding the last one. Regional changes due to Land and boundary reforms are, however, taken into account.

2.2 The accounts by production sectors

2.2.1 The changeover from the national system to the NACE-CLIO

The economically classified aggregates compiled by the Working Party on Economic Accounts for the Länder (i.e. gross value added, compensation of employees, taxes linked to production less subsidies, wage and salary earners and the gainfully employed) are converted on a sectoral basis by the Federal Statistical Office to the NACE-CLIO by reference to the same kind of classification in which they are made available. This conversion exercise constitutes not only a changeover from institutional presentational units to clearly defined subject units; account is taken also of what are sometimes rather different subject areas covered by the statistics. The transition from the national system of economic sectors (as laid down for the purposes of national economic accounts) to the input-output version of the General Industrial Classification of Economic Activities within the European Communities (NACE-CLIO) is in two stages. Firstly, the nationally classified data based on institutional units are converted into "homogeneous production units" in the system of input-output accounts (SIO), using a machine-conversion system on the part of the FSO (described below). The SIO data are then converted manually to a NACE-CLIO base, the data resulting from differences between the ISO and the NACE-CLIO (the result of certain three-digit items in the SIO, equating to the "of which" items in the comparison on page 66) being distributed among the regions concerned by reference to each Land's share of the output of the relevant three-digit item.

Comparison

of amalgamated economic sectors in the national economic accounts and similar groupings of production branches in the NACE-CLIO (the main differences are entered as "of which" items)

Economic sectors in the national economic accounts			Production branches in the NACE-CLIO NACE-CLIO production branches			
Sector or "Of which" items	WZ 1970/ WZ rev.1976	SYPRO	Sector or "Of which" items	NACE-CLIO		
	Number			R 6	R.R. 17	Groups
Agriculture, hunting, forestry and fishing	0		Agricultural, forestry and fishery products	01		
Goods-producing industry	1 - 3	10 - 77				
Energy and water, extractive industries	1	10,21	Fuel and power products	06		
of which:			of which: mineral oil prodacts			140
extraction of iron ore	113					
potassium and rock-salt extraction, brine pits	115					
other mining, peat extraction	118					
Processing industry	2	22 - 69	Manufactured products	30		
of which:			of which:			
mineral oil processing	205		ferrous ores			211
repairs to road vehicles and consumer goods n.e.c. by specialist workshops			non-ferrous ores			212
	ex 2448		salt of potassium and of natural phosphates			232
	ex 2449		rock-salt, marine salt			233
	ex 2508		other minerals, peat			239
	ex 2545		products of publishing			474
	ex 2580					
	ex 261					
	ex 271					
	ex 2725					
	miscellan.					
Building and civil engineering	3	72 - 77	Building and construction	53		
			Market services	68		
Distributive trades and communications	4.5 (incl. 60 6;T.a. 9.70 0)		Recovery and repair services, trade services, lodging and catering services, transport and communication services		58.60	
			of which:			
			recovery and repair services			620,671, 672
			lodging and catering services			660
Other services	6 (excl. 60 6): 7 (incl. T.a. 80 4, 80 5, 80 6)		Services of credit and insurance institutions, other market services		69.74	
of which:						
hotels and catering	700					
publishing, literary and press services	708					
General government, households and private non-profit institutions	9 (excl. T.a. 9.70 0, 9.9) 8(excl. T.a. 80 4, 80 5, 80 6)		Non-market services	86		

2.2.2 The machine-conversion method used by the Federal Statistical Office

The Länder data for gross value added, compensation of employees, the gainfully employed population, wage and salary earners, etc, are classified by institutionally defined economic sectors, corresponding to the basic statistical material available in the Federal Republic of Germany for these items. However, the ESA provides for a classification on the basis of production sectors defined by commodities. As original, commodity-based data are, generally speaking, not available for the items in question, the institutional data are converted into commodity data by a mechanical conversion method developed by the Federal Statistical Office for the conversion of GNP statistics (on an institutional basis) into the concepts and definitions used for the input-output accounts (based on commodities).

This method is along the same lines (albeit in modified form) as the conversion method described in the UN "System of National Accounts" (1968) (p. 48 et seq.). By this method, institutional input data (e.g. intermediate consumption and the components of gross value added) or production factors (e.g. wage and salary earners) are converted to a commodity-based classification with the aid of output data (value of production) with a dual classification by reference to institutions <u>and</u> commodity categories. For conversion purposes, it is generally assumed that the input-output ratio for a certain commodity category remains the same. regardless of the economic sector in which the goods were actually produced. Any information which is available on the input-output relations of commodity-based sectors is taken into account in the conversion process.

In converting the Länder data, statistical information on the commodity classification of the institutionally-based production values for the Länder was used wherever available. Where no such data was available, conversion was affected by reference to the relevant relations for the FRG as a whole.

2.3 Households accounts

The discrepancies described above in the sectoral definition of households vis-à-vis the ESA apply to both the national and the regional economic accounts. There are no other discrepancies affecting only the regional data.

2.4 The accounts of general government

2.4.1 General remarks

The compilation of complete regional accounts of general government does not at present feature in the national programme of work and publications covering regional economic accounts. The chances of calculating such accounts and the calculation of provisional figures for 1977 and final figures for 1979 has been and is therefore the subject of a study undertaken by the FSO exclusively on behalf of the European Community. There is at present no way of telling to what extent the Working Party on Economic Accounts for the Länder will in future assume the task of producing such calculations and itself publish the results.

2.4.2 Preparation of regional accounts for general government

Apart from very slight modifications, the items specified for the compilation of regional accounts of general government are based on the ESA definitions. The important thing is therefore to reconcile the sum of the regional data with the figures for the FRG as a whole. The data based on the definitions required for the regional accounts of general government are calculated nationally as follows :

- initially, the national data are taken to be the figures supplied by us to the SOEC for ESA purposes;
- material social benefits are likewise reported at regional level to enable general government consumption (based on the national concepts) to be converted into social benefits, as is done at national level;

- the above economic accounts data are adjusted wherever there are discrepancies between the accounts systems laid down for the regional accounts of general government and the ESA accounts.

Initially, no-one quite knew what to do about general government sales and buildings erected by general government. Whereas the ESA provides for such sales of goods and services to be entered as a negative value on the expenditure side as a reduction in general government consumption, the regional accounts on general government are based on the thinking that sales should be entered in the accounts as actual current receipts. Unlike the ESA, buildings erected by general government should be recorded only under gross fixed capital formation, and that is the method we adopted in the methodological study and in our calculations of the provisional figures for 1977. As a result of differences ascertained in the methods used in the Member States, the problem was discussed once again by the SOEC Working Party on economic accounts and statistical indicators at regional level, and the decision was taken to apply the ESA Rules in future. We shall be complying with this decision in calculating the data for 1979. As a result, the only discrepancies between the sum of the regional data and the national figures relate to the elimination of all notional transactions from the regional accounts of general government and the inclusion therein of transfers on the part of local authorities or the Länder.

The result of this first stage is the global data to be used as a basis of regionalization.

The basic statistical material for the calculation of expenditure and receipts of local authorities and central government by type and by sector in the economic accounts comprises the local and general government financing statistics.

In many respects, these figures do not accord with the definitions drawn up for the purposes of the national economic accounts, neither for the total figures for income and expenditure nor for virtually all the sub-aggregates. Conversion work (supplemented in part by estimates) is required for the calculation of the accounts for the various government authorities. Essentially the same method is used for the regional accounts, albeit only insofar as the financial data are available on a regional basis. The conversion and estimating work then has to be done separately for each region (this work currently being done on a global basis for the FRG as a whole).

Local authorities (communes, associations of communes and consortia of authorities)

Commune finance statistics in the degree of detailed classification required for the regional presentation of local authority finances in the economic accounts are not available for government districts. The first step must therefore be to compile the basic financial material on the basis of government districts, something which - because of the mass of data received from communes and commune associations - can only be done mechanically. As the original data are only available to the Länder statistical authorities, it is up to each such authority to do the necessary work for the area under its jurisdiction.

As the requisite special processing work on the basis of government districts is done only for this purpose, it could be based without any further ado on the concepts used in the National Economic Accounts. As far as possible, the individual financial data (categorized by grouping and functional parameters) are sorted into the headings needed for the regional accounts of general government by reference to formalized computational instructions. However, as some of the basic material needed for formalized calculations is not available, it is possible only to compute interim values, which subsequently have to be finalized by way of estimates.

The method described applies both to the regional calculation of the overall account for local authorities (classified by types of income and expenditure) and for the regional presentation of the selected transactions by sectors.

The quality of the regional data may be said to be satisfactory, judging by the experience gained with the processing of data for 1977 for the main aggregates (i.e. current and asset-affecting expenditure, current and asset-affecting receipts). This is, however, not true of all individual items of data, some of which have a large proportion of regionally unrecorded expenditure (e.g. as is the case with investment subsidies). It is impossible at present to say anything about the data submission deadlines and the time required to process the data in vew of the fact that, as was mentioned earlier, it is still not certain whether the Working Party will be assuming these tasks in the future.

Länder (including city states)

The system used for the regional presentation of Länder finances, including the classification of selected transactions by sectors, is essentially the same as for commune finances. The Federal Statistical Office has access to the required regional classification (inasmuch as regionalization has only to be to the level of Länder), which means that the available general government financial data must be converted (separately for each Land) to the definitions used in the regional accounts. To this end, a conversion programme from the general government financial statistics to the general government regional accounts categories has been developed, with the result that formalized computational methods can be used to do all the conversion work, so long as grouping and functional parameters are clearly definable. The resultant interim values are then (as is the case with the local authorities) supplemented by estimates to produce the final overall figures.

As regards the quality of the regional statistics, the same remarks apply here as to the local authorities. However, given that regionalization is, in this case, only by reference to Länder, there is none of the uncertainty with which the local authorities' figures are beset (as a result of the further subdivision by reference to government districts). It therefore follows that the potential for error is a good deal reduced, even with the smaller aggregates.

2.4.3 Gross fixed capital formation and investment subsidies from the federal authorities

The financial statistics can yield no regionalized data for these items. Data on investment subsidies granted by the federal authorities to the Länder and communes can be derived in more or less the required form from the financial statistics representing receipts on the part of the local and regional authorities. As regards classifying gross fixed capital formation and investment subsidies granted to 'others', on the other hand, the budget documents and computations on the part of the federal authorities must be subject to direct evaluation by reference to the explanatory notes on the various items. Because of the frequent lack of information on where precisely the investment work took place or where the investment subsidies ended up, the result of this evaluation exercise, which requires a considerable amount of work both overall and especially in particular sectors, is that the significance of the resultant statistics is very limited. It is therefore worth considering whether the regional presentation of transactions on the part of central government should be dispensed with altogether or whether at least the additional classification by sectors should be done away with.

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Düsseldorf/Stuttgart, 1979

Number 11 : Gross fixed capital formation in the Länder of the Federal Republic of Germany, revised figures 1960-1979
Stuttgart, 1981

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Number 12 : The generation. distribution and utilization of GNP in the Länder of the Federal Republic of Germany, revised figures 1970-1971
Stuttgart

The figures are set out and commented on in the monthly reports published by the Länder statistical authorities.

A slightly enlarged presentation of the macroeconomic data is contained in statistical reports PI 1, PI 2 and PII 1 published by the Länder statistical authorities.

F R A N C E

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SOURCES AND METHODS OF REGIONAL ACCOUNTS IN FRANCE

Introduction

Over the last 12 years or so the INSEE has been regularly compiling for all the French regions [1] regional accounts data, which have gradually taken on a more substantial form. Deliberately pragmatic, the approach adopted at regional level differs on many points from the statistical methods and techniques used in national accounts. Following an initial ambitious attempt during the 1960s, which showed the limitations of the basic information, the idea of a comprehensive system of regional accounts showing the sectors, transactions and regions along the same lines as the system of national accounts was discarded.

The inclusion of a spatial dimension in a system of coherent accounts greatly increases the number of economic flows to be measured and raises conceptual problems which in some cases are insurmountable.

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(1) Owing to the many statistical limitations, Corsica is in fact generally considered together with Provence.

Moreover, the essential merit of a system of coherent accounts, namely that of consolidating the estimation of the main aggregates by means of a combination of the various approaches, i.e. production, income, expenditure and regional breakdown, does not apply because all the regional statistical data would have to be supplied in full, whereas in fact they are fewer in number than the national data.

It was therefore decided to give preference to the compilation of regional accounts or in some cases even of separate aggregates for the institutional sectors and transactions which satisfied the two conditions of being observable at local level without too many conventions and of lending themselves to the construction of time series.

This approach entails a division into five institutional sectors :

- industrial enterprises, comprising the extractive industries, energy, manufacturing industry and the civil and agricultural building and engineering sector (BGCA), whose regional accounts are compiled on the basis of sources and methods which differ quite considerably from those used for national accounts. Instead of being based on indicators of trends in volume and prices, as in national accounts, these accounts are in fact compiled directly in terms of both level and value of production by means of a microeconomic regionalization model applied to the firms covered by the annual survey of enterprises.

- households, whose many methods and sources are for the most part similar to those used in national accounts.

- general government, the data for which are partly regionalized. For local authorities, the sources constituted by the virtually exhaustive documentation of the Ministry of Economic Affairs mean that the national methods can be followed exactly and ensure almost perfect consistency. On the other hand, for the central government sub-sector regionalization poses a dual problem of concepts and data which has not yet been solved.

- agricultural enterprises, for which there is a plentiful supply of statistical information that can be used to compile regional and even Département accounts within a very short period.

- the least regional information is available for enterprises in the market tertiary sector. Belated estimates of three aggregates, namely value added, compensation of employees and employment, were carried out with some difficulty to meet the requirements of the SOEC and the European System of Regional Accounts (ESA-REG). The lack of an annual survey on the local units of distributive and services enterprises, together with a number of conceptual problems regarding the localization of certain tertiary activities, constitute major handicaps for the regionalization of this sector.

All in all, the coverage of these five institutional sectors produces many items of regional accounts data but not a comprehensive system. Although the concepts and accounting frameworks used are still as close as possible to the Extended System of National Accounts (SECN) used in France since 1975, which is very similar to the European System of Integrated Economic Accounts (ESA), it does not seem reasonable at the present stage of development of the statistical apparatus to try to produce composite statistics of the resources/uses balance type and even less of the regional input-output table type. One of the main obstacles to this is the profound lack of statistical information on flows of interregional trade, even in their most simplified form, which may be explained partly by the tradition of centralized administration in France.

Mention should also be made of another difficulty related to the geographical localization of the flows recorded for compiling regional aggregates : for reasons to do with statistical requirements, only the transactions of the households institutional sector are allocated to the place of residence of the economic agents involved(resident approach), whereas the transactions of the other four sectors are recorded at the place of production (domestic approach).

After this general introduction, the following sections describe in turn the institutional sectors mentioned above, giving datails of regionalization methods, and attempt to bring out the nature and scope of the statistical sources from the critical angle of the localization of economic agents and transactions.

Before that, a brief review of the history of regional accounts in France will show the position occupied by this work in the public authorities' efforts to tackle the problems of regional development and territorial imbalances.

I. - Landmarks in the history of regional accounts in France

Immediately after the Second World War, three factors (the scale of the reconstruction effort, the still very rural nature of the French economy and the overwhelming predominance of Paris) combined to pose the problems of development aimed at restoring a territorial balance. The statisticians took these concerns into account and we find in a 1951 INSEE publication entitled "L'espace économique français", for example, an initial empirical attempt proposing for each Département in 1946-1947, when a census of population took place, overall indicators of income and production compiled on the basis of composite data combined in a relatively arbitrary way. This attempt did not have a formal framework comparable to that on which the national accounts, which were developing rapidly at that time, are based but in the absence of accounts aggregates it provided composite index numbers which could be used for inter-Département comparisons. The success achieved by this first adition led to this study being repeated in 1955 before the results of the 1954 census were even available. It was partly repeated at Département level for a number of years. It was at this time that the first theoretical regional models were put forward (1). Shortly afterwards there appeared in France a large number of university studies on regional accounts in the strict sense, but they tackled this question from a particular angle which was different from that subsequently adopted by the INSEE : either they deal with a region or even an individual Département, describing its activities in a precise and sometimes very elaborate way by means of an input-output table (examples : Bauchet for the Lorraine region - 1955 ; Bellanger for the Loir et Cher region - 1958), or they go beyond a single region and deal with interregional flows, but concentrating on a branch of production or a specific product (examples : Capronnier - Spielhagen for energy - 1962 ; Brugens -Romieu for the iron and steel industry).

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(1) W. Isard : Interregional and regional input-output analysis : a model of a space economy, Revue Economie et Statistique, November 1951.

L. Moses : Regional input-output : Ph.D dissertation, Harvard, June 1952.

W. Leontieff : Interregional theory in "studies in the structure of the "American Economy" - 1953.

However, from the middle of the 1950s a much more ambitious project was launched, based on the 1954 census and led by Jeanneney : the aim was to build up a comprehensive picture of interregional trade showing both income flows and flows of goods and services. In order to ensure its successful completion this work, which was published much later (Jeanneney - Quiers-Valette : Essai de comptabilité interrégionale pour 1954 - Results : 1968; Methods : 1971), had to be limited to a division of France into seven zones and construct a hypothetical trade model of the gravity flows type, which cannot be compared with observable data. This project was extended even further in the 1970s in the form of a table for five zones showing flows by branch and region for 1969 - 1970 (Courbis and Pommier : Construction d'un tableau d'échanges interindustriels et interrégionaux - Paris 1980).

Towards 1963, the INSEE launched a large-scale project, aimed at raising the conceptual problem, to compile the economic accounts of the 21 French regions for 1962. This project was instigated by Commissariat du Plan, which for the purposes of the IVth Plan (1961-1964) had undertaken to establish definite links between the national development strategy and the reduction of regional imbalances by means of the process of "tranches opératoires".

The aim was to determine the effects in the regions of large public investment projects, infrastructure projects and all the major technical projects provided for in the IVth Plan and thus to draw up regional plans for a longer term (15 years) than the national plan. A further aim was to facilitate regional comparison of certain economic structures with a view to determining the regions' relative levels of development and their specific features and laying down guidelines for regional development schemes.

A large number of both theoretical and practical lessons were drawn from this initial experiment by the INSEE in the field of regional accounts. A framework of accounts suitable for regional use was devised and a set of coherent definitions and concepts drawn up.

Contrary to the practice in some countries, the aim was not to calculate one or two individual aggregates but to compile accounts and sub-accounts forming balanced wholes which could be used independently. The regional system took from its national counterpart only those parts for which regionalization is meaningful. Discarding the table of financial transactions, the balances of which are significant only at national level, the system comprised an overall regional economic table based on a dual residential and territorial approach. The economic agents were divided into those which could be meaningfully regionalized (households, enterprises and local authorities) and others, termed non-regional (the State, the financial institutions, the transport and telecommunications branches).

A balanced account was drawn up only for the former, localized according to a residence criterion. It was therefore possible to study the behaviour of these agents, whether or not they carried out all their transactions in their region of residence.

The overall regional economic table also provided, however, for a balance of transactions within the region. It was therefore necessary to also regionalize certain transactions of non-regional agents to the benefit of regional agents (e.g. wages paid by the State). The table also aimed to divide regional agents' transactions into those carried out in the region of residence and those carried out in the rest of France (households' travel, external local units of regional enterprises), thus showing extra-regional transfers.

As it turned out, in the 1966 publication on this work (1) this second part could not be tackled. There were many limitations arising from the state of development of the statistical system, but they affected in particular the measurement of trade flows between the region and its external environment, which were, however, neatly dealt with in overall terms in a shadow account by the system of concepts. This required, in fact, much less information than, for example, a table of inter-industry and interregional trade, the construction of which was not contemplated out of realistic considerations, despite its theoretical attraction.

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(1) "Etudes et Conjoncture" , INSEE Review

The most original problems posed by the compilation of these accounts were obviously encountered in the case of enterprises consisting of several local units situated in different regions. The statistics available related either to the enterprises as a whole (declarations of industrial and commercial profits) or to a combination of enterprises and local units (register of enterprises and local units, 1962 industrial census) or finally to local units (output in physical quantities, supplied mainly by the Bureau Central des Statistiques Industrielles) (1) . The operating, use of income and capital accounts were then drawn up by sector of enterprises, based on tax data. The operating accounts of multiregional enterprises were then broken down among the local units' regions on the basis of data on the number of employees by branch taken from the 1962 industrial census. Operating accounts by branch were obtained in this way, while the production accounts were derived from regional production statistics in physical quantities, used as an indicator of the distribution of production, which was valued in the national accounts on the assumption that in each branch there is no regional dispersion of prices.

All in all, it had to be acknowledged that the advantage generally attributed to an articulated system, namely that of permitting cross-checking of certain estimates, did not play a major part. On the other hand, the constant alignment on the national aggregates acted as a sort of safety device when it did not form the basis for the estimates made in the frequent cases where direct observations were not available.

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(1) These regionalized data, which are of very variable quality, have not been available any more since the reform of the branch surveys decided in 1975.

II.- The households institutional sector

For the households' regionalized account, the concepts, methods and accounts used in the Extended System of National Accounts (SECN) are followed very closely.

There were two main reasons behind this choice :

- the SECN, which is very similar to the ESA (European System of Accounts adopted by the countries of the European Community), permits comparisons between the regions of these countries and makes it possible to meet the SOEC's requirements ;
- from an accounting point of view, this alignment on the national accounts not only gives the regional accounts for the households sector a guarantee of consistency but is essential for the estimation of certain items. In fact, certain transactions which can be estimated directly at regional level are estimated by means of a breakdown of the national figure on the basis of an indicator.

The national accounts, every resources or uses transaction is in fact the aggregation of components, in many cases multiple. These components are used at a more or less detailed level to compile the households' accounts.

A regional estimate is made for each of these sub-headings, the total for the regions being made compatible with that of the national accounts.

For certain transactions, it is not possible to use the same statistical source as that used by the national accounts. For example, earnings are for the most part broken down by region on the basis of the Annual Declarations of Earnings (DAS) and not the fiscal declarations of industrial and commercial profits (BIC) and non-commercial profits (BNC) used to estimate the value of wages and salaries in the national accounts. The BIC and BNC are in fact tax documents drawn up at enterprise level which do not break the accounts data down by local unit, whereas the DAS give such a breakdown of earnings.

The compilation of these accounts involves the use of over 60 different statistical sources. Households' resources are broken down into around 100 sub-headings and uses into more than 80 sub-headings.

The table below gives a synopsis of these many sources and methods used in the construction of households' regional accounts. As an exhaustive description of these would have been too long, only the main resources headings have been included here.

As regards the most important item of households' resources, namely wages and salaries, the method must be described in greater detail. It can be seen that for wages and salaries paid by industry, civil and agricultural building and engineering, market services, credit institutions and insurance enterprises, the prime source is the Annual Declarations of Earnings (DAS), which every employer is obliged to make to the tax authorities and which are analysed by the INSEE. This analysis is used in the regional accounts, but only after it has been ensured that the number of employees covered is consistent with that shown in the annual series on the number of employees by region, which are also compiled and published by the INSEE. Estimates thus have to be made for certain large national undertakings (EDF, GDF, PTT)*: as analysis of their declarations presents a number of difficulties at regional level, they are only partly taken into account in the analysis of the DAS.

The aggregate "regional income", which is an amalgam of a large number of data of very varied origin, is based mainly on directly regional statistics which are consistent with the national accounts, but also on estimates made with the help of indicators.

The sources can be divided into four categories (see table) :

- category "A", in which are classified first of all the directly regional sources which, for a given item, are the same as those used in the national accounts and which do not require any special treatment because the total of the regional figures is more or less the same as that shown in the national accounts. Also in this category are the sources which are different from those used in the national accounts but require only minor adjustment ot the SECN based on precise regional data ;

* EDF: Électricité de France
  GDF: Gaz de France
  PTT: Postes-Télégraphe-Téléphone

- category "B", comprising the sources which can be used for a direct regional breakdown of the item but require an adjustment, in some cases considerable. For example, as regards the transactions of sole proprietors the tax statistics (declarations of industrial and commercial profits and of non-commercial profits) provide directly regional data which, being presented in an appreciably different language and concepts, have nevertheless to be transcribed (a rather tricky operation) for the purpose of estimating each transaction of sole proprietors ;

- category "C", comprising sources for which there is no direct regional breakdown of the item. In this case, use is made either of structural data taken from surveys (survey of taxable incomes, housing survey, etc.) providing information according to different criteria, such as socio-professional categories, and making it possible to estimate the indicator considered representative (e.g. the statistics on a certain type of deposits for regional estimation of the corresponding interest). Thus, although certain hypotheses have to be adopted in this category, they are generally acceptably sound ;

- finally, category "D", comprising sources for which there are neither data bearing a close resemblance to regional information nor structural data which can be used for the item in question. In the majority of such cases, a demographic breakdown coefficient on employment, population, socio-professional categories, the number of vehicles, the number of dwellings, etc. is used for the regional breakdown of the item, depending on the field concerned.

All in all, it can be seen that for three-quarters of households' total resources (1) the regional valuation can be regarded as being based on accurate statistical material. It is also important to note that all the income components contain data from sources in categories "C" and "D", representing less reliable regionalization methods. Less than 5% of wages and salaries, however, have to be broken down by region in this way.

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(1) i.e. the volume of income broken down by region on the basis of sources classified in categories "A" and "B".

On the uses side of the income account, approximately 60 % of the volumes are broken down on the bases of sources classified in categories "A" and "B".

From 1973 onwards, the division between consumption and saving was not estimated owing to the interruption of the survey on Households'living conditions. Its resumption in 1979 (as the "family budget" survey) will make it possible to fill this gap. Moreover, as this source was not designed to be used at regional level, it will have to be backed up by structural data (socio-professional categories, categories of communes, etc.) for the purposes of a regional estimate of consumption.

Finally, bearing in mind the estimation methods used for certain items, it is obvious that some degree of imprecision prohibits too strict comparisons of the income per inhabitants in regions with similar levels. The budgetary structure of the households' account and the hierarchy among the regions remain fairly rigid over time. On the other hand, by their very nature agricultural incomes are subject to in some cases rather abrupt changes from one year to the next. Generally speaking, it is preferable to analyse the pattern of households' accounts over a period of at least two years.

SOURCES AND METHODS USED FOR THE REGIONAL BREAKDOWN OF HOUSEHOLDS' RESOURCES

Transactions (1)	Main sub-headings	Sources and methods used	Suitable of source for regional accounts (2)
N2 – GROSS OPERATING SURPLUS	– Agricultural sole proprietorships (EIA)	"Département" accounts for agricultural and various sources for fishing and forestry.	A (94%) C (6 %)
	– Non-agricultural sole proprietorships (EINA)	The EINA headings can be estimated on the basis of these enterprises' tax returns (industrial and commercial profits under the "real" and "all-in" systems, non-commercial profits)	B
	– Households . housing service	Estimation of notional and real rents on the basis of the "housing" survey and Population Census data on accommodation	C
	. production of kitchen gardens	Indicator based on the area of kitchen gardens	D
	. production of domestic services	Corresponding to the amount of wages paid to domestic servants and regionalized according to the number of jobs in the activity 'domestic services'	D
R641 – SOCIAL BENEFITS LINKED TO A SOCIAL SECURITY SYSTEM	Wages and salaries paid by the sectors of activity :		
	– U01 (3) : Agriculture	'Département' accounts for agriculture.	A (79%) C (21%)
	– U02-11 : IAA, Energy, Industry, BTP, Distributive trades, Transport, Market services.	Annual declarations of earnings (DAS).	A
	– U12 : Insurance	DAS	A
	– U13 : Financial inst'ns	DAS	A
	– U14 : Non-market services		
	. Central Gov't (APUC)	Analysis of State employees' payslips by the Direction de la Fonction Publique and the INSEE.	A (86%) C (14%)
	. Social Security Funds	DAS.	A
	. Local authorities (APUL)	Regional accounts of the APUL	A
	. Private non-profit institutions	DAS.	B
	– Wages paid by households	Regionalization according to the number of jobs in the activity 'domestic services'.	D
	– Wages paid by the rest of the world to French frontier-zone workers working in the other countries	Population Census	D
	– Wages paid to the rest of the world to foreign frontier zone and seasonal workers	(amount to be deducted from the sum of wages paid)	
	. frontier- zone workers	Indicator based on the DAS	C
	. seasonal workers	Based on the statistics of entries published by the National Immigration Office	D
R41 – INTEREST RECEIVED BY HOUSEHOLDS	According to deposits and issues of bonds and the various types of saving	Banque de France Caisse Nationale de Crédit Agricole Savings banks Ministry of Economic Affairs and Finance (Budget)	C
R42 – IMPUTED INTEREST ON LIFE INSURANCE CONTRACTS		Breakdown by region on a demographic basis : Population Census	D
R43 – INCOME FROM LAND AND INTANGIBLE ASSETS	Tenancies and share-farming	'Département' accounts for agriculture	A
R44 – DIVIDENDS AND OTHER INCOME DISTRIBUTED BY COMPANIES	Dividends, tax assets income of majority directors of private limited liability companies.	Estimation based on structural data by socio-professional category (CSP) taken from the INSEE's 'Income' survey.	C

Transactions	Main sub-headings	Sources and methods used	Suitability of the source for regional accounts (2)
R46 – EMPLOYEES' CONTRIBUTION TO EXPANSION		Ministry of Labour statistics	A
R52 – NON-LIFE INSURANCE CLA CLAIMS	– Accident, transport, civil liability	Regionalization based on demographic coefficients	A (3 %) D (97%)
	– Fire	Based on the number of dwellings	
	– Motor vehicle	Statistics on the frequency of motor vehicle accidents	
R64 – SOCIAL BENEFITS			
R641 – SOCIAL BENEFITS LINKED TO A SOCIAL SECURITY SYSTEM	– General scheme : occupational diseases and accidents	Caisse nationale de l'Assurance Maladie des Travailleurs Salariés	A
	family benefits retirement	Caisse Nationale des Allocations Familiales.	A
	retirement	Caisse Nationale d'Assurance Vieillesse des Travailleurs salariés.	A
	– Special schemes : agricultural scheme	Mutualité Sociale Agricole	A
	mining scheme	Caisse Autonome Nationale de la Sécurité Sociale dans les Mines	A
	ENIM(4) (marine)	Population Census : members of the SCP : "patrons pêcheurs et marins pêcheurs"	D
	Health insurance of non-agricultural self-employed persons	CANAM	A
	ORGANIC (industry and distributive trades) CANCAVA (craft trades) Liberal professions	Demographic breakdown coefficients derived from the Population Census.	D
	– Supplementary schemes AGIRC (retired executives) ARRCO (supplementary retirement benefits) Social security fund for agricultural managers	Number of former employees in the private sector, taken from the Population Census.	D
	IRCANTEC IPACTE	Number of public-sector pensioners, taken from the Population Census	D
	– Unemployment	Allowances paid by the UNEDIC	A
	– Statutary schemes	Breakdown by region on a demographic basis	C
	– Friendly societies	Direction de la Sécurité Sociale	B
R642 DIRECT SOCIAL BENEFITS	– Large national undertakings (GEN)	For most of the GEN, based on the number of employees	D
	– State	Demographic breakdown coefficients	D
R643 OTHER SOCIAL BENEFITS	– APUL	Accounts of the local authorities	A
	– Expenditure on military pensions	State Secretariat for Ex-servicemen	A
	– Social assistance	Regionalization based on a demographic breakdown coefficient	D
R68 PRIVATE INTERNATIONAL TRANSFERS		Regionalization based on the total population of the region	D
R69 MISCELLANEOUS CURRENT TRANSFERS	– Local authorities (APUL)	Accounts of the local authorities	D
	– State grants	Based on the number of recipients per region	D
	– Other	Demographic breakdown coefficient	D

(1) Classification of transactions used in the Extended System of National Accounts (SECN).
(2) The categories A, B, C and D are defined on pp. 9-10.
(3) Classification of activities and products under 15 headings (1973).
(4) For the exact titles of the various funds, see No. 44-55 in the INSEE series 'C' n. 90

SOURCES AND METHODS USED FOR THE REGIONAL BREAKDOWN OF HOUSEHOLDS' USES OF INCOME

TRANSACTIONS	MAIN SUB-HEADINGS	SOURCES AND METHODS USED	SUITABILITY OF THE SOURCE FOR REGIONAL ACCOUNTS
R41 Interest paid	- short-term interest	New credits granted by establishments specializing in credit sales	C
	- long-term interest	Long-term credits of the banking system (BANQUE DE FRANCE)	C
R43 Income from land and intangible assets	Tenancies and share-farming	'Département' accounts for agriculture	A
R51 Net non-life insurance premiums	Various risks (accident, fire)	Various demographic breakdown coefficients	D
R612 Taxes on income	Taxes on the income of physical persons, surcharges, BNC deduction at source	Direction Générale des Impôts	A
R613 Other taxes on income and wealth	- direct local taxes	Direction Générale des Impôts	A
	- taxes on income from securities (legal tender levy)	Bond issues, individuals' deposits with the banking system	C
R621+R622 Employees' social security contributions	- general scheme	Agence Centrale des Organismes de Sécurité Sociales (ACOSS)	B
	- supplementary scheme	Demographic breakdown coefficients	D
	- statutary scheme		
	- special schemes	Caisse des Mines, Mutualité Sociale Agricole	A (90%) D
	- friendly societies	Direction de la Sécurité Sociale	B
	- State and Posts and telecommunications	Analysis of State employees' payslips	B(86%)C (14%)

SOURCES AND METHODS USED FOR THE REGIONAL BREAKDOWN OF HOUSEHOLDS' USES OF INCOME (cont'd)

TRANSACTIONS	MAIN SUB-HEADINGS	SOURCES AND METHODS USED	SUITABILITY OF THE SOURCE FOR REGIONAL ACCOUNTS
R623 Current transfers to general government	- general scheme	ACOSS	B
	- agricultural scheme	Mutualité Sociale Agricole	A
	- other special schemes	Demographic breakdown coefficient relating to the working population other than employees	D
	- friendly societies	Direction de la Sécurité Sociale	B
R66 Current transfers to private non-profit institutions		Demographic breakdown coefficient	D
R68 Private international transfers		Demographic breakdown coefficient	D
R69 Miscellaneous current transfers		Demographic breakdown coefficient	D

III. - The industrial enterprises sector

The regional accounts for the branches of industry are compiled from three annual surveys of enterprises: the survey of agri-foodstuffs enterprises carried out by the Ministry of Agriculture, the survey of other industrial enterprises carried out by the Ministry of Industry and the survey of civil and agricultural building and engineering enterprises carried out by the Ministry of Public Investments. These surveys provide not only data on enterprises but also material which can be broken down among their various local units.

Unlike households' regional accounts, which are based on a large number of sources similar to those used for national accounts, it was decided to construct the accounts for the industrial enterprises sector from a single source. In this way the various aggregates are compiled from coherent data which make it possible to determine statistically sound ratios and therefore to carry out comparative structural studies between regions. The national accounts approach is completely different in terms of both sources and method: establishment of a base year (1971 for the present national account series) and use of indicators of trends in volume and prices. The consequence of this for the application of the ESA-REG is that the national checks give rise for each aggregate to a correction by means of a specific coefficient which considerably modifies the orginal ratios.

1. The statistical source

1.1. Coverage

The coverage of the surveys is defined in terms of activity and size of enterprise. The Ministry of Agriculture survey covers all private enterprises and agri-foodstuffs cooperatives with ten or more employees; it also covers all firms in the water-forestry-sawmills sector with a minimum of six employees. The Ministry of Industry survey covers all industrial enterprises with ten or more employees. The survey carried out by the Ministry of Urban Development and Housing covers all enterprises in the civil and agricultural building and engineering sector (BGCA). The table below shows the coverage of the surveys for 1978 and the size of the samples.

Survey	Size of enterprises	Coverage	Number of units surveyed
Agri-foodstuffs industry (Ministry of Agriculture)	Private enterprises and agricultural cooperatives with ten or more employees	Wine-making, forestry and agri-foodstuffs industries except: baking and confectionery, manufacture of starch products and crude and refined oils and fats (1)	6 000 enterprises
	Agricultural cooperatives with ten or more employees	Wholesale food distribution	13 000 local units
	All enterprises with six or more employees	Sawmills	
Industry (Ministry of Industry)	Enterprises with ten or more employees	Industrial establishments of the Ministry of Defence (armaments, land transport equipment and aeronautical equipment) are not included in the accounts	34 000 enterprises 58 000 local units
Civil and agricultural building and engineering (Ministry of Urban Development and Housing)	Enterprises with between one and five employees: 1 in 25 sample Enterprises with between 6 and 19 employees: 1 in 10 sample Enterprises with 20 or more employees: full survey		27 000 enterprises 30 000 local units

(1) These activities are covered by the Ministry of Industry survey.

The surveys do not cover local units whose main activity falls within their scope but which are attached to enterprises outside this scope. However, work was carried out for 1978 to reintroduce these units in order to improve the coverage ratios.

With a view to estimating the coverage ratio for each activity (NAP 40 nomenclature[1]), we drew up the following table relating the numbers of employees in the sections of local units to the estimates of regional employment by branch made on the basis of enterprises' declarations to the unemployment funds, which constitute the reference statistics.

It should be noted, however, that divergences may appear for reasons due not to the field of survey but to the slightly different definitions used for the two sets of statistics (method of taking hired workers, trainees, etc. into account).

Coverage ratios of the industrial surveys, based on the number of employees

T02	Meat and dairy products	92%
T03	Other agri-foodstuffs industries	97%
T04	Coal	104%
T05	Petroleum	105%
T06	Electricity, gas and water	93%
T07	Iron and steel	114%
T08	Non-ferrous metals	89%
T09	Building materials	90%
T10	Glassmaking	96%
T11	Chemicals	89%
T12	Parachemicals	108%
T13	Smelting	89%
T14	Mechanical engineering	104%
T15	Electromechanical engineering	130%
T16	Motor vehicles	101%
T17	Shipbuilding	95%
T18	Textiles	93%
T19	Leather	94%
T20	Wood	83%
T21	Paper	93%
T22	Printing	87%
T23	Rubber	99%
T24	Civil and agricultural building and engineering	110%

(1) The 1973 NAP, (Nomenclature of Activities and Products grouped into 40 headings) contains 23 headings covered by these surveys.

The coverage ratios are satisfactory on the whole. The problem is in fact how to monitor the coverage over a period of time, in particular the population of local units. An annual check on the enterprises questioned can be made on the basis of the survey start-up files. On the other hand, it is not possible in this initial phase to check the local units declared by the enterprises. Consequently, a decentralized manual checking phase following comparison of the survey file and the file of large local units has been introduced since the 1977 survey. Together with a systematic comparison of one year with the previous one, this should lead in future to better monitoring of changes in coverage over time.

1.2. Content of the questionnaires

. Agri-foodstuffs industries (I.A.A.)

Two types of questionnaires are used by the Ministry of Agriculture. The general questionnaires, sent to the majority of enterprises, require details of the type of enterprise, the general operating account, a breakdown of sales by product and data on local units (localization, workforce per activity, wages and salaries paid and investment). The simplified questionnaires, which are sent only to firms in the water-forestry-sawmills sector with between six and nine employees, do not include any data on local units.

. Industry excluding I.A.A.

Three types of questionnaires are sent to industrial enterprises. The basic questionnaires, sent to enterprises with between 10 and 19 employees, require only a minimum amount of information: sales and workforce per activity. The simplified questionnaires, sent to enterprises with between 20 and 99 employees, include in addition a general operating account and data on local units: localization, investment excluding initial capital, wages and salaries paid and workforce per activity. The general questionnaires contain the most information but they are sent only to enterprises with 100 or more employees. They also require additional information, i.e. for enterprises: investment by individual contribution of capital, the fixed assets account and a breakdown of expenditure, and for local units: a breakdown of investment excluding initial capital and the number of employees per quarter.

. Civil and agricultural building and engineering (BGCA)

The survey is based on only two types of questionnaires for this sector. The general questionnaires, designed for enterprises with 50 or more employees, require for enterprises data on the general operating account together with data on sales and the number of employees per activity (branch concept). In respect of local units, these general questionnaires record information on localization, investment, and wages and salaries, but there is no breakdown of the number of employees by activity. The simplified questionnaires, which are sent to small firms (between 1 and 49 employees), do not include either a general operating account or data on any local units.

2. Processing of data : micro-economic accounts

The data are processed with a view to obtaining more comprehensive localized information in respect of each local unit and even each activity within the local unit. The data processed are micro-economic data collected by means of the industrial survey and relating to enterprises, local units, branches of local units and branches of enterprises. The first stage involves estimating a general operating account for each local unit and then for each branch thereof. The second stage involves calculation of the various aggregates which make up the accounts. Finally, these results are corrected on the basis of the national accounts so as to complete the coverage of the three surveys used.

IV. - The market tertiary sector

The calculation of regional aggregates for the tertiary sector comes up against greater difficulties than in the case of industry. The first difficulty is a conceptual one, since many services activities are difficult to localize, either on account of the very nature of the service produced (transport) or owing to the way production is organized.

In some cases, the fact that there is no local unit for certain services rendered to enterprises throughout the territory means that the system for regionalizing industrial activities cannot be used. The second difficulty is a statistical one, in that the annual survey of services enterprises does not contain any information on local units. For local units of the distributive trades, the survey results can be broken down by region for the 1982 financial year only.

However, the maximum possible use is made of the sources available, namely the tax statistics and the annual declarations of earnings (DAS). A cross-classification between the file of DAS by local unit and that of tax declarations on industrial and commercial profits by enterprise (BIC) makes it possible to produce a micro-economic model of the regional breakdown of the tertiary activities of enterprises with more than 20 employees. Manual checks on the non-paired units improve the quality of the operation. However, the total number of units involved (200 000 local units) makes the operation very costly and difficult to control. In the case of enterprises with fewer than 20 employees and other tax schemes (lump-sum, non-commercial profits), the principle applied is that of the localization of the activity of the enterprises' registered office.

V. - The non-market tertiary sector

The value added of the non-market tertiary sector has several components, the main ones being the wages and salaries paid by this sector and the consumption of fixed capital by the General Government (S60) and Private non-profit institutions (S70) sub-sectors.

It should be noted firstly that wages and salaries account in all cases for the greater proportion of value added and secondly that consumption of fixed capital varies appreciably between the Local Government sub-sector (29% of value added) and the Central Government sub-sector (3.9%).

1. Central Government (S61) (APUC)

The Direction de la Fonction Publique and the INSEE carry out every two years an exhaustive analysis of the payslips of State employees. For most of the employees of the civilian ministries, precise individual data are available on geographical and administrative localization, earnings and their various components (salary, residence allowance, etc.), and social security contributions and benefits broken down by kind in the calendar year under review. As regards the remainder of the payslips of the civilian ministries, these data relate only to the numbers employed as at 31 December of the year under consideration (it is easy, however, to reconstitute annual earnings).

The data on the employees of the Ministry of Defence (approximately 400 000 employees) are processed directly by this Ministry and the regional tables are sent to the INSEE.

Since no localized data are available on consumption of fixed capital, the national figure is broken down in proportion to the total volume of wages and salaries.

2. Social Security funds (S63) (APUSS)

The wages and salaries paid by the Social Security funds are broken down on the basis of an analysis of the annual declarations of earnings (DAS). Unlike the APUC, the APUSS draw up a declaration of this kind for all their employees.

This sub-sector's consumption of fixed capital accounts for a very small proportion of its value added (4.6%). It is broken down among the regions in accordance with the method outlined above.

3. Local Government (S62) (APUL)

The value added (excluding amortization) of Local Government is broken down precisely by region in this sub-sector's regional accounts. These are compiled by the INSEE from the accounts, held centrally by the Direction de la Comptabilité Publique, of all local authorities (36 000 'communes', 96 'départements', 22 'établissements publics régionaux', 14 000 'syndicats de communes', 500 'régies', 7 200 'services à comptabilité distincte', etc.). The regional estimation of fixed capital consumption is based on a calculation of obsolescence of the capital. The regional series on the subsector's GFCF, beginning in 1962 and deflated by a national price index of the GFCF of General Government, used to estimate the amortization of local authorities' capital.

4. Private non-profit institutions (S70)

A small proportion of wages and salaries in the non-market tertiary sector is paid by trade unions, political parties, religious organizations, etc. The relevant figures are broken down by region on the basis of the annual declarations of earnings.

Similarly, the households institutional sector generates a non-market value added from its output of domestic services. This value added is broken down by region on the basis of the numbers employed in this activity.

VI. The agriculture sector

The agriculture sector (activity T01 in NAP 40) comprises three activities.

. Agriculture (activity 01 in NAP 100) (1)

This sub-sector accounts for the bulk of the gross value added of agriculture. This aggregate is estimated at regional and Département level by the Ministry of Agriculture statistical services (SCEES). A detailed account of the sources and methods used can be found in the paper given by Mr. Greiner. It may be said briefly that the compilation of these accounts is based on the collection, by the Département statisticians of the Ministry of Agriculture, of a considerable number of data (approximately 2 500) on areas under cultivation, livestock kept, yields, animal and crop production, prices, foodstuffs delivered to other branches or consumed by agricultural households themselves, etc. and, in less detail than production, the branch's intermediate consumption.

All these data can be used for estimates in terms of quantity, prices and value. Certain items of intermediate consumption are broken down by Département on the basis of an indicator which is considered to be highly correlated with the expenditure being analysed. The figures are then aligned, item by item, on the national accounts in order to meet the requirement of consistency with the latter.

. Forestry (activity 02 in NAP 100)

The Forestry Department of the Ministry of Agriculture compiles regional statistics on the value of timber felled and certain labour force data which can be used to estimate the regional value added of forestry.

. Fishing (activity 03 in NAP 100)

The Direction des Pêches Maritimes publishes for each port the value of fisheries production (fishing, oyster farming, shell-fish breeding, etc.), which is used as an indicator for the regional breakdown of national value added.

Aggregation of these three sub-sectors gives an estimate of the value added of the agriculture sector in the wide sense.

(1) The NAP 40 and NAP 100 are versions of the 1973 Nomenclature of Activities and Products, which is currently in force.

CONCLUSION

The application of the European System of Regional Accounts (ESA-REG) has not posed conceptual problems since the national and regional accountants adopted for their own work the 'Système Elargi de Comptabilité Nationale' (Extended System of National Accounts = SECN) in 1975 and 1978 respectively. Moreover, the NACE-CLIO RR17 classification of activities and products used at regional level in the ESA-REG does not pose any major problems of transcription from the French nomenclature NAP 40.

There are still, however, four types of difficulties regarding the use of the ESA-REG for level II regional accounts in France:

1) Of the 22 French regions, the smallest in terms of number of inhabitants and scale of economic activities, namely Corsica, cannot be treated in the same way as the others with the same sources, for obvious statistical reasons. It would therefore require a specific statistical treatment, and initial experiments to this end were carried out recently.

2) The market and non-market tertiary sectors, which make a predominant contribution to the GDP of certain regions, were covered expressly for the purposes of the ESA-REG without any pre-established tradition. At the present stage, it must be considered that these treatments are still of an experimental nature and definitely somewhat shaky.

3) As national requirements in terms of regional statistics are directed more towards structural studies, the periodicity of the production of regional aggregates (in particular annual ones) was not a major concern.

   The adaptation to the ESA-REG changes this state of affairs and has important consequences on the accuracy of the regional estimates. What is needed is a different concept of the methods devised for national purposes with a view to obtaining better control over the temporal continuity of the series of aggregates, so that the margins of uncertainty as regards the annual changes are of a significantly smaller order of magnitude.

4) Finally, a direct structural consequence of national policy on regional accounts is that use is made of the most detailed sources, which are also subject to the greatest delays.

From the point of view of the ESA-REG, of which annual accounts are a major feature, the choice of sources made prior to the adoption of the ESA-REG leads to relatively long production times. This calls into question to some extent the value of annual series, which call for shorter-term use.

That is why, in conclusion, the sources and methods currently used in the French system of regional accounts should be developed while at the same time observing the constraint of the limited resources which should be devoted to them.

I T A L Y

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SOURCES AND METHODS USED TO COMPILE REGIONAL ACCOUNTS IN ITALY

INTRODUCTION

1. Background

The ISTAT ranks as one of the EEC's most experienced national statistical institutes when it comes to calculating regional economic aggregates. As long ago as the 1950s, more or less when national accounts were becoming a field per se and a general reference framework for the evaluation of economic factors, the ISTAT compiled the first figures on income, consumption and investment in respect of the main regional groups, viz. North-West Italy, North-East Italy, Central Italy, Southern Italy and the islands.

The reason for subdividing the country into the four areas mentioned above was to provide a clear picture of the extent of economic development at the regional level, since the regions involved were characterized by deep-seated economic and social imbalances.

Economic accounts data were therefore compiled for these four areas and certain sectoral and functional analyses were carried out on the main aggregates relating to costs, e.g. gross product, consumption and investment. The first results related to the 1951-59 period and were published in 1960. They were based on the results of a number of specific surveys conducted by the ISTAT on households' consumption, turnover and value added.

Aggregates analysis gradually expanded in the 1960s in parallel with the progress made in the context of basic statistics and consequent upon research and studies aimed at achieving a better understanding of the concepts and methods to be used for the purposes of regional calculations. Significant contributions were also made by individual researchers - particularly Tagliacarne - who, working on the basis of indirect estimates, carried out a valuation in respect of smaller areas than the geographical areas considered by the ISTAT. In order to gain a more detailed knowledge of the economic aspects of specific local situations, the ISTAT further expanded the scope of its valuations of regional aggregates towards the end of the 1960-69 period. Long before the implementation of the Community system (ESA), and in addition to valuations of major groupings, estimates were carried out, in respect of each of the 20 regions, of the number of persons employed by professional category (employees and self-employed), the gross income of residents, the gross domestic product at factor cost and the national compensation of employees by economic sector; estimates were also made of gross marketable product, intermediate consumption and value added in agriculture, forestry and fishing. The valuations were subsequently extended to the other main economic aggregates (consumption, investment, changes in stocks, etc.) in order to arrive at an overall account of resources and uses for each individual regional economy.

Lastly, it should be noted that while the series on compensation of employees start at 1961 and those on agriculture go back as far as 1951, the series on the other main items in economic accounts (GDP, consumption, investment) start only at 1970. From that year on, and for each of the 20 Italian regions, valuations of the main aggregates provided for in the Community system (ESA/REG), obtained in a manner which is consistent with the corresponding estimates in national accounts, are therefore available.

2. Organization

The task of compiling regional economic accounts at the ISTAT was given to the same departments that compile national accounts. The purpose of this was to give to these regional accounts the benefits of the professional experience which the staff of these departments had acquired in the handling of the statistical sources used for carrying out estimates for the sectors for which they were responsible, and to ensure that the calculation criteria used were as homogeneous as possible.

In addition, in order to carry out at the same time the valuations of income, final consumption, investment, etc. for every part of the national territory, with a view to facilitating cross-checking of the estimates and observance of the principle of data additivity, it was agreed that the data should be centralized at the ISTAT National Accounts Department, which is directly responsible for collecting statistical material from the various internal and external sources, for aggregating processed data according to the system used (ESA) and for disseminating the results.

PART I

DESCRIPTION OF THE ITALIAN REGIONAL ACCOUNTING SYSTEM

1.1. General structure of the system (types of tables)

As in the case of national accounts, the ESA rules are also adopted for compiling regional accounts.

The statistical tables which are a regular feature concern the main financial aggregates based on macroeconomic patterns, and the regional distribution of persons employed by professional category (employees and self-employed). The aggregates considered are as follows:

- value added at factor cost and at market prices, broken down by branch;
- compensation of employees, broken down by branch;
- gross fixed capital formation broken down by producer branch and type of goods;
- final internal consumption of households, broken down by groups of goods and services;
- final consumption of resident households;
- taxes linked to production and imports, broken down by branch;
- current production subsidies, broken down by branch;
- gross disposable income of households;
- gross fixed capital formation by general government, broken down by function (defence, law and order, etc.);
- general government investment grants.

Although this is not part of Community requirements, it should be noted that internal consumption of households is broken down by the ISTAT into the following groups of goods and services:

Consumption of foodstuffs
Consumption of non-foodstuffs

- tobacco;
- clothing and footwear;
- dwellings, heating fuel and electricity;
- furniture, fittings, appliances, equipment and services for the household;
- health expenditure, etc.;
- transport and communications;
- leisure, entertainment, education and culture;
- other goods and services.

As for the aggregates needed for a better knowledge of the main functions carried out by the economic operators, it should be noted that the valuations relate to both transactions in goods and services and those involving distribution and redistribution of income.

More specifically, the following aggregates are currently being compiled for household accounts:

- gross operating surplus;
- compensation of employees;
- social benefits;
- property and entrepreneurial income;
- current taxes and income and wealth;
- actual and imputed social contributions;
- gross disposable income;
- final consumption broken down by function (foodstuffs and other).

The first estimates of these aggregates, made partly at the instigation of Eurostat, relate for the time being to 1979 and will be completed as soon as possible in order to arrive at the same standard as that achieved for the regional tables already available.

General government accounts break down as follows:

- current expenditure (local government), including in particular compensation of employees;
- production subsidies, social benefits and current transfers between general government agencies;
- capital expenditure (central and local government), including in particular gross fixed capital formation and investment grants (broken down by groups of functions);
- current income (local government), including in particular taxes linked to production and imports, current taxes on income and wealth, and current transfers between general government agencies;
- capital income (local government), including in particular investment grants;
- sales of goods and services and own-account production at the regional level (local government).

The aforementioned aggregates are still processed on an experimental basis only, but the relevant results will be incorporated as soon as possible into the regional accounts published by the ISTAT.

1.2. Statistical units

As already stated in the previous paragraph, the ISTAT complies on the whole with the ESA rules, not only as regards the breakdown of accounts, but also as regards classification and defining the concepts of the various aggregates.

For the purposes of grouping basic economic units, the regional accounts system - just like the national one - uses, depending on the type of transaction, two basic types of statistical units, viz. units of homogeneous production (works, workshop, shop, etc.) and institutional units (enterprises, households, etc.).

As for the regional breakdown of the activity carried out by units of homogeneous production, the problem is where to classify the figures for certain basic units which operate in one specific area but depend on a decision-making centre situated elsewhere.

This makes it necessary to subdivide the statistical units into three categories, namely enterprises, functional units and local units.

The enterprise is a legally-defined entity which has been formed for the production or sale of goods or the supplying of services, and carries out its activity enjoying the maximum autonomy as regards decision making and account-keeping.

The functional unit (or kind-of-activity unit) is considered as a part of an enterprise active in a given economic sector, with a view to correctly calculating the contribution made by the individual economic activities to the overall production of goods and services. Enterprises which carry out their activity in one or more of the branches listed in the ESA are therefore asked to compile a separate questionnaire for each of the economic activities actually pursued by the enterprise.

The local unit corresponds to the production unit situated in a geographically separate place in which it pursues one or more of the economic activities carried out by the enterprise.

In order to facilitate the estimation of regional aggregates, enterprises are in turn broken down into 'single-location' enterprises when they consist of only one local unit which corresponds to the enterprise's registered office and 'multi-location' enterprises when they consist of a number of local units, the first of which is the registered office to which the others are subordinate and may be situated in the same geographical area or in other areas. For both single-location and multi-location enterprises which pursue their activities in the same region, the relevant figures are assigned en bloc to the region in which the enterprise has its registered office.

In the case of enterprises with branches in a number of different regions, there is the problem of breaking down the overall aggregates (value added etc.) among the basic units situated in different regions. The criterion used by the ISTAT in such cases is to divide value added into parts which are proportional to the contribution made in each region by the production units it accommodates; as a first approximation, this contribution is represented by the wages and salaries paid for work in the individual local units of which the enterprise consists.

A similar problem arises with 'itinerant' enterprises, e.g. those which pursue a transport activity and which are continually on the move from one region to another in Italy.

1.3. Nomenclatures

The classifications are the same, albeit aggregated to some extent, as those adopted for the purposes of national accounts. The basic classification used for most of the aggregates (value added, number of wage and salary earners, compensation of employees, etc.) is the NACE, which is used for grouping, at different levels, (groups, classes and branches) the production units considered.

The most detailed level used for national accounts is the 44-branch nomenclature which serves as the basis for the input/output tables. Compared with this, regional accounts feature a further aggregation of economic activities, classifying all operational units into 17 branches by merging one or more of the national accounts branches.

1.4. Definitions

The previous paragraphs gave a rundown of the aggregates for which regional figures are calculated, highlighting the main characteristics considered. It has already been mentioned that, for the purposes of compiling the accounts, the rules and definitions of the ESA are generally used; from time to time certain adjustments, albeit of little significance in the general context of the accounts, may reflect the institutional characteristics of the country.

1.5. Description of the sources used

The statistical sources used for the purposes of national accounts originate largely in the institutional activity of the ISTAT which, as is known, collects all the information needed to compile Italy's national accounts. As a general rule, the ISTAT's tasks at the national level also include the compilation of territorial accounts which are based on the following statistical sources:

1) statistical surveys on employment and use of statistics on the number of persons registered with social security organizations;

2) statistical surveys on employment, value added, investment, wages and salaries and other economic aggregates, covering enterprises with 20 or more employees in non-agricultural sectors;

3) sample surveys on household budgets conducted by the ISTAT to calculate overall consumption, and special surveys of specific groups of goods and services conducted by private research centres;

4) statistical surveys of the balance sheets of general government agencies and state-financed enterprises;

5) administrative surveys conducted by public and private organizations as part of their management structure;

6) income declarations by natural persons for the purposes of direct taxation (IRPEF), classified according to the various types of source;

7) use of indirect indicators when no specific surveys are available.

1.6. Sources, indicators, statistical adjustments

Valuations of regional economic accounts, in which the ISTAT's experience dates back over ten years, are not the results of fragmentary and one-off processing exercises, but are an integral part of national accounts. For the most part, they are compiled by assigning to each region a portion of the corresponding data already compiled nationally; in certain cases, the same valuation criteria make it possible to derive directly the regional data from which the corresponding values for the country as a whole can subsequently be obtained by addition. From an organizational standpoint, the ISTAT's approach to regional accounts data is predominantly 'centralized', although it does not at the same time neglect in these calculations an approach of the 'decentralized' type. As a result of the centralization principle, whenever adjustments are made at the national level the corresponding adjustments are automatically made in the regional figures by mainly empirical means which are best suited to the characteristics of the methods involved.

When insufficient statistical information is available, it is impossible for the ISTAT to carry out a regional breakdown of the figures derived from national accounts, so the valuations are carried out by indirect means or by means of appropriate complementary data obtained from the surveys available. This means that the reliability of the estimates, as regards certain of the major economic accounts aggregates, decreases as the region considered diminishes in size.

1.7. Reliability

Only a few of the regional aggregates can be valued with a sufficiently high degree of approximation on the basis of the statistical sources currently available. For other aggregates estimates based on occasional direct surveys or on indirect data not always capable of providing an accurate picture of the scale of the phenomena observed are used. Nevertheless, the results of regional economic accounts are on the whole fairly reliable, although the degree of reliability is not the same for the different characteristics considered. In this connection, a list is given below, in decreasing order of reliability, of the representativeness of certain regional aggregates:

1) employment;
2) compensation of employees;
3) final consumption of households;
4) added value of the main and secondary activities;
5) general government expenditure;
6) other aggregates.

1.8. Time required for processing and making data available

The preliminary processing runs for national economic accounts are carried out by the end of the month of March following the reference year, which means that they are more or less contemporary with the period considered.

At regional level, on the other hand, the results become available later on. Taking for example the year t, the processing is completed by the end of the month of December of year t + 1 for the major geographical subdivisions (Centre-North; Southern Italy) and by the end of the month of December of year t + 2 for each of the 20 regions.

PART TWO

METHOD USED TO COMPILE REGIONAL ACCOUNTS FOR ESA PURPOSES

II.1 - ACCOUNTS BY BRANCH

1.1. Compensation of employees

At regional level, compensation of employees is calculated only in overall terms (gross wages and salaries and social contributions) as the cost borne by enterprises in respect of their employees, the only exception being the agricultural sector, for which it is possible to isolate gross wages and salaries.

The base year used is 1970, for which a detailed valuation based on the combined use of all the relevant information then in existence was carried out. Once the basic structure has been decided, valuations for subsequent years can be made by using either overall values derived from available sources or a number of indicators relating to certain aspects of the factor being studied.

As has been pointed out, compensation of employees in agriculture consists of the sum of gross wages and salaries and social contributions analysed separately for each professional category (managers, employees, salaried staff, occasional labour).

For the industrial sector, this calculation is made by adding the labour costs determined by means of the annual survey of value added of enterprises employing 20 or more persons, and the expenditure incurred by enterprises employing a maximum of 19 persons, this figure being estimated on the basis of criteria which are similar to those used at the national level.

Compensation of employees in the distributive trades, hotels and catering is assessed by means of calculation criteria which are fairly similar to those used for industry.

In the case of the transport sector, the figure is calculated on the basis of a breakdown into land, sea and air transport. Data on land transport are further subdivided into rail transport and conventional road transport. The relevant data are derived from the balance sheets of the various bodies concerned (Italian state railways, utilities companies run by the local authorities, etc.) and from the annual survey of the value added of enterprises employing 20 or more persons, any gaps being filled by means of appropriate estimates.

Data for the communications sector are derived from the balance sheets of the Ministry of Posts and Telecommunications and firms engaged in activities of the same type. Data for the banking and insurance sectors supplied by surveys of private banks and insurance enterprises conducted by the Bank of Italy in conjunction with the ISTAT are processed to obtain data on wages and salaries paid in the different regions.

Compensation of employees in the market services sector is generally calculated by means of comparatively specific indicators used to update the estimate carried out in respect of 1970.

Labour costs in the entertainment sector are calculated directly from the balance sheets of the relevant enterprises (RAI - Italian Broadcasting Corporation etc.). Lastly, the relevant figure for the general government sector is calculated by directly processing the data obtained from the central and local agencies of the state (ministries, the regional governments, social security organizations, etc.).

1.2. Gross value added

The estimates of value added are generally based on the "real" method which is used to determine the value of production, the relevant costs (whenever possible) and, consequently, the value added for the individual production units subdivided into branches on the basis of the NACE nomenclature. The value added of the individual branches is estimated by methods which are not always uniform, since account has to be taken of the fact that the statistical sources available are not always the same. Most of the aggregates for the agricultural sector are calculated directly, i.e. on the basis of data specifically recorded for the different regions. The sum of the regional data can thus be used subsequently to work out the corresponding national aggregates in other words, the opposite procedure to that used for the majority of the other sectors.

As regards the calculation methods, the sources available (both on the quantities harvested and on the ex-farm prices of products) make it possible to carry out an estimate on the basis of the assumption that only one regional enterprise exists and accounts for all production achieved.

A breakdown, i.e. switching from data for the whole country to data for individual regions, is used for the industrial sector. There are, in the main, two methods. The first relates to industrial activities in the strict sense of the word and is based on the results obtained from the survey of the economic accounts of enterprises employing 20 or more persons. The second relates to the building industry and involves quantifying the work carried out in the individual areas.

The results of the survey mentioned several times already of enterprises employing 20 or more persons are used for the energy products and industrial processing sectors. For enterprises with fewer than 20 employees the estimate is, however, carried out using the results of certain occasional surveys conducted by the ISTAT and other research centres, and interpolating the per capita values added of the individual branches recorded for the years not covered by the surveys. Value added in the building sector is calculated by subtracting from a regional estimate of production value (broken down into residential buildings, non-residental buildings and public works) the corresponding intermediate consumption calculated indirectly.

Production data are for the most part derived from administrative surveys of residential buildings and public works conducted annually by the ISTAT. For the distributive trades, hotels and catering, the calculation is carried out on a separate basis for the distributive trades on the one hand and for hotels and catering on the other.

As is done at the national level, the flows relating to marketed goods are considered first (goods at the final consumption stage, goods considered at capital investment and so on), after which the proportion of value added in the overall "turnover" thus established is estimated. Virtually the same procedure is used to obtain the value added in catering, for which the parameters of regional distribution are derived from the corresponding item of households consumption. In the case of transport and communications, the same sources as were used to assess compensation of employees are used, i.e. the balance sheets of the various public and private agencies and the results of surveys on the economic accounts of enterprises employing 20 or more persons. The data on enterprises not covered by these inquiries are obtained by extrapolating the results of certain pilot surveys conducted on an occasional basis.

In view of the nature of the services provided by banks, viz. mainly financial operations, data on value added in banking for the whole country are broken down by region on the basis of the corresponding data on deposits and uses recorded by the Bank of Italy.

As for the value added of the insurance sector, the national data are subdivided into parts which are proportional to the total premiums received by the insurance enterprises in the individual regions, as shown by the special survey conducted by the Ministry of Industry and Trade.

In the case of letting of buildings, the basic premise is that the corresponding services are almost always taken up by households. The regional breakdown of national value added is therefore carried out taking account of the results of the sample surveys of households' consumption conducted annually by the ISTAT. Market services have to be subdivided into those provided to enterprises and those provided to households. In the former case, the breakdown of national data by type of service (legal, technical, etc.) is based on certain indicators, e.g. number of legal, bankruptcy and similar proceedings recorded regularly by the ISTAT. In the latter case (health, eduction, recreation, etc.) the national data are broken down on the basis of the corresponding expenditure borne by households in the geographical areas considered.

Value added at the regional level for non-market services, represented mainly by general government activities, is calculated indirectly, distinction being drawn between the three sectors of central government, local government and social security organizations, in which the value added is realized. It is allocated in proportion to the staff costs paid in the individual regions, bearing in mind that the expenditure in question represents virtually the total value added of general government.

1.3. Taxes linked to production and production subsidies

Value added "at market prices" is obtained by adding to the value added "at factor cost" the total indirect taxes less current subsidies paid by general government to enterprises. The reason for this is that the production and the value added of the different economic sectors are calculated using producer prices which by definition exclude all taxes linked to the products or the activities of the enterprises concerned.

At the regional level, taxes are calculated by breaking down geographically, and for each of the categories of taxes, the total recorded at the place where they are actually paid. Calculation at the regional level of current subsidies paid by general government is carried out for each economic sector on the basis of criteria which differ according to the nature of the subsidies themselves and the statistical sources available. In certain cases, the breakdown is based on regional production as established by certain statistics (e.g. agriculture), while in others the relevant proportions are allocated on the basis of value added at the regional level (e.g. almost all non-agricultural sectors).

1.4. Gross fixed capital formation

Generally speaking, at the regional level this aggregate is calculated by using appropriate indicators to break down the national values which are in turn appropriately grouped both by type of goods (branch of origin) and by user sector (branch of ownership).

In the agricultural sector, allocation of part of total capital formation to individual regions is based on the results of direct surveys conducted mainly by the ISTAT, backed up by inquiries by other public bodies.

Indicators better suited to specific cases are used to establish the geographical distribution for certain types of goods for which data cannot be collected directly.

Regional breakdown of investment in the industrial sector is based mainly on the results of the annual survey of the economic accounts of enterprises employing 20 or more persons, appropriately supplemented by means of criteria similar to those followed at the national level.

Different criteria are used to establish a breakdown of investment for the market services sector. Certain of these criteria are connected with factors which are not always reliable; while for others the estimate is based on surveys, sometimes part surveys, of the means of production used in the different sectors (e.g. the transport and communications sector). There are no particular problems as regards investment in non-market services, which mainly comprise public works for the benefit of the community at large, as a sufficiently reliable regional breakdown is available through the specific surveys conducted by the ISTAT.

1.5. Wage and salary earners

The base year for this calculation at the regional level is 1971, for which data were available inter alia on the working population from the population census.

Annual updating of the data for the agricultural sector is mainly on the results of the sample surveys of the labour force conducted quarterly by the ISTAT.

The number of wage and salary earners in industry is established by adding to those recorded by the survey of the value of enterprises employing 20 or more persons, the category not covered by that survey, which is in turn estimated using indicators derived from ISTAT and social security sources.

For the distributive trades, hotels and catering sector, the regional calculation is, generally speaking, carried out in a manner similar to that used for industry. The procedure used for the transport and communications sector is modelled on that used to estimate compensation of employees, as described in 1.1. of this chapter. On the basis of available sources, viz. the survey of private banks and insurance enterprises conducted by the Bank of Italy in conjunction with the ISTAT, the data collected at the national level can also be broken down into regional figures for the banking and insurance sector.

For the market services sector the regional valuations are based on a series of statistical data sometimes collected directly (private education, private health services, etc.) and sometimes obtained by means of appropriate indicators.

Lastly, the relevant breakdown in the non-market services sector is based on the accounting figures of the social security organizations as regards employees not covered by the public sector. For this latter sector, on the other hand, the regional breakdown is based directly on data supplied by the various organizations concerned (ministries, regional governments, etc.).

1.6. Self-employed persons

The number of self-employed persons is generally calculated by means of the same sources and the same methods used in respect of wage and salary earners. It should be noted, however that estimates are made for certain branches, using indirect factors exclusively. The starting point for the relevant figures in the agricultural sector is the result of the labour force sample survey, care being taken to include only a fraction of those who work on an occasional or a non-continuous basis in agriculture.

Obtaining the relevant figures in respect of self-employed persons in the industrial sector is somewhat more difficult. Use is therefore made primarily of data on the number of workers employed, as obtained from the survey of value added of enterprises in the smaller size-bracket (20-49 employees). For those size brackets not covered by the statistical survey, the number of self-employed workers by branch and by region is estimated, taking account of the annual variations in the overall number of wage and salary earners recorded.

In the distributive trades, hotels and catering sector, the estimate is carried out by updating the 1970 data on the basis of changes both in the number of commercial and similar premises and in the number of hotel and lodging establishments, this latter figure being the total number of beds available.

For the transport and banking/insurance sectors, the relevant figures are calculated by updating the 1970 data on the basis of changes in the number of self-employed persons recorded by the labour force surveys.

Lastly, estimates for the market services sector are generally carried out using the same methods as for calculating wage and salary earners. Whenever available sources are insufficient, updating is carried out by applying to the most recent data available the changes recorded in the number of wage and salary earners in the same sector.

II.2 - HOUSEHOLD ACCOUNTS

2.1. Gross disposable income

The disposable income of households is calculated annually by the ISTAT at the national level in accordance with the accounts for institutional sectors laid down by the ESA. The data needed for this estimate are derived from the results of various surveys on the formation, distribution and redistribution of income in the enterprises and general government sectors; these results are in turn supplemented by information from indirect sources and by data on the monetary flows derived from the account of Italy's transactions with the rest of the world.

It should be noted for the purposes of regional valuation of household accounts that the statistical surveys used in this context at national level in many cases provide the relevant data directly. In all other cases, on the other hand, specific estimates are necessary; these are based on indirect data and on ratios of proportionality derived from observation of elementary series in some way connected with the aggregates being calculated.

Lastly, attention is drawn to the fact that these regional accounts, as already mentioned in the first part of this report, have not yet become a fixture in the regional accounts statistics in Italy. Nevertheless, an experimental processing run is already under way and the general criteria involved will be outlined in this chapter.

2.2. Gross operating surplus

For the individual producer branches, regional accounts include data on value added at factor cost as well as on compensation of employees. The difference between these two aggregates gives the gross operating surplus of enterprises, including sole proprietorships and partnerships. The national sectoral accounts also show that a substantial proportion of the gross operating surplus for certain branches is accounted for by households in the broad sense of the word, including sole proprietorships and partnerships. These branches relate to agriculture, the distributive trades, letting of buildings, certain market services and certain - a proportion which varies according to branch - industrial activities and transport activities, a feature of which is the large number of enterprises run on an individual and partnership basis.

The estimate can thus be made by allocating geographically the proportion of gross operating surplus attributable to households in the branches listed above on the basis of regional data relating to the operating surplus of all production units (corporate and quasi-corporate enterprises, households, etc.).

2.3. Compensation of employees

Compensation of employees in households resident in the various regions is calculated by adding net compensation from abroad and from the other regions to internal compensation of employees. Net compensation from abroad can be broken down by region using a geographical distribution by country of origin of the data on emigrants' remittances. These data are provided by the Bank of Italy. In the case of inter-regional exchanges of services by workers, this calculation can be made according to various criteria:

1) by comparing the number of employed persons present and resident respectively in each region, on the basis of labour force sample surveys, and assuming that a proportion of the compensation paid out in the region in which the worker carries out his activity is transferred to his region of residence;

2) by assuming that the majority of income transfers by workers temporarily outside their region of origin are made via the postal service. An estimate can thus be made from postal administration data on the values of money orders paid and cashed in the region of origin and the region of destination respectively.

2.4. Social benefits

At the regional level, the ISTAT calculates social benefits by means of special surveys covering the balance sheets of the organizations active in this sector. That portion not covered by the aforementioned surveys, i.e. the part relating to severance payments and benefits paid out by companies, can be estimated by breaking down the overall figure for Italy on the basis of data on payments made by the enterprises constituting the economic sectors in which these legal forms are predominant.

Family allowances paid to government employees and employees of state-run companies can be estimated on the basis of the geographical distribution of these employees. Pensions paid out by joint insurance schemes can be assigned to the regions concerned in proportion to the premiums paid in those regions.

2.5. Property and entrepreneurial income

Interest on sight deposits and savings accounts and on postal deposits and interest-bearing securities can be broken down by region on the basis of the average value of the deposits involved.

Interest on bills and on short- and long-term bonds can be calculated by region as the difference between that paid to the economy as a whole and that cashed by internal sectors other than households. The former can be derived from the banking surveys conducted by the treasury department, inter alia for the public sector, while the latter could be estimated according to the value of the portfolios shown in the balance sheets of the corresponding institutional units.

Imputed interest accruing to insurance policy holders could be broken down into parts which are proportional to the premiums paid on life insurance. The remaining household income from property can be allocated by region on the basis of statistics relating to tax declarations (Ministry of Finance). Income from land can be broken down on the basis of data on gross agricultural product or income from estate as recorded by the relevant fiscal records.

Lastly, income from intangible assets can be broken down by region in proportion to the gross product of the branches of the industrial sector which by the nature of their activities make greatest use of patent facilities.

2.6. Current taxes on income and wealth

Taxes on the income of natural persons and local taxes on income are recorded on a regional basis by the Ministry of Finance according to the place of residence of the income earners, based on documentation compiled from tax declarations.

Substitutive taxes on interest are deducted at source and form part of bank interest paid; it is therefore possible to make a regional breakdown based on that of the corresponding interest. Payments for state-subsidized dwellings payable by employees can be broken down regionally on the basis of information on compensation of employees available at this level.

2.7. Actual and imputed social contributions

Breaking down social contributions geographically is very difficult, particularly because of the lack of appropriate surveys.

Regional estimates therefore have to be carried out not only for imputed contributions (redundancy and unemployment funds) payable by enterprises, but also for actual contributions paid by both employers and employees.

Imputed contributions can be broken down geographically on the basis of compensation of employees paid mainly by medium sized and large industrial enterprises and by banking and insurance enterprises.

Actual contributions payable by employers can be broken down by branch and by region on the basis of the labour cost net of works' redundancy and unemployment funds. On the other hand, contributions payable by employees can be allocated geographically in proportion to gross wages and salaries.

Social contributions paid by self-employed persons, classified according to the main activities (agricultural workers, tradesmen, craftsmen, liberal professions), can be broken down regionally in proportion to the number of self-employed recorded in the corresponding branches.

2.8. Final consumption by function

Data on the final consumption of households are, as has already been mentioned, regularly calculated on a regional basis by the ISTAT by means of a fairly comprehensive analysis, even though this analysis is not one of the ESA/REG requirements.

The estimate is made for each of the functions which go to make up the final internal consumption aggregate. A valuation is also made of regional expenditure by non-residents (Italians and foreign nationals) and that incurred by residents outside their own region.

The net expenditure of non-residents can thus be established for each region, making it possible subsequently to calculate "regional" consumption from the value of final "internal" consumption.

The geographical breakdown of internal consumption by function is carried out mainly on the basis of the results of the statistical surveys conducted by the ISTAT and other organizations.

A glance at the procedures used for the main categories of expenditure shows that the lynchpin of the estimates is the sample survey of household budgets conducted on a regular basis by the ISTAT. However, the data obtained from the above mentioned survey are supplemented by a wide range of statistical information for the purpose of calculating non-food consumption.

Consumption of "tobacco" is measured from statistics on deliveries to retailers recorded by surveys conducted by the state monopolies. The main source of data for the category "heating fuel and electricity" for domestic use in the supply companies' own statistics, collected by the Italian Central Electricity Generating Board (ENEL), recording the quantities consumed by the various user categories.

For the estimates of expenditure on 'solid and liquid fuels and gas', use is made of the statistics of the Ministry of Industry on energy sources and those of the National Hydrocarbons Board (ENI) on the distribution of gas. Valuation of expenditure on purchases of means of transport for the 'transport' category is based on vehicle registration statistics, whereas for other services, statistics on income from travellers and luggage-handling supplied by the organizations operating in the sector are used.

Certain groups of non-food consumption (telephone, entertainment, lotteries, etc.) are broken down geographically on the basis of information on the activities of the various organizations providing the services in question.

In the 'other goods and services' category which completes the set of functions adopted for classifying internal household expenditure, particular importance is attached to expenditure in hotels and catering establishments, as recorded by the surveys on household budgets, periodic surveys on holidays taken by Italian nationals and regular statistics on occupation of hotels and other lodging establishments.

For a broader assessment of the phenomenon being considered, the 'consumer population' is calculated by region. In combination with other information available, the population generating 'non-household' consumption is also calculated.

As can be expected, the regional 'non-household' population comprises:

1) residents of a given region who generate non-household consumption in the same region;
2) residents from other regions temporarily present in the region;
3) foreign nationals temporarily present in the region.

The population referred to in 1) generally spend on food and drink away from home; that referred to in 2) on accommodation in hotels and on catering facilities, while that referred to in 3) provides the basis for calculating expenditure by foreign nationals temporarily present.

As mentioned at the beginning of the paragraph, an estimate is also made of net expenditure by non-residents, for which four separate categories of consumer population are calculated, giving rise to the regional tourist balance as follows:

1) residents having stayed in other regions;
2) non-resident Italians having stayed in that particular region;
3) residents having stayed abroad;
4) foreign nationals having stayed in the region.

The population mentioned in 1) and 2) account for consumption by Italian tourists in their own country, the relevant two figures giving the national total. The populations referred to in 3) and 4) account for consumption abroad by Italian tourists and that in Italy by foreign tourists; the value of the latter's consumption is known at the national level. Regional valuations are carried out by breaking down the national expenditure according to the populations mentioned above.

II.3 - GENERAL GOVERNMENT ACCOUNTS

Introduction

The need for coverage, albeit not comprehensive, of the activities pursued by general government in the regions has led to:

1) the compilation of an economic account for the "local government" sub-sector, in a very succinct form highlighting only a few of the major economic transactions;
2) an analysis of investment by the sub-sector itself according to the factors or functions involved (education, economy, housing, etc.). This is backed up by an analysis of "investment subsidies" paid to the regional economy;
3) lastly, in order to consolidate information on general government activity in the field of investment and subsidies to fixed capital formation, a similar exercise is performed, this time on the basis of the "central government" sub-sector as the paying entity.

The ISTAT uses surveys conducted regularly and annually on the balance sheets of the bodies and agencies covered for the regional breakdown of the aggregates relating to local government.

3.1. Current expenditure (by local government)

a) Compensation of employees

The models for the surveys mentioned above can be used to calculate compensation of employees regionally by adding the following elements:

a. gross wages and salaries, inclusive of the 13th-month payment, cost of living allowance, etc.;
b. payments in kind made to employees;
c. (actual) social contributions payable by the agencies concerned;
d. pensions paid by local government to retired staff.

These data are subsequently checked for consistency on the basis of comparative criteria, e.g. payments per employee recorded over a period of time (comparison between the levels per employee in the same region) and in space (examination of the range of payments made in different regions in relation to the average).

b) Production subsidies

The most important paying entities as far as production subsidies are concerned are:

1) municipal authorities which are statutorily required to clear any deficit incurred by the utilities companies they run. These subsidies are broken down regionally according to the ISTAT surveys on the balance sheets of municipal authorities;

2) regional authorities which pay out large sums, particularly grants for interest relief to local enterprises. Sums earmarked for production subsidies are recorded directly from the balance sheets of the regional authorities.

Enterprises also receive payments from local bodies and agencies other than municipal and regional authorities. The amounts involved are fairly small, but are recorded through the survey models.

c) Social benefits

Social benefits paid out by local authorities include:

1) transfers to households, e.g. allowances to enable the poor to buy medicines, grants to the handicapped, grants to illegitimate children, etc.;

2) benefits corresponding to imputed social contributions.

Benefits paid out from the social security schemes which are part of the social security sub-sector are thus not covered by this definition. Transfers of the first type can usually be determined from the survey models. The benefits corresponding to imputed social contributions are mainly supplementary pensions paid by the various bodies and agencies concerned directly to their former employees through channels other than the conventional social security ones. As has already been pointed out with reference to compensation of employees, these data are specified in the survey models.

d) Transfers to general government

Current transfers by local authorities to public bodies include the flows to central government and social security organizations.

The accounts are compiled on the basis of the local authorities' consolidated account, which in a way makes the calculations in question easier, for all that has to be done as regards the expenditure of each paying entitity (regional governments, provincial governments, municipal authorities, etc.) is to note the "outgoing" transfers to the State, other central public authorities and the social security organizations. The survey models are in fact designed in such a way as to highlight these items.

3.2. Capital Expenditure (central and local government)

a) Investments by groups of functions

Estimating investments by central government is based on a variety of statistical information which includes:

a. the data of the Cassa per il Mezzogiorno, which is the most important entity as regards investment expenditure. As well as being available on a regional level, these data are also very detailed from the standpoint of analysis of the sectors which benefit from the fund;

b. the data of the ANAS, whose investments in terms of roadworks are provided directly by the organization;

c. central government data, which are fairly satisfactory from the point of view of the breakdown by intervention sector, although they are not available at the regional level. This breakdown is therefore based on the results of surveys on public works conducted by the ISTAT, which give, by region and by category of works, the investment figure in terms of works partially or wholly financed by the State. Local government investment broken down by region and sector of intervention is calculated from the results of the ISTAT surveys (often referred to in this text) of the balance sheets of the agencies and bodies concerned. These surveys, as already stated, can be used for functional analyses of investment and investment subsidies by intervention sector in a manner which complies almost fully with the ESA/REG requirements.

b) Investment subsidies by groups of function

Capital subsidies by central government are paid out to other public agencies (local government and social security organizations) and to outside sectors such as enterprises, households and the rest of the world.

Subsidies, mainly state subsidies, paid to local government are broken down by region on the basis of information obtained from the ISTAT surveys i.e. from the recipient public organizations. The survey models for local organizations in fact make separate provision in capital revenue for state subsidies and other public subsidies. This goes for virtually all local government bodies and agencies apart from local authorities which are the subject of alternative information originating in specific research carried out by the Ministry for the Budget.

State subsidies to finance investment in sectors outside general government are broken down by region on the basis of their inherent characteristics.

Subsidies to the rest of the world are thus imputed to the Latium region, subsidies to enterprises (mainly government transfers to the utilities and public service companies run by municipal authorities) are broken down on the basis of information from the recipient organizations themselves or, in other cases, according to parameters linked in some way to the subsidies to be broken down regionally. Certain other subsidies are automatically broken down by region because of their nature and characteristics (e.g. aid to earthquake victims).

As for capital subsidies paid by local government, as has already been seen, the relevant data are obtained directly through ISTAT surveys.

3.3. Current Income (local government)

A major part of the current income of the "local government" sub-sector is accounted for by taxation and current transfers from public bodies.

On the taxation side, the regional breakdown relates almost exclusively to the balance sheets of the regional governments and municipal authorities. However, in view of the aggregation required by the ESA/REG, there are no particular problems involved in regionalizing these taxes, as the relevant data are easily obtained from the balance sheets of the regional governments and the ISTAT surveys. As regards current transfers from public bodies and agencies, a distinction has to be drawn between:

a) transfers received by the regional governments from the state. The geographical breakdown of these transfers is based on data published by the Ministry for the Budget mentioned above;

b) state transfers to other local government agencies and bodies. The regional breakdown of these current transfers is more complex because of the discrepancies in the accounting data recorded by the paying entity (the state) and the recipient entity (local authorities). The data are in this case made to tally with the figures recorded by the ISTAT surveys.

   Data relating to active transfers from sources other than the state are broken down by region on the basis of information provided by the surveys.

3.4. Capital Income (local authorities)

The bulk of the capital income of local government is accounted for by investment subsidies paid out by central government.

As the two flows necessarily have to tally i.e. the amounts recorded in the accounts on the debit side by central government must be the exact equivalent of the amounts recorded on the credit side by the local authorities, the underlying methodological problems have already been dealt with in 3.2. above.

3.5. Sales of Goods and Services and own-account production at the Regional Level (local government)

The compilation of regional data is in this case considered to be of secondary importance, and the problem has therefore not been studied. The subject concerned is of little importance in the context of the activities carried out by local government.

NETHERLANDS

Centraal Bureau voor de Statistiek
Voorburg

REGIONAL ACCOUNTS IN THE NETHERLANDS

(Sources and methods)

0. Introduction

0.1 History

Towards the end of the 40s the Statistical office of the Municipality of Amsterdam came upon the idea that it would be possible to draw up annual accounts for an open economic region such as the city of Amsterdam, the results of which would be comparable with the results of the national accounts drawn up by the Netherlands Statistical office (Nederlands Centraal Bureau voor de Statistiek (CBS)) if identical definitions and classifications were used. A regional input-output table drawing, broadly speaking, on the same sources as the national input-output table could be used as the basis for the system. The Amsterdam Statistical office therefore contacted the CBS which gave it access to its material, particularly on production structure. However, a number of simplifications between the city and the rest of the Netherlands involving goods, services and incomes. Only the balances resulting from these transactions between the city of Amsterdam and the rest of the Netherlands were registered. The input-output table for the Municipality of Amsterdam for 1948, which was drawn up in the way described, was taken as the basis for the municipal accounts system for that year. The structure of the system, which includes accounts relating to production incomes (and distribution of incomes); consumption and capital and financial transactions, is also virtually identical to that used for the national accounts [1].

A few years later, Prof. Rijken van Olst, lecturer at the Rijksuniversiteit, Groningen, devised a system of accounts for the province of Groningen which was also similar to the national system. As in the case of the 'Amsterdam' method, this system also took a regional input-output table as its model. In this case, however, the table included full details of goods and services transactions between the province of Groningen and the rest of the Netherlands, i.e. the territory of the ten remaining provinces.

On the other hand, the Groningen accounts system was more limited in scope than the Amsterdam one [2].

Further details of the 'Amsterdam' and 'Groningen' methods are given in Annex 1, which also outlines a third alternative involving three or more regions with goods and services transactions in and between the regions being indicated separately.

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[1] P. de Wolff and P.E. Venekamp : Stedelijke jaarekeningen van Amsterdam (On a system of regional social accounts for the city of Amsterdam), Institut International de Statistique, The Hague, 1957.

[2] Dr. H. Rijken van Olst : De provincie Groningen en overig Nederland (The province of Groningen and the rest of the Netherlands), Groningen 1958.

0.2 Organization

The centralized compilation of predominantly national data by the CBS made it possible to produce a quantitative description of the economic process in the form of national accounts. This requires the availability of basic statistics which may be divided up into the following categories :

a) economic statistics relating to businesses and institutions;
b) social statistics, generally speaking relating to persons and/or households.

These basic statistics can in turn be divided up into two groups:

a) statistics based on exhaustive surveys (e.g. of larger undertakings) or censuses
b) those based on random samples (e.g. household surveys).

Originally, all the various types of basic statistics were drawn up for their own specific purpose. However, the increasing need to consider the interrelationship between the various kinds of data prompted CBS to coordinate its work to a substantial extent. This coordination led to:

- classification of economic activities;
- standard nomenclature for groups of goods;
- as identical as possible a definition of statistical variables;
- establishment and maintenance of coherent populations of respondents.

It has proved necessary, particularly when producing national input-output tables and accounts, to integrate the statistical data at as low a level as possible. This integration involves comparison of the results of the basic statistics at an early stage. In this way, the process of incorporating (predominantly) integrated data into the above mentioned tables and accounts is facilitated. The adjustments for the purposes of the SNA [3] and ESA [4] are an extension of this process.

In drawing up the regional input-output tables and accounts, it therefore appeared obvious to use the (partly) coordinated and integrated national level basic statistics. It goes without saying that in the first instance not all the various elements contained in the national accounts system were considered for regionalization, partly out of considerations of priority and appropriateness and partly in the interests of gradual phased introduction of regional breakdowns into the national basic statistics. It should be added that there would not appear to be any point in giving a regional dimension to certain data contained in the basic statistics for example, financial data on multi-regional undertakings.

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3 A System of National Accounts, Studies in Methods, Series F No 2 Rev.3, United Nations, New York 1968.

4 European System of Integrated Economic Accounts, E.S.A. a second edition, Statistical Office of the European Communities, Luxembourg 1979.

Finally, attention is drawn to the fact that the CBS does not have a monopoly on the compilation of regional statistics. One of the tasks of an Advisory Committee (Commissie van Advies) set up in 1981 is to coordinate the wide range of regional data which are also compiled by institutions other than the CBS and in many cases published.

1. Detailed description of the entire national system of regional accounts

1.1 General outline (specific tables)

When drawing up the regional accounts, one has the advantage that the totals of the various variables for the 11 provinces and a limited number of subprovincial areas are already given in the national accounts. These totals therefore have to be split up over the regions.

In the case of the so-called "balance method" (Asterdam), it is sufficient, as regards the input-output tables, to distribute each column of the table over the various regions. (By contrast, in the case of the "non-balance" method (not involving the balances) each line of the table must be split up in a similar fashion).

As regards selection of the regional macro-variables, the production account contained in the national accounts is taken as the basis, on the understanding that intermediate supplies of goods and services have been disregarded and that, on the other hand, the item showing the balance of goods and services with the rest of the Netherlands has been included as a closing entry. The way in which regional summaries of uses and resources can be derived from the regional input-output tables is shown in schematic form below.

Regional summary of use and resources

Use		Resources	
Consumption (government)	..	Wages and social security costs	..
Consumption (households)	..	Other income	..
Increase in stocks	..	Consumption of fixed capital	..
Gross fixed capital formation	..	Indirect taxation	..
Export of goods and services	..	Minus :	
		Price subsidies	..
Minus :	..		
Import of goods and services	..		
Balance with the rest of the Netherlands	..		
Gross regional product (market prices)	..	Gross regional product (market prices)	..

Summaries may be drawn up in this way every five years beginning with 1960. The users of regional statistics have increasingly called for more recent data and for data relating to regions smaller than provinces. However, it is not feasible to draw up input-output tables for small regions more than every five years in view of the disproportionate increase in the work involved. For these reasons, the CBS has decided, in cooperation with the Ministry of Economic Affairs, the Central Planning Bureau (het Centraal Planbureau) and the National Planning Authority (de Rijks Planologische Dienst) in the Regional Study Programme Coordination Committee (Coördinatie-commissie Regionaal Onderzoek-programme-COROP) to continue compiling regional input-output tables every five years for 14 areas (the 11 provinces together with the Rhine Estuary region, the Hague conurbation and the municipality of Amsterdam) and, in addition, to calculate a number of macro-variables on a yearly basis for 43 areas.

In order to meet the need for statistical information relating to areas smaller than provinces, the COROP based its region classification on the "nodal classification principle". The main feature involved is the functional relationship within a particular region between one or more central points and the surrounding area. Central points, in this context, are urban centres of employment and services which act as nodes in the social life of a particular region. The region classification used by this Committee is generally known as the "COROP classification". It takes account of the provincial borders; in other words, in no cases do the borders of the COROP regions extend beyond provincial borders. The subdivision of the Netherlands into districts by the Regional Labour Offices was also taken as a guide in drawing up this new classification. In all of the provinces except North Holland, South Holland and North Brabant, these Regional Labour Office Borders have been retained more or less in their entirety in accordance with the nodal principle.

It should also be mentioned that various bodies including the Provincial Planning Services and the Economic Technological Institutes are also consulted on the delimitation of the COROP regions.

Towards the middle of 1973, this COROP classification was produced for 40 regions together with 3 sub-regions, making a total of 43 regions. So far, annual CBS publications entitled "Regionale Economische Jaarcijfers" (Annual Regional Economic Figures) have appeared for the period 1973 to 1977 [5].

Apart from figures relating to production and consumption of goods and services per branch with a view to determining the gross domestic product at market prices for the COROP regions, there are also the following annual indicators contained in the above mentioned summary of use and resources [6]:

- gross fixed capital formation
  (broken down into a limited number of groups of receiving branches);
- wages and social security costs;
- other income (including consumption of fixed capital);
- taxes linked to production minus price subsidies;
- gross regional product (market prices).

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5 The annual figures for 1978 and 1979 are to be published in 1982 and the figures for 1980 will be available in 1983.

6 Theoretically, for the COROP areas the marginal totals of the provincial input-output tables can be regarded as regional indicators. Taken together as provincial totals the (relevant) COROP indicators should - in theory - correspond to those from the provincial input-output tables for the corresponding years. The same material is processed - in a simplified fashion - for the COROP regions;

The remaining regional indicators contained in this summary have hitherto been left out of accounts for reasons of insufficiently reliable basic statistical material.

Taking the national accounts as a model, the following general regional tables are taken from the five-yearly regional input-output tables for the eleven provincial (and three sub-provincial) areas, compiled according to the "Amsterdam" or "balance" method :

1. provincial distribution of goods and services totals;
2. provincial distribution of production, consumption and added value of the business sector on the basis of - in principle - some 31 branches;
3. provincial listing of generated income on the basis of alternative definitions;
4. provincial summary of net added value at factor cost per head of population;
5. provincial trade balances on the basis of transactions (goods and services balances);
6. provincial distribution of gross fixed capital formation by receiving sector and type;
7. provincial distribution of the volume of work for the category "wage earners" to be derived from the basic material.

The provincial distribution of gross fixed capital formation with specification of receiving sector and type, mentioned in Table 6, is partly derived from national investment statistics and partly based on special calculations.

The annual publication "Regionale Economische Jaarcijfers (Annual Regional Economic Figures)" contains the following tables for the 43 COROP regions :

1. production, consumption and added value (subdivided into wages and social security costs, indirect taxation minus price subsidies and other income, including consumption of fixed capital for 31 classes of undertaking, together with volume of work for wage earners;
2. gross fixed capital formation by receiving sector (agriculture, industry, transport, other branches, housing, government);
3. idem by type (housing, buildings and civil engineering works, means of transport, machinery and other equipment, increase in livestock herd).

1.2 Statistical units and classifications

The regional accounts differ in come cases from the national accounts by taking as the statistical unit for production and generation of income not the unit at national level, but the local unit, which in many cases corresponds to the registered office of a simple undertaking or can be seen as a specific local activity of a multi-regional undertaking. As in the case of the units at national level, these local units are divided up into branches (and groups) of homogeneous production units on the basis of their technical and economic activities.

In the interests of coordination and integration, as pointed out in the introduction, the CBS has its own standardized classification system known as the "Standaardbedrijfsindeling-SBI" (Standard Classification of Economic Activities) which is used both for the national accounts and for the basic statistics for these production units. Certain aspects of this system differ from the classification system used by the SOEC (NACE/CLIO). Obviously, this SBI system has also been selected for use for the regional data.

Data relating to gross fixed capital formation for the investment statistics are compiled and processed in a coordinated and integrated manner on the basis of the location of the registered office, which means that in principle the classification like that used for homogeneous production units is also applicable at regional level. However partly because these surveys do not cover the entire area, adjustments predominantly call for regional groupings of branches by receiving sector.

As regards household consumption it should be pointed out that this has the same scope in the national accounts as in the ESA. However, there are differences in the details of the classification by homogeneous groups of goods and services between the Netherlands classification and the "Classification and coding of the purposes of final consumption of households" used in the ESA. As in the case of the national accounts, these discrepancies can also be adjusted at regional level. The regionalization criterion for household consumption is also the establishment criterion, i.e. the region in which the consumer normally resides. As regards government consumption the regional input-output tables and accounts depart from the national concept insofar as only uses by local government bodies, particularly those of provinces, municipalities, watercontrol boards and educational establishments, are distributed regionally. Uses by central government bodies, i.e. the State (excluding educational establishments) and social insurance institutions together with other private non-profit institutions, such as trade organizations and marketing boards, are not included in the regional distribution since these uses (e.g. military expenditure) are so predominantly national in nature that they cannot directly be assigned to any specific region whatsoever. Uses of this kind are therefore included under a separate region known as the "extra-territorial sector". Differentiation of government expenditure under the terms of the "classification and coding of the purposes of general government" in the ESA has not yet been carried out for the national accounts except in the cases of military and education expenditure. If required, a gradual regionalization can be made on the basis of the developments in the national accounts.

The regional data on volume of work are dealt with on the basis of the above mentioned SBI classification. The volume of work, hitherto limited to number of persons in paid employment, refers to all workers who regardless of their nationality and place of residence - have been working in a particular region or can be ascribed to that region (e.g. persons working in sea and air transport).

The volume of work is defined as an annual average converted to years of work. Persons who did not work for the entire year are only partially included, i.e. on the basis of the number of days or parts of days during which they were working in a particular job.

1.3 Further details of the accounts systems

This section deals with the following aspects:
1. Definitions, where these differ from the ESA concepts;
2. Sources used for national and regional accounts;
3. Structure of sources, choice of indicators, adjustments, etc. for the various sectors and branches;
4. Summary assessment of the reliability of the results;
5. Compilation period and publication date for the regional data.

1.3.1 Definitions, where these differ from the ESA concepts

As regards the various adjustments which have been made in the course of the years to the Netherlands system of national accounts, it could be said that, broadly speaking, there are now hardly any discrepancies between the concepts and related definitions used in the ESA.

However, the ESA institutional sectoral classification has not yet been fully applied. Furthermore, additional calculations must be made for the purposes of the ESA in the case of those items which are still lacking. It goes without saying that the national-level adjustments mentioned above will also influence the further development of the Netherlands system of regional accounts.

1.3.2 Sources for national and regional accounts

The following sub-section contains details of the sources used. These are described -insofar as they are relevant - very briefly in the case of the national accounts, whereas the sources for the regional accounts are gone into in somewhat greater detail.

1.3.2.1 Description of sources used for the national accounts

Broadly speaking, this sub-section, which deals with national accounts, will only cover, on the one hand, the ways in which production, consumption in the production process, added value (broken down by production factors) and the domestic product are calculated and, on the other hand, the way in which the uses (export, consumption and investment) are determined. As pointed out in the introduction, the national output tables make extensive use of annual basic economic statistics (in this case production statistics), as a source of data on production, consumption, added value, wages and salaries and social security costs, etc.

By means of, inter alia, indexes (e.g. figures for the volume of work per group), grossing up is used for smaller undertakings not included in the production statistics in question. In the case of those branches and groups for which no basic statistics are available at all, data from business censuses, production indices, quarterly data, data compiled by other institutions, taken from registers or obtained directly from undertakings are generally used instead.

As regards national uses the calculated value of all goods and services produced in the country plus the value of imported goods and services are taken as the basis. From this total is substracted the value of consumption in the production process leaving the amont known as the "total available for use". Finally, by substracting exports from this latter, national expenditure is determined. It includes :

a. Household and government consumption;
b. net fixed capital formation by business and government;
c. stockpiling (including increase in work in hand).

In principle, all these data are derived from the national input-output table[7].

In the case of households, the uses specified under a. are verified by comparison with data from budget surveys, whereas the government uses are largely based on analyzed data from the accounts of the various government institutions.

The investment data for businesses and the government calculated according to the 'commodity flow' method are compared with, inter alia, grossed-up results from the investment statistics or data obtained from the accounts of government institutions.

The amounts involved in the stockpiling referred to in c., which represent part of the total investment, are for the most part based on production statistics.

For the sake of completeness it might also be mentioned that data on the import and export of goods are derived from the import, export and transit statistics. As regards trade in services with other countries, the necessary information is provided by the Nederlandsche Bank.

1.3.2.2 Description of sources used for regional accounts

Further details of the regional sources described in subsection 1.3.2.1 are given below as regards :

1. Production data (production, consumption of intermediate goods and services, added value and related production factors, such as wages and salaries, social security costs, consumption of fixed capital etc.);
2. Final use :
   - household consumption;
   - government consumption;
   - gross fixed capital formation by business;
   - gross fixed capital formation by the government;
   - other goods and services transactions with :
     . other countries
     . the rest of the Netherlands[8];

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[7] This method of determining final use, which is also known as the "commodity flow" or "indirect" method, is pre-eminently suitable in the context of the national input-output table, in which the flows of goods and services are followed up to and including their final purposes.

Because of the lack of adequate data, a similar approach is not possible for the regional accounts. This is due to the fact that in the regional input-output tables, based on the "Amsterdam" method, transactions involving goods and services within and between the regions are not fully registered. this means that direct measurement ("expenditure" or "direct" method) is required for determining regional use (consumption and investment).

[8] The concept of 'the rest of the Netherlands' is the same as that described

. the extra-territorial sector [9].

Re 1. production data

The regional breakdown of the columns of the national input-output table obviously depends on the nature of the material available. In certain cases, statistics have already been compiled on a regional basis. This is largely true of agricultural production, for example. In a number of other cases, it is still possible, in view of the nature of the statistical data, to regroup the basic material on a regional basis for example, for a large number of branches of industry for which detailed annual production statistics are available. In a number of other cases, however, no direct data on which the regional distribution could be based are available and indirect approaches (involving indexes etc.) must frequently be used. These indexes can take the form of the regional employment distribution applicable to the relevant branch or part thereof. This approach has been used in particular in connection with wholesale and retail trade and a number of other branches and groups in the services sector.

However, even in situations where the statistics or the basic material can be split up on a regional basis, this does not mean that no additional calculations will be required. In the case of agriculture, for example, the figures for production volume which are available at regional level must also be evaluated as a function of the average prices, which means that accounts must be taken of any regional price variations. In addition, not only must the production volume be calculated, but also the value of the consumed goods and services.

In cases where the basic statistics are grouped on a regional basis, for example those relating to branches of industry and transport and communication services, all corrections and additions etc. made for the national accounts must also be made at regional level. Where appropriate, this also applies to the analyzed data taken from the annual accounts of the local govement departments for the purposes of the national input-output tables.

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in the introduction and always refers to an area of a different size depending on the reference region. The term 'other areas' is used to refer to the same concept in the annexes to this document.

9 The term 'extra-territorial sector' was used in section 1.2. In this sector, data which are not regionally distributed can be collected. In the Netherlands regional account, this 'extra-territorial sector' is used for :

- consumption by central government departments;
- (production) data relating to harbour works and dredging work taking place outside the borders, exported by Dutch undertakings established in the Netherlands, at least insofar as these activities are included in the national product;
- data on wages and salaries (including social security costs), together with consumption of persons working in Dutch embassies in other countries, and of military attachés and members of the Dutch armed forces in other countries.

Re 2. Final use

Household consumption

There are virtually no direct yardsticks for the regional distribution of household consumption. For 1960, it was possible to use registration data which were available for a large number of retail traders and which give an indication of turnover and number of persons employed by area.

However, this source too was lacking for 1965 and 1970. Consequently, in the majority of cases, the regional consumption for 1965 had to be extrapolated from the figure for 1960. This extrapolation was carried out mainly on the basis of the development in the population and the taxable income in the areas. For certain categories, regional assessment of consumption could be carried out on the basis of supply figures where the production of consumable goods and (in particular) services is regionally determined for example housing services, domestic services, hairdressers, public baths etc.

For 1975, the distribution was carried out on the basis of a number of new economic basic statistics relating to the retail trade sector, the surveys of which are also available at regional level. In addition, regional indices, taken from the workers' budget survey for 1974 and 1975, were applied to certain use categories. For the distribution of the remaining consumption, the method described above was used.

Government consumption. It has already been pointed out that the expenditure on consumption by central government, social security institutions and other public bodies, such as statutory trade organizations, with the exception of expenditure on education, is not broken down by region, but indicated as the consumption of the extra-territorial sector.

Separate data are available for the provinces. As regards the municipalities, the results contained in the municipal finance statistics are used. These statistics are partly based on integral surveys and partly on random samples.

Government fixed capital formation

Government investment was determined on a regional basis in the light of data provided by the National Water Control Authority (Rijkswaterstaat) and other departments. For the other public bodies, a regional breakdown of investment was possible with the aid of the statistics compiled by the CBS.

Fixed capital formation (businesses)

For this component, it was possible to base a large part of the calculations on the statistics relating to fixed capital formation. These statistics concern only industry and transport. Investments outside these classes of economic activity were partly broken down by means of supply data (particularly the building industry, where turnover is locally bound), whereas the remaining amount of the total investments in businesses (which could not be broken down as described above) were regionalized on the basis of number of persons employed. In the case of agriculture, this latter breakdown was based on the amounts invested per agricultural area.

Increase in stocks and work in hand

The changes in stocks in the various areas were recorded for the various classes of business producing the goods in question. This corresponds to the procedure used for the national input-output tables. It might be pointed out in connection with the regional distribution of changes in the producer-consumer's and trader's stocks of goods of foreign origin, that these were ascribed, in the regional accounts for 1960 and 1965 to the regions in which the businesses were established. The regional distribution of changes in work in hand did not pose any problems since the data are taken from the various production statistics. In contrast to the accounts for 1960 and 1965, changes in stocks of goods produced in the Netherlands were no longer distributed by region of origin in the 1970 and 1975 accounts, but by the region in which the goods were actually physically in the possession of the producer-consumer. This corresponds with the procedure used for changes in stocks of imported goods.

Imports and Exports

The import and export of goods and services has also been broken down over the regions and the extra-territorial sector. These data are for a large part taken from the annual production statistics and the general industrial statistics. Use is also made of data from the Nederlandsche Bank relating to the regional distribution of particular services (e.g. for management, technical assistance, administrative costs).

In a number of cases, where no direct data are available, distribution was carried out on the basis of the regional production value of the relevant branches (and parts thereof), mainly in the services sector.

As regards the 'reexport' item it should be pointed out that this covers goods entered and cleared and reexported without further processing. Direct regional distribution of these goods is not possible. They are allocated on the basis of the regional production value for wholesale trade.

The rest of the Netherlands

The annex (c.f. Table I) shows the way in which the relation between the various regions and the rest of the Netherlands is handled. This relation is described as the difference (balance) between the purchases and sales of competing goods and services per branch between these regions and the rest of the Netherlands. If these balances per branch for all the regions are taken together, the overall result is always zero.

Extra-territorial sector

A complete breakdown of supplies of goods and services between the regions and the extra-territorial sector was carried out for the regional input-output tables relating to 1960 and 1965.

For the sake of simplicity, this breakdown was dispensed with for the tables relating to 1970 and 1975. Instead, the balance of these transactions, together with the balance with "the rest of the Netherlands" was included in the input-output table and accounts for each region.

1.3.3 Structure of sources, adjustments etc. for the various sectors and branches

As part of the ongoing coordination and integration process in the compilation and processing of statistics, the CBS also classifies its data - in so far as this is possible and relevant - according to a regional system. In the interests of coordination the CBS uses three principal regional classifications, i.e. a municipal and a provincial one, between which comes the COROP classification into 43 areas [10].

Except in the case of exhaustive surveys, a classification by regions will depend, inter alia, on the size of the random samples selected. it is possible by means of the "oversampling" to improve the reliability of the results for areas with smaller populations.

The aim of the CBS in its attempts towards coordination is to permit conversion of regional data at the COROP level as far as possible.

Obviously, the coordinated approach to regional statistics will in the coming years lead to the improvement and extension of more mutually comparable regional indicators in a wide range of fields. A further step in this direction may be the proposed establishment by the CBS of a regional data bank which would also substantially increase the accessibility of regional data. Partly with a view to keeping the Algemene Bedrijfsregister (general trade register) up to date, the CBS intends in the coming years to carry out a five-yearly rotating system of regional surveys in which all establishments of undertakings, institutions and self-employed persons will be asked to provide information on, for example, the local economic activities and other useful data which would appear to be obtainable, such as the number of persons employed. These annual surveys, which will each time be carried out for a different group of regions, will in due course make for better regional data in comparison with other statistics.

Indices can be taken from the continuous budget survey, which has been in progress since 1978 with a view to determining the use patterns of households. These indices can improve the distribution of regional household consumption, in the first instance for the four sections (groups of provinces) of the Netherlands.

The CBS also intends to make the income statistics, based on data from the tax authorities, more suitable for use in connection with the household sector at regional level so that the statistics can serve as an important link between the production process (primary generation of income) and the final use for consumption. These various aspects must be regarded as a simple regional version of the accounts system for this sector under the ESA. Section 2.2 goes into this question in greater detail.

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[10] There are, of course, many other possible regional classifications in which the size of the region is greater than a municipality and smaller than a province, not to mention sub-municipal classifications and grid systems. Overall, it can be concluded that the planned improvements and extensions together with the increased accessibility of regional information and its application in regional input-output tables, accounts and annual figures will in the future lead to better results.

It will take a few years to put these plans into action, which means that the results will only become available gradually. As a result of the increased specification of data, particularly as regards a larger number of regions, the extent to which they can be made available will increasingly depend upon the legal obligation on the CBS which in turn wil necessitate the aggregation, to a greater or lesser extent, of regional data.

1.3.4 Summary assessment of the reliability of the results

It is impossible to generalize concerning the accurancy of the data, since this varies from one area to another. It depends, in particular, on the nature of the basic material, which is extremely diverse. In addition, account should also be taken of the fact that this basic material for the national accounts and the derived regional data have frequently undergone extensive processing involving, for example, estimates to make up for the incompleteness of production statistics in which small businesses are not included.

Furthermore, corrections have to be made for discrepancies in definitions, classifications or evaluations, while additional estimates are required where no data are available. For this reason, the question of the accuracy of the various data will be left open. It should be pointed out, that regional data are generally less accurate than the corresponding national totals.

1.3.5 Time taken for compilation and publication of the regional data

Three years are required for the compilation of the five-yearly regional input-output tables, work on which can start 18 months after the end of the reference year. Thus, the data normally become avaiable 4 1/2 years after the reference period.

In the case of the 'regionale economische jaarchijfers' (Annual Regional Economic Figures) the time taken for production is only about one year, so that the data become available 2 1/2 years after the reference period. Partly as a result of the coordination and integration process, the supply and analysis of the basic data can be expected to take less time in future - perhaps 3 1/2 and 1 1/2 year respectively.

2. Description of the compilation method for regional accounts in accordance with the ESA

2.0 General

As regards the adjustment of the regional accounts to the ESA, it has already been pointed out in sub-section 1.3.1 that this partly depends on adjustments which are still to be made in the Netherlands national accounts.

The reader is also referred to sub-section 1.2, which contains a summary of the statistical units and classifications used in the regional accounts. The following sub-paragraphs therefore, contain a more detailed description of the way in which the following accounts are or may be regionalized :

1. Accounts relating to branches
2. Household accounts
3. Government department accounts (central and local govement)

2.1 Accounts relating to branches

The main regional variables for the accounts relating to branches are :

1. Wages and salaries (including social costs) of employees
2. Gross value added (at market prices)
3. Taxes on production and imports
4. Gross fixed capital formation
5. Numbers of employees
6. Numbers of self-employed persons
7. Output of bank services.

The way in which the calculations are carried out is considered for each of these variables in terms of the regrouping of the 44 NACE-CLIO branches into 6 branches [11] as follows :

- agricultural, forestry and fishery products (R 01) (one branch)
- fuel and power products (R 06) (5 branches)
- manufactured products (R 30) (20 branches)
- building and construction (R 53) (1 branch)
- market services (R 68) (13 branches)
- non-market services (R 86) (4 branches).

2.1.1 Employees' wages and salaries (including social costs)

2.1.2 Gross value added (at market prices)

In the Netherlands system of regional accounts, the gross value added is not calculated directly, but as the difference between production and consumption of goods and services in the production process for approximately 250 groups based on the local economic activities. For this purpose, a large volume of statistical data from both the CBS and other institutions is required at COROP level (classificaiton into 43 regions).

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[11] This regrouping into 6 branches (R 6) may be found on p. 167 of the European System of Integrated Economic Accounts, E.S.A., second edition, Statistical Office of the European Communities, Luxembourg 1979.

On the basis of the same statistical material, calculations for the item "Employees' wages and salaries (including social costs)" are carried out simultaneously.

The way in which the regional calculations are carried out depends to a great extent on the nature of the available statistical material. The main sources in the case of larger undertakings, particularly in industry and transport, are the annual production statistics, which are also broken down by region. An additional breakdown must often be made for the multiregional undertakings which, generally speaking, do not provide data broken down by local activities. If no direct information of this kind is obtained, the breakdown is carried out on the basis of the number of workers per local unit, taken from the annual CBS Statistics on persons in employment (Statistiek Werkzame personen - SWP) and/or the General Industrial Statistics (Algemene Industriestatistiek - AIS). The SWP, which covers all undertakings in economic life, is also used for the regional grossing-up of smaller undertakings which are not included in the production statistics and for the regional breakdown of groups of economic activity for which no other statistical material is available. The AIS covers undertakings with 10 employees or more and contains, in addition to employment data, figures on turnover both within and outside the Netherlands.

In the interests of clarity in the further discussion of these two items (wages and salaries and value added), the description will be limited to the ESA classification into six branches (R 6) as mentioned in sub-section 2.1. Details are given below :

Agricultural, forestry and fishery products (R 01)

For the regional breakdown of wages and gross value added in agriculture, use is made of the statistics known as "Productierekening Land - en Tuinbouw (Agricultural and Horticultural Production Account)". The forestry variables are distributed regionally on the basis of the figures for employed persons contained in the SWP. The fishery products group is regionalized with the aid of regional data on catches and the number of crew per fishing vessel. The home port, i.e. the port where the ship is registered, has been taken as the regionalization criterion rather than the landing port.

Fuel and power products (R 06)

As regards oil and natural gas extraction, data are available for the output per concession area, while figures for the employees per region can be obtained from the AIS. The regional calculations for wages and added value in the electricity, gas and water sector are carried out on the basis of data contained in the available production statistics.

Manufactured products (R 30)

In the case of manufactured products, the principal sources are the yearly production statistics and the AIS from which regional data are taken for purposes of production, consumption, value added and wages (including social costs) calculations. Where the questionnaires for the production statistics relate to undertakings with establishments in more than one region, a regional distribution is normally carried out with the aid of data from the AIS.

Building and construction (R 53)

Data are derived from the Statistiek Voortgangscontrole Bouwnijverheid (Building Industry Production Control Statistics) of the CBS and are used as a basis for calculating regional production in the residential and the utility building sector. In addition, data may be obtained from the statistics on investment by industry, the transport sector and the government which may be used for calculating regional production in the civil engineering sector. The regional data on road construction and hydraulic engineering, derived from the accounts of the ordinary and extraordinary departments of the Ministry of Transport, Water control and construction, also represent an important source.

The production, consumption and labour costs (including social costs) of construction companies at regional level are calculated with the aid of the numbers of persons employed as indicated in the SWP. It was not possible to make use of the building industry's production statistics for the regional calculations for this sector, since instead of the establishment criterion (in this case the building site) these statistics are based on the administrative headquarters of the undertaking - in many cases the owner's place of residence.

Market services (R 68)

On this heterogeneous branch, the CBS provides very little in the way of production statistics which can be directly regionalized.

However, the data contained in the annual statistics for the lodging, catering and transport sectors can be directly regionalized and this is also true of certain statistics in the health sector, particularly on persons receiving hospital treatment or similar. In other branches, regionalization must be carried out indirectly. There are a large number of regional distribution keys available for this purpose derived from data from the CBS and other institutions.

Examples include :

- The numbers of self-employed persons by region (i.e. specialists, dentists);
- Netherlands Railway Company (Nederlandse Spoorwegen) data on regional transport density;
- Regional data on house purchase prices.

Non-market services (R 86)

The items "salaries (including social costs)" and "gross value added" can be directly regionalized from the government statistics relating to provinces, municipalities, water control boards and cooperation schemes. The Ministry of Defence provides data on the regional breakdown of salaries and social costs for military personnel on the basis of the places where they are stationed. Regionalization of education is carried out with the aid of data taken from costs and financing statistics for this branch together with the known regional figures for pupils and teaching staff per type of school.

2.1.3 Taxes on production and imports

Since no direct regional information on taxes on production and imports is available, approximate figures have been calculated on the basis of the regional production value per branch.

2.1.4 Gross fixed capital formation

Agricultural, forestry and fishery products (R 01).

Regional investment in buildings for this branch is measured on the basis of data taken from the Building Industry Production Control Statistics. Other fixed assets (external means of transport, machinery etc) are distributed regionally on the basis of the agricultural investment statistics.

The investment item "Increase in livestock" is broken down regionally on the basis of regional livestock censuses taken from the Agricultural Census Statistics (Statistiek van de Landbouwtelling).

Fuel and power products, manufactured products and building and construction (R 06, R 30 and R 53)

The regional calculations for these branches are carried out in the same way as for agriculture, i.e. on the basis of the Building Industry Production Control Statistics and the Industrial Investment Statistics (Investeringsstatistiek voor de Nijverheid). In the latter, the investment data, including those for multiregional undertakings, are given per establishment, which means that they completely satisfy the establishment criterion.

Market services (R 68)

Here too, investments in buildings must be regionalized on the basis of the Building Industry Production Control Statistics. As regards other fixed assets, in the transport sector use is made of the regional results of the Transport Investment Statistics (Statistiek van de Investeringen in het Vervoer). The regional breakdowns of investments in the other branches is approximated on the basis of the numbers of persons employed as indicated in the SWP.

Non-market services (R 86)

The various government statistics are used as the basis for deriving regional investment data for municipalities and provinces for example :

The data regarding general civil government investment predominantly civil and hydraulic engineering works, are supplied, broken down by region, by the Minister of Transport and Water Control and the National Road Fund Authority (Rijkswegenfonds). Investment in education can be broken down regionally on the basis of the education statistics and the numbers of pupils and teaching staff per region.

2.1.5 Number of employees

As regards regional employment, the main source used is the number of employees. These figures are taken from the SWP and are converted to volume of work per branch, as defined in the last paragraph of section 1.2 (statistical units and classifications).

2.1.6 Number of self-employed persons

Since no direct regional sources are available, no calculations are as yet made concerning self-employed persons. It may be possible in due course to make adequate regional calculations using the results of the Labour Force Census Statistics (Statistiek Arbeidskrachtentelling).

2.1.7 Output of bank services

This involves calculating the interest margin of banks. In the absence of regional sources, the national figure is distributed regionally on the basis of the number of bank staff as indicated in the SWP.

2.2 Accounts relating to the houseehold sector

2.2.0 General

In view of the fact that the system of accounts relating to the institutional sectors in accordance with the ESA has not yet been fully implemented in the context of the Netherlands' national accounts system, it is not yet possible to draw up a (simplified) system of accounts for the household sector at regional level. However, subsections 2.2.1. - 2.2.6. deal with the question of whether and, if so, to what extent calculations could be carried out at regional level for a number of items which in the national context have been brought into line - as far as possible - with the concepts and definitions contained in the ESA.

The following items have been considered for possible regionalization:

1. gross operating surplus (N 2);
2. compensation of employees (R 10);
3. social benefits (R 64);
4. income from investments and entrepreneurial activities. (R 41 + R 44 + R 45);
5. current taxes on income and wealth (R 61);
6. actual and imputed social contributions (R 62 + R 63).

2.2.1 Gross operating surplus (N 2)

The calculations for the institutional sectors in the Netherlands system of national accounts are not yet sufficiently advanced as to permit compilation at national level of the gross operating surplus for the households sector. Only when the national calculations for this item have been completed will there be any question of regionalization.

2.2.2 Compensation of employees (R 10)

In the national system, this item is in line with its counterpart in the ESA as regards definition and content. Regional-level calculations of the sub-item "wages and salaries of employees" (i.e. excluding social costs) can be carried out with the aid of data taken from the income statistics based on fiscal sources. The sub-item "social costs" will have to be estimated since there is no complete regional coverage for this item in the above-mentioned statistics.

2.2.3 Social benefts (R 64)

There is as yet no complete correspondence between the item "social insurance" in the national system and its counterpart in the ESA as regards scope.

However, if necessary, regional distribution of the national item is possible on the basis of the income statistics and additional information.

2.2.4 Income from investments and entrepreneurial activities (R 41 + R 44 + R 45)

ESA items R 44 (dividends and other income distributed by corporate enterprises), R 45 (withdraws from the entrepreneurial income of quasicorporate enterprises) and item R 41 (actual interest) taken together correspond in content with the item "income from investments and entrepreneurial activities" (inkomen uit beleggingen en ondernemersactiviteit) in the Netherlands national accounts system. Regionalization of the combined ESA items (R 44, R 45 and R 41) can be carried out with the aid of indices derived from the income statistics based on the aggregates "income from property and entrepreneurial income".

2.2.5 Current taxes on income and wealth (R 61)

The definition of the item "current taxes on income and wealth" is the same in the ESA and the national system. The regional breakdown of this item can be made on the basis of taxes paid on wages, income and wealth, figures for which are taken from the incomes statistics.

2.2.6 Actual and imputed social contributions (R 62 + R 63)

the scope of the ESA items "actual social contributions and imputed social contributions" is greater than that of the comparable item in the Netherlands national accounts system, i.e. "social insurance premiums".

The Dutch system does not include premiums for pension funds or life insurance. In view of the inadequate degree of coverage, regional distribution of the Netherlands item on the basis of data from the incomes statistics is not thought to be relevant.

2.2.7 Use of income account for the households sector

As already indicated in sub-section 2.2.1, there is a connection between the net disposable income and final use. The difference between the two items is regarded as the net savings, i.e. that portion of the net disposable income of the households sector which is not used for final consumption [12].

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[12] In this account, the net concept is used for disposable income and savings, since the item "consumption of fixed capital" can only be introduced into the production and operating accounts after the calculations for the other institutional sectors have been completed.

Fig. 1 Use of income account

Outgoings		Receipts	
1. Final consumption	..	4. Net disposable income	..
2. Net savings	..		
3. Total	..	5. Total	..

The basis for the regional calculations of the item "net disposable income" is the usable income [13] as published in the incomes statistics.
A number of (regional) corrections must be made to this usable income in order to obtain the figure for the net disposable income. These corrections involve the following

- adjustments in view of tax-deductible items and incompleteness;
- adjustment in view of differences in definitions in comparison with the national accounts system;
- a final adjustment based on a corrected usable and net disposable income.

Table 1 shows the relationship between usable and net disposable income.

Table 1. Calculation (regional) of net disposable income for the households sector.

1. Usable income according to income statistics	..
2. Corrections in view of tax-deductible items and incompleteness ;	
1. Deductible items (travelling expenses (home-work), acquisition costs, other costs and deductible items)	..
2. Incompleteness of incomes statistics.	..
3. Corrections in view of discrepancies in definitions between incomes statistics and national accounts;	
1. Payments from pension funds and interest payments from internal life insurance companies.	..
2. Gross pension premiums	..
3. Imputed insurance companies and pension fund.	..
4. Total (1 + 2.1 + 2.2 - 3.1 + 3.2 +3.3)	..
5. Adjustment (6-4)	..
6. Net disposable income.	..

[13] The usable income is calculated by subtracting the following items from the total income for tax purposes:
- taxes paid;
- the balance of revenue from own home;
- investment deduction;
- deductions in view of interest on debts.

2.2.8 Final consumption

In the national accounts system, final consumption by the households sector is in principle determined to the "commodity flow" method (cf. sub-section 1.3.2.1.). However, this method cannot be applied for regional purposes, which means that regional final consumption must be calculated directly.

A number of sources are available at regional level for these calculations, as follows:

- basic economic surveys of turnover in retail trade per region;
- production of services, final consumption of which takes place more or less entirely in the region of production, derived from the regional accounts (e.g. domestic services);
- regional indices, taken from the employees budget survey (e.g. the 1974/75 survey) and the incomes statistics;
- regional figures (e.g. housing, population, doctors, automobiles).

Fig. 2 gives an overall picture of the statistical sources used per ESA purpose of final consumption.

2.3. Accounts relating to central and local government

2.3.0 General

In accordance, *inter alia,* with the decision of the Commssion of the European Communities of 4th July 1979 regarding the simplified system for the local government sub-sector (S 62), the following subsections deal with four general variables in the field of current and capital expenditure and revenue for each of the regional government departments belonging to this sub-sector.

Only in the case of the specified capital expenditure dealt with in subsection 2.3.2. is the question of whether regionalization of the items in question is possible considered in connection with central government (S 62) as well as the sub-sector of local government (S 61). A number of items connected with the abovementioned variables, concerning, for example, transactions involving transfers of income and capital, will be dealt with in detail. This concerns the processing of the following variables broken down more specifically into a number of subsidiary items as follows:

1. Current expenditure

   - compensation of employees (R 10)
   - operating subsidies (R 30)
   - social benefits (R 64)
   - current transfers within general government (R 65)

2. Capital expenditure

   - gross fixed capital formation (P 41)
   - investment grants (R 71)

Fig. 2: Summary of sources used for the calculation of regional final consumption of the households sector by purpose (ESA code)

ESA code	Description of purpose	Statistical sources				
		Basic economic surveys	Regional production data or production statistics	Employees' budget survey & incomes statistics	Figures etc.	Other sources
1	Food, beverages and tobacco	Retail trade in food, beverages and tobacco etc.				
2	Clothing and footwear		x (repairs)	x		
3	Rent and other charges heating and lighting		public utilities		Housing Rent and buying prices Population	
4	Furniture, household equipment and appliances including maintenance		Repairs Domestic services	x		
5	Medical care		Hospital care and the like	x	Doctors, dentist, specialists etc.	
6	Transport and communications		Regional transport	x	Private cars, taxis, population, holidays survey 1975	
7	Recreation and leisure activities		Repairs	x	Population	Press media Survey 1975 - Structural survey (book trade 1975)
8	Miscellaneous goods and services	Detail trade in flowers and plants	Various services	x	Holiday survey 1975	

3. Current income

- taxes linked to production and imports (R 20)
- current taxes on income and wealth (R 61)
- current transfers within general government (R 65)

4. Capital revenue

- Investment grants (R 71)

These regional variables are processed for each of the groups of regional government bodies included in sub-sector S 62, as follows:

1. provinces
2. municipalities (excluding education)
3. joint arrangements
4. water control purification and supply boards
5. education[14]

- municipal public education
- special (subsidized) education.

Fig. ? contains a summary of the items to be processed for each regional group of government departments.

2.3.1. Current expenditure (local government)

In the Netherlands national accounts system, the item "total current expenditure) is calculated, on the basis of the ESA, for each group of regional government bodies coming under the sub-sector "local government". This also applies in the case of items R 10 (compensation of employees), R 30 (operating subsidies), R 64 (social benefits) and R 65 (current transfers within general government).

The regional breakdown methods used for these items are described below.

Provinces

All the items are taken from the statistical material which is available for each province and forms the basis for the publication of provincial financial statistics. In these annual statistics, which cover the entire territory, expenditure and revenue are presented in such a way as to permit a virtually direct classification of the ESA transactions at both national and provincial level.

Municipalities (excluding education)

In 1976, an entirely new system for municipal statistics on revenue and expenditure was introduced in the Netherlands with a view to improving coordination with the ESA system among other things. Thus, for the year 1977 the accounts of 130 of the total 842 municipalities were processed on the basis of a random sample stratified by size class. Grossing up of the relevant items at national level was carried

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[14] The following are not included as they come under central government (S 61)
- national schools and public institutions for scientific education with a legal personality
- special educational institutions with a legal personality

out on the basis of the ratios between the available national totals per chapter for all the municipal accounts and those included in the random samples. Grossing up of this kind can also be carried out at provincial level. However, the results will inevitably be less reliable than the national level results. It is not possible at this stage to say to what extent these results would be suitable for publication.

Cooperation schemes

These cooperation schemes take the form of public bodies with an independent administration formed by municipality in conjunction with one or more other municipalities (and/or provinces). It should be pointed out that, as regards their functions and financing, these schemes should for the most part be regarded as extensions of the municipalities. In 1977, 684 schemes of this kind were in force. The statistical processing of all the available accounts regarding expenditure (and revenue) is carried out in such a way as to produce the (distribution) items required for the Netherlands and ESA systems of national accounts.

The relevant items can be determined at provincial level by reprocessing the appropriate accounts.

In the case of schemes across provincial borders, the regional breakdown will be made on the basis of contributions from the local government bodies concerned.

Water control, purification and supply boards (Water-en Zuiveringsschappen).

Statistics on the finances of water control boards were first produced for the year 1977, partly for the purposes of the Netherlands and ESA system of national accounts. For the statistics, use was made of a stratified random sample with three size classes consisting of 150 of a total of 606 water control and purification and supply boards. National-level grossing-up of the items in question was carried out with the aid of data on revenue from water control board levies which are available for all the bodies. Provincial breakdown of the relevant items will be carried out partly on the basis of these levies. If necessary, in the case of a small number of larger water control boards covering an area which does not fall within the province, more detailed corrections will be made on the basis of the areas involved.

Education

Data on public education, insofar as they relate to municipal education, are obtained in an integral fashion with the aid of detailed questionnaires concerning the expenditure (and revenue), figures for which are taken from the municipal accounts. These data are used as a basis for a national-level Table of income and resources which serves as a basis for transactions for the purposes of the national system of national accounts and the ESA.

Obviously, the requisite regional breakdown can be derived from these data.

No basic statistics are drawn up for special education. Resources and uses are estimated at national level on the basis of the figures in the national and municipal accounts; uses by type of expenditure are estimated on the basis of the corresponding items in the municipal public education accounts. Use is also made-in the case of special vocational training-of accounts which are sent to the Ministry of Education by the school boards in this educational sector.

Provincial breakdown into the appropriate ESA items is only partly possible in the case of special education to the extent that the data can be estimated on the basis of the municipal accounts. Otherwise, the number of pupils in this type of education per type of school can serve as provincial distribution key.

2.3.2 Capital expenditure (local and central government)

The regional breakdown of the items "gross fixed capital formation" (P 41) and "investment grants" (R 71) per group of local government bodies is carried out on the basis of the same statistical material as described in sub-section 2.3.1. The methods of calculation used are also identical. The regional data for gross fixed capital formation are also compared with the data mentioned in sub-paragraph section 2.1.4 under the heading "non-market services" (R 86)

In the case of items P 41 and R 71 regional-level calculations can also be carried out for central government (S 61). For item P 41, see also subsection 2.1.4. As regards item R 71, it should be pointed out that in the case of grants not channelled through the local government bodies regional data could be obtained from, for example, the Ministry of Economic Affairs.

Hitherto in the current Netherlands system of national accounts there has not been a complete breakdown of the sub-sectors "central government" (S 61) and "local government" (S 62) by purposes G 1 to G 9, as summarized in Table 13 in the ESA. Only 3 breakdown categories have been used, i.e. defense (G 2), education (G 3) and other purposes. For regional purposes, data relating to education can only be given for the local government.

2.3.3 Current revenue (local government)

The regional breakdown of the items "taxes linked to production" (R 20), "current taxes on income and wealth" (R 61) and "current transfers within general government" (R 65) for the various groups of local government bodies are dealt with in the way described in sub-section 2.3.1.

2.3.4 Capital yield (local government)

The regional breakdown of the item "investment grants" (R 71) by the groups of local government bodies is also carrid out as described in sub-section 2.3.1.

2.3.5 Specific problem (local government)

This concerns the sale of goods and services and the own-account production of local government. For the purposes of the Netherlands system of national accounts calculations are made for those government bodies which correspond to ESA items P 11 (production of goods) and P 12 (production of market services). These 2 items are subtracted in the account relating to government consumption.

With the aid of the available basic material, a regional distribution can also be made.

Fig. 3: Summary table of regional variables for the sub-sector "local government"

Variables / Groups of local government departments	Provinces	Municipalities (excluding education)	Cooperation schemes	Water control, purification and supply boards	Education
Expenditure					
Current expenditure					
R 10 Compensation of employees					
R 30 Operating subsidies					
R 64 Social benefits					
R 65 Current transfers within general government					
Capital expenditure					
P 41 Gross fixed capital formation					
R 71 Investment grants					

Variables / Groups of local government departments	Provinces	Municipalities (excluding education)	Cooperation schemes	Water control, purification and supply boards	Education
Income					
Current income					
R 20 Taxes linked to production					
R 61 Current taxes on income and wealth					
R 65 Current transfers within general government					
Capital yield					
R 71 Investment grants					

Annex 1.

Methodological discussion of various types of regional input-output tables

1. Introduction

The Netherlandse Centraal Bureau voor de Statistiek (CBS) has compiled regional accounts data for the years 1960, 1965, 1970 and 1975 in the form of regional input-output tables. The figures for 1960 and 1965 are dealt with in the relevant publication [15], while the data for the two later years have not yet been published.

The idea of drawing up a system of regional accounts covering the entire Netherlands originated with the joint provincial Economic and Technological Institutes, which, in 1962, requested the CBS to produce regional accounts for the year 1960 for the 11 provinces, on the basis of input-output tables according to the "Amsterdam" or balance method [16]. For the later years, the CBS included the regional accounts project in its own working programme.

Since the appearance of the first publication relating to the year 1960, interest in the regional accounts has increased substantially, particularly on the part of central government over the last decade when it has shown a more directly policy-oriented interest. This is reflected, for example, in the decision by the government to draw up regional study programmes, such as the Integral Structural Plan for the north of the country and the Note on Prospects for South Limburg and, in recent years, in the notes on the regional social and economic policy over the periods 1977-1981 and 1981-1985.

2. Relationship to the national accounts

As already pointed out in the historical survey, the regional accounts are in fact an extension at regional level of the national accounts. However, there are two points which should be considered more closely in this context.

First of all, it should be pointed out that for statistical reasons it is still not possible to reflect in the regional accounts all the aspects covered in the national accounts. Secondly, it is necessary, in a system of regional accounts, to devote extra attention to factors relating to the economic relations between the regions and the rest of the national economy and the relations between the various regions.

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15 Regional Accounts 1960; Part 1, texts and figures; Part II, Input-Output tables; Centraal Bureau voor de Statistiek, 1968.
Idem. 1965 Centraal Bureau voor de Statistiek, 1970.

16 Those requesting statistics included the Statistical Offices of Amsterdam, the Hague and Rotterdam who called for the drawing up of regional accounts for the municipalities of Amsterdam and The Hague and for "Nieuwe Waterweg" region (later extended to cover the Rhine estuary area). The requesters for the Nieuwe Waterweg Region also include the Rotterdam Chamber of Commerce and the Municipal Port Administration, also in Rotterdam.

A complete system of national accounts as represented by the annual publications of the Centraal Bureau voor de Statistiek gives a picture of the following aspects of economic life :

a. Production and generation of income;
b. Distribution and use of income;
c. Capital formation and financing.

In addition, calculations at constant prices are made for a number of appropriate items and, finally, accounts relating to changes in the balances and national (and sectoral) balances will be produced.

So far, the regional accounts have been limited to transactions in groups and services. In practice this involves the following per region :

- the compilation of production accounts for separate branches and appropriate sectors which can be summarized in a double-entry table (input-output table);
- calculations - on the basis of the above-mentioned table - regarding government and household consumption, fixed capital formation by the government and industry, stockpiling and imports and exports. This makes it possible to obtain data regarding the regional product, regional consumption, investments, etc. for each area.

In the income accounts, therefore, the information is restricted to consumption, whereas in the capital accounts only data regarding fixed capital formation and stockpiling are available.

This restriction to transactions in goods and services was not exclusively for statistical regions but also in view of the fact that these data regarding the real transactions have always been the most urgently required for a study of the regional economy.

3. Various approaches

There is more than one way of representing the flows of goods and services in which the regions are involved. Each of these ways not only gives different results, but also make different demands on the statistical material. The important thing is the way in which the relations between the regions and the rest of the Netherlands are handled (Fig. I, II and III).

From the statistical point of view, the simplest method is simply to calculate the balance of all outgoing and incoming goods and services flows (the "export balance"), with the rest of the country for each of the regions. This method is outlined in Fig. I.

The method described in Fig. II involves measuring the value of the incoming and outgoing flows of goods and services separately for each region. In this way one would obtain a figure for the "import" and a figure for the "export" for each region vis-à-vis the rest of the country. The method shown in Fig. III is the most complicated and involves an attempt to indicate the destination or origin as regards all the other regions separately for the incoming and outgoing flows of goods and services. The first two methods have already been discussed in the first publication (Regionale Rekeningen 1960).

They were referred to as the 'Amsterdam' and 'Groningen' methods respectively in view of the studies carried out into the regional accounts of these areas. The method used by the CBS is the simplest one, i.e. the 'Amsterdam' or 'balance' method. However, after the appearance of the publications relating to 1960 and 1975, the second method (i.e. the 'Groningen' or 'non-balances' method) was introduced on an experimental basis in the case of the province of Groningen and the region of the Rhine estuary. It should be pointed out by way of explanation that the figures relate to 3 regions within which (the same) two branches are distinguished.

In Fig. I, the figures on the lines for the different branches include not only the value of the goods and services produced in the region itself but also the value of those produced in other parts of the country. One could draw a parallel here between the national input-output tables in which imports (i.e., in the context of the regional accounts, imports from the rest of the Netherlands) are distributed over the lines for the various competing branches. From the statistical point of view, this is the simplest method since it does not make it necessary to determine separately the extent to which the various goods and services were produced within the region itself. The balance of the outgoing and incoming flows is given in a separate column. The total of this column naturally always equals zero for all the regions together. The non-balance method (Fig. II) shows only the value of the goods and services produced in the region itself on the lines market "branches". The total value of the goods and services originating from other regions is included on a separate line for each region. The column showing the relation with the other regions thus contains the figure for 'exports' to the rest of the Netherlands. Here too, the total of the outgoing flows minus the total of the ingoing flows is always zero for all the regions taken together.

From the statistical point of view, method 2 is considerably more complicated than method 1, since it calls for data which will permit separate estimates to be made per region of the value of the incoming and outgoing flows, whereas in the balance method it is sufficient to determine the difference between the value of production of the region and the sum of the intermediate and final use in the region for each line[17].

Fig. III, refers to the so-called 'integral' method which in addition, shows the destinations or origin of incoming and outgoing flows of goods and services separately for each region per line and column. As regards the relation with the national input-output table, method 2 can be compared with the input-output table in which imports are classified directly according to the branches or sectors forming the ultimate destination of the imported goods and services. Method 3 would mean that in the national input-ouput table, the export column and the import line would have to be split by country of destination or origin.

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17 For the sake of completeness it should be pointed out that final use in the region consists of household and government consumption, gross fixed capital formation on the part of industry and the government, changes in stocks and export to other countries.

Fig. 1. Input-output table for 3 regions and 2 branches according to "balance" (Amsterdam) method (Imaginary figures)

	Intermediate and primary costs for branches in :						Final use							TOTAL
	Region A		Region B		Region C		of region A	of region B	of region C	Exports to other countries 1)	Balance of supplies to others regions by			
	Branch 1	Branch 2	Branch 1	Branch 2	Branch 1	Branch 2					Region A	Region B	Region C	
1. Supply of goods and services of Netherlands branches														
to region A														
by branch 1	90	80					110			40	-20			300
by branch 2	20	40					70			70	50			250
to region B														
by branch 1			60	90				60		80		110		400
by branch 2			50	70				60		80		40		300
to region C														
by branch 1					70	70			140	60			-90	250
by branch 2					80	60			120	30			-90	200
2. Imports from other countries	90	50	100	40	20	30								330
3. Primary costs	100	80	190	100	80	40								590
TOTAL	300	250	400	300	250	200	180	120	260	360	30	150	-120	x

1) From the respective regions

Fig. 2. Input-output table for three regions and two branches according to the non-balance (Groningen) method (Imaginary figures)

	Intermediate and primary costs for branches in :						Final use							TOTAL
	Region A		Region B		Region C		Within the regions from :			exports to other countries 1)	Supplies to the other regions by :			
	Branch 1	Branch 2	Branch 1	Branch 2	Branch 1	Branch 2	Region A	Region B	Region C		Region A	Region B	Region C	
1. Supplies of goods and services of Netherlands branches														
to region A														
by branch 1	20	30					20			40	190			300
by branch 2	10	10					10			70	150			250
to region B														
by branch 1			10	10				20		80		280		400
by branch 2			20	20				10		80		170		300
to region C														
by branch 1					20	10			40	60			120	250
by branch 2					40	20			40	30			70	200
2. Supply by other regions to :														
region A	80	80					150							310
region B			80	130				90						300
region C					90	100			180					370
3. Imports from other countries	90	50	100	40	20	30								330
4. Summary of costs	100	80	190	100	80	40								590
TOTAL	300	250	400	300	250	200	180	120	260	360	340	450	190	x

1) From the respective regions

Fig 3. Input-output table for 3 regions and 2 branches according to the integral method (Imaginary data)

	Intermediate and primary costs of :						Final use				TOTAL
	Region A		Region B		Region C		of region A	of region B	of region C	Exports of goods and services 1)	
	Branch 1	Branch 2	Branch 1	Branch 2	Branch 1	Branch 2					
1. Supply of goods and services of Netherlands branches											
to region A											
by branch 1	20	30	40	40	20	10	20	30	50	40	300
by branch 2	10	10	20	40	10	20	10	30	30	70	250
to region B											
by branch 1	50	20	10	10	30	50	80	20	50	80	400
by branch 2	10	20	20	20	30	20	40	10	50	80	300
to region C											
by branch 1	20	30	10	40	20	10	10	10	40	60	250
by branch 2	-	10	10	10	40	20	20	20	40	30	200
2. Imports from other countries	90	50	100	40	20	30	-	-	-	-	330
3. Primary costs	100	80	190	100	80	40	-	-	-	-	590
TOTAL	300	250	400	300	250	200	180	120	260	360	x

1) From the respective regions

UNITED KINGDOM

Central Statistical Office
London

UK REGIONAL ACCOUNTS - SOURCES AND METHODS

History

1. Following the production of several estimates by academics of gross domestic product (GDP) for the countries of the United Kingdom in the late sixties and early seventies, the first official estimates, which also covered the English regions, were published by the Central Statistical Office in 1973. The main development in the work since then has been spurred by involvement with the European Communities. ESA regional accounts were first produced, for 1971, in 1976; the regional accounts of local government were first produced for 1977 in 1979, and Level III estimates of GDP for 1977 were produced in 1981. This year; 1982, has seen the provision of ESA regional accounts for 1977 and 1978, of local authority regional accounts for 1979 and of Level III GDP for 1979.

Organisation

2. The regional accounts estimates are produced by the United Kingdom Central Statistical Office (CSO). Statistical tasks which involve the use of data from different official sources fall to the CSO and the regional accounts is a good example of such a task. The accounts are produced by a team of three people, two of whom spend half their time on other work.

SECTION I: THE UK SYSTEM OF REGIONAL ACCOUNTS

I.1. Outline of the system

3. The estimates are first published annually in the November issue of the official monthly magazine, "Economic Trends".
The regular tables show:

- Gross domestic product at factor cost
- Gross domestic product by industry group
- Factor incomes in the gross domestic product
- Taxes on expenditure and subsidies
- Total personal income
- Personal disposable income
- Consumers' expenditure
- Gross domestic fixed capital formation (GDFCF) by selected industry groups
- GDFCF by purpose of government

I.2 Statistical units and classifications

Statistical units

4. In the various data sources used, the unit of observation ranges from the individual to a complete local authority. However, the most important to note in this context is the establishment, a unit which typically covers all land and buildings at the same address and affects a large proportion of GDP. The industrial classification of an individual's pay or of a factory's estimated profit, for instance, depends on the industrial classification of the establishment in question. An establishment with output appropriate to more than one industry is normally classified wholly according to the industry of its main output.

Classifications

5. The industrial classification used is the UK Standard Industrial Classification - SIC (1968). GDP estimates are made for 27 industrial groups and aggregated to 12 for publication. From 1983, a revised classification, SIC (1980), will be used. The orders (the main industry headings) of the SIC (1968) are as follows:

SIC Order	Description
I	Agriculture, forestry and fishing
II	Mining and quarrying
III	Food, drink and tobacco
IV	Coal and petroleum products
V	Chemicals and allied industries
VI	Metal manufacture
VII	Mechanical engineering
VIII	Instrument engineering
IX	Electrical engineering
X	Shipbuilding and marine engineering
XI	Vehicles
XII	Metal goods not elsewhere specified
XIII	Textiles
XIV	Leather, leather goods and fur
XV	Clothing and footwear
XVI	Bricks, pottery, glass, cement etc
XVII	Timber, furniture, etc
XVIII	Paper, printing and publishing
XIX	Other manufacturing industries
XX	Construction
XXI	Gas, electricity and water
XXII	Transport and communication
XXIII	Distributive trades
XXIV	Insurance, banking, finance and business services
XXV	Professional and scientific services
XXVI	Miscellaneous services
XXVII	Public administration and defence

In the regional accounts, two further "pseudo-industries" are also employed, namely "ownership of dwellings" and "adjustment for financial services".

6. In preparing estimates of General Government GDFCF by purpose, the ESA purpose classifications are used to give the following groups:

General administration and defence	ESA groups 1 and 2
Education	ESA group 3
Health and social services	ESA groups 4 and 5
Housing and community development	ESA groups 6 and 7
Economic services	ESA group 8

I.3 GDP at factor cost

7. Definition: The sum of factor incomes, ie the incomes of UK residents, whether individual or corporate, which are derived directly from the current production of goods and services.

Sources

8. In the national accounts, data are used from Inland Revenue tax records, local authority accounts, accounts of public corporation, social security statistics, the annual census of production, household surveys and a number of other sources.

9. In the regional accounts the basic approach is to estimate factor incomes separately and to constrain to the UK totals in the national accounts. The following sections give a resumé of the sources and methods used for each factor income.

I.3 (a) Income from employment

10. Income from employment is the largest component of GDP at factor cost, accounting for about 70 per cent of the total. It comprises:

- wages and salaries in cash and in kind
- employers' contributions to national insurance, etc. and other pension schemes
- pay of HM Forces

11. Regional totals for the wages and salaries of the civilian population are set by figures from the 1 per cent sample of pay national insurance held on the Department of Health and Social Security computer at Newcastle (the same source as that used for national accounts). Industrial breakdowns of these figures are obtained by taking, for men and women separately, regional pay averages by industry from the New Earnings Survey (an annual 1 per cent survey) together with numbers of employees in employment from the Census of Employment. The estimates thus obtained are pro-rated both to (i) the regional totals already described and (ii) industrial totals from the national accounts by means of a two-way iterative grossing procedure. Employers' contributions are allocated pro-rata to wages and salaries.

12. Forces' income (including employers' contributions) is allocated in two stages. Income accruing to forces based in the United Kingdom is allocated in proportion to the numbers of forces resident in each region. The income of forces stationed overseas is distributed in proportion to the resident population of each region.

I.3 (b) Income from self-employment

13. Income from self-employment accounts for about 9 per cent of factor incomes in the gross domestic product. The main data source in this case is tax assessments of self-employment income by Inland Revenue. A sample of these assessments produces estimates of self-employment income by region and industry which are constrained to the corresponding national accounts total for that industry. A difficulty here concerns manufacturing industries in England: the Inland Revenue data extends only to a single total for all manufacturing industries. First estimates of the amounts in each English region x manufacturing industry cell are obtained by pro-ration using the

numbers of self-employed (by industry and region) observed in the 1971 Census of Population. The two-way iterative grossing procedure is then used to pro-rate these to the regional and industrial controls for manufacturing industries already obtained.

I.3 (c) Profits and surpluses

14. Profits and surpluses include the gross trading profits of companies and the gross trading surpluses of public corporations and general government enterprises.

15. Estimates in the national accounts are derived from tax data held by Inland Revenue; since these data do not have a regional dimension, regional profits (this term is henceforth used to include surpluses) must be estimated. For the manufacturing industries this is done by taking gross value added less income from employment for each establishment in the annual census of production. This gives a first set of estimated profits by region and by industry. These results are pro-rated to industrial totals from the national accounts.

16. For the non-manufacturing industries, profits are generally allocated to regions in proportion to employment. Data are available from the Department of Energy which enable estimates to be made of the offshore profits of the oil and gas extraction industries, which are allocated to the Continental Shelf.

I.3 (d) Stock appreciation

17. Gross domestic product is defined as the sum of factor incomes less stock appreciation. The latter is that element of the annual change in book values of stocks which arises from changes in the prices of goods held in stock. As there are no relevant price indices available to measure regional variations, national accounts personal sector stock appreciation is allocated between regions in proportion to self-employment income, and the remainder in proportion to the profits in each industry group.

I.3 (e) Rent and the Imputed charge for consumption of non-trading capital (ICCC)

18. Rent and ICCC amount to about 8 per cent of GDP at factor cost. Rent income is that derived from the ownership of land and buildings, after deducting expenditure by the owners on repairs, maintenance and insurance. A substantial proportion of land and buildings is owner-occupied, and for these assets no rent is paid, although in the national accounts income is imputed to the owners of private dwellings and in respect of property owned by private non-profit-making bodies and government, representing the amount that the owner might receive if the accommodation was let un-furnished and if the tenant was responsible for paying rates, repairs and insurance. The owner is therefore viewed as letting the property for a certain rent to himself as occupier. For government and private non-profit-making bodies the imputed charge is based on estimated capital consumption for the property concerned. For owner-occupied business premises however, no rent is imputed. Instead, the economic benefits of ownership are implicitly included in the trading profits of these enterprises.

19. Estimates of rent are built up from six separate components, viz. business rent, central government rent and ICCC, local authority rent and ICCC, private rent, the ICCC of private non-profit-making bodies and agricultural rent.

20. The methods used for allocating the components of rent income by region are, as far as possible, regional adaptations of those used for the national accounts estimates.

Business rent

21. The UK total for business rent is based upon rateable values of commercial property excluding shops and dwellings combined, with adjustments to reflect changing business rent levels over time, using a specially constructed index of business rents. The regional allocation is based on similar data: rateable values of commercial property are available by region. The national total for business rent is allocated to regions in proportion to these figures. Implicit in this treatment is the assumption that the proportions of business property rented rather than owner-occupied are the same in all regions.

Central government rent and ICCC

22. Nearly all of the central government total is an imputed element based on capital consumption of the properties concerned. The regional allocation is made separately for public health services using the number of beds in each region to indicate the regional distribution of premises, and for public administration and defence using the number of civil servants in post and the distribution of the Forces.

Local authorities

23. Local authority rents include rent of dwellings and the imputed charge for capital consumption of land and buildings owned by the local authorities, other than those that are part of trading activities. In the national accounts local authority rents of dwellings are based on the operating surpluses of local authority housing revenue accounts. The national accounts estimates include separate figures for England and Wales, Scotland and Northern Ireland. These components are used directly in the regional accounts.

24. For the regions of England and Wales, analysis of local authority returns to the Department of the Environment provides the necessary regional information. The local authorities' imputed charge for capital consumption is estimated using numbers of local authority employees as regional indicators.

Private dwellings

25. Rent of private dwellings is estimated separately in four components:

- rent paid to private landlords
- owner-occupiers' imputed rent
- ground rent of owner-occupiers
- imputed rent of rent-free dwellings

26. Data on average household rents, rates and water charges are extracted from the Family Expenditure Survey (FES, a household survey) for both furnished and unfurnished accommodation. After smoothing to reduce the effects of sampling fluctuation, these estimates are grossed up using independent estimates of the numbers of privately rented dwellings in each region.

27. The largest element in the rent of private dwellings is owner-occupiers' imputed rent. Like the national accounts, the regional accounts use FES data on imputed rent (derived from rateable values updated by a "full cost rent index" for each country of the UK). These results are also smoothed to reduce the effects of sampling fluctuations. Ground rent is pro-rated to imputed rent. The small national figure for the imputed rent of rent-free dwellings is distributed by region according to estimates of the numbers of rent-free dwellings in each region.

The ICCC of Private non-profit-making bodies

28. This item is allocated to regions by taking 35 per cent of the UK total in proportion to the wages and salaries paid by universities, and the remainder in proportion to employment in religious organisations and other services.

Agricultural rent

29. In accordance with national accounts conventions, agricultural rent is allocated to regions according to the combined distribution of business and central government rent.

I.4 Allocation of taxes and subsidies (production method)

30. The allocation of taxes and subsidies to production is not done within the framework of the UK national accounts, but as a special exercise to produce ESA estimates for SOEC. However, estimates based on the ESA principles are produced for the UK regional accounts. Sources and methods are as follows.

Taxes

31. Value added tax (VAT) and stamp duty are distributed using regional GDP in the appropriate order groups.

32. The duties on alcoholic drink, tobacco and hydrocarbon oils are allocated in proportion to regional net output in the industries concerned.

33. Betting and gaming duties are allocated in proportion to employment in this industry.

34. Car tax is allocated according to the numbers of new car registrations, since it is a tax on cars being registered for road use.

35. Estimates of motor vehicle licence duties receipts for England, Scotland, Wales and Northern Ireland are provided by the Department of Transport and constrained to the UK national accounts total. The regions of England are allocated by sub-dividing the total into classes of vehicles and distributing each according to the numbers of vehicles currently licensed in each category.

36. Rates are distributed across the regions on the basis of returns to the Department of the Environment showing net rate income from local authorities.

37. Customs/protective duties and agricultural levies are treated as taxes on imports. Royalties and other taxes on seaward activities are allocated to the continental shelf region.

38. Estimates of television contractors' payments are received from the Home Office and used to allocate the national accounts total; most other miscellaneous Central Government taxes are allocated proportionally to the regional breakdown of other central government taxes.

Subsidies

39. The range of subsidies in the United Kingdom has varied over time and the usual approach in the regional accounts is, where possible, to seek data on the regional breakdown of subsidy receipts. For current subsidies, this has proved possible for housing subsidies, most of transport subsidies and some employment subsidies. Agricultural subsidies are distributed in accordance with GDP in that industry. Assistance to the coal industry is allocated in proportion to the output of coal by region. The remainder of other subsidies are pro-rated across the regions according to the total of all other subsidies allocated, though some estimates for Scotland and Northern Ireland are obtained from departmental records.

I.5 Personal income

Total Personal Income

40. Total personal income includes income from employment and income from self-employment, both of which have been already derived for regions as part of the calculations for regional GDP. Other items not included in GDP comprise some rents, dividends and net interest received by the personal sector, national insurance benefits received by persons, and other current grants from public authorities. The methods used to allocate these items are described below.

41. Rents, dividends and net interest can be divided into receipts of life assurance and superannuation funds, and 'other' receipts. Receipts of life assurance and superannuation funds are allocated by region in proportion to the contributions from which these funds are built up. Firstly, the national accounts total is roughly divided between life assurance and superannutaion schemes. The life assurance receipts are pro-rated across regions using employers' contributions as an indicator. Superannuation receipts are allocated using weighted information from the FES.

42. The imputed rent of owner-occupiers has already been allocated by region as part of the GDP estimates, as described above. The remaining part of the rents, dividends and net interest receipts by the personal sector is allocated using the category 'total investment income' provided by the Inland Revenue Survey of Personal Incomes.

43. National insurance benefits and other current grants break down into scholarships and maintenance allowances etc, grants to universities and colleges, rent rebates and allowances, social security benefits, and other. Scholarships etc are allocated using numbers of students in full-time education. Grants to universities and colleges are allocated using

exchequer grant information from published sources. Information on rent rebates and allowances for England and Wales, Scotland and Northern Ireland are available from the national accounts; England and Wales is allocated using the regional distribution of rebates and allowances compiled from local authority returns, published by CIPFA. Social security benefits are broken down into the major benefits by the national accounts. These totals are used to constrain Department of Health and Social Security regional estimates of cash expenditure on those benefits; a residual amount for which no breakdown is available is distributed according to the total allocated. The remaining part, other current grants, is distributed using the sum of all current grants allocated.

44. The imputed charge for capital consumption of private non-profit making bodies has already been estimated by region as part of rent income; transfers to charities, a small item, is allocated using the regional distribution of all other components of personal incomes.

Personal disposable income

45. A number of items must be subtracted from total personal income to give personal disposable income. These are:

Net transfers abroad
Taxes paid abroad
UK taxes on income: payments
National insurance, etc contributions

46. There is no regional information on taxes paid abroad or on transfers abroad, and these are allocated in proportion to population.

47. Payments of taxes on income by the personal sector are allocated using estimates of tax payments provided by the Survey of Personal Incomes, a sample of tax records conducted by Inland Revenue. The five major categories of national insurance contributions, employers, employees, self-employed persons, HM Forces, and non-employed persons, are treated separately. Employees' contributions are distributed by region using the proportions already calculated for employers' contributions. The contributions of HM Forces (both for employers and insured persons) are allocated in proportion to Forces' income, and those of the self-employed in proportion to the numbers of self-employed persons. The remainder for non-employed persons and payments in lieu of graduated conditions is very small and is distributed in proportion to the sum of the other categories.

I.6 Consumers' Expenditure

48. Consumers' expenditure is defined in the national accounts as the sum of the expenditures on goods and services by households, other individuals and non-profit-making bodies serving persons, all of which are resident units in the United Kingdom. The total thus includes expenditure abroad by resident consumers and excludes expenditure in this country by foreign residents. These last two items are shown in the national accounts as adjustments and are not disaggregated by category of expenditure. The expenditure categories shown therefore relate to total expenditure within the United Kingdom, irrespective of whether this is incurred by UK or foreign residents.

49. The regional accounts attempt to follow the same principles for consumers' expenditure as in the national accounts - namely to define the regional totals in terms of expenditures by residents. Regional estimates have been built up more directly however, in terms of expenditures by residents, for which the major data source used is the Family Expenditure Survey (FES). Although the regional estimates are defined in an analagous way to the national totals, the data sources are somewhat different. In general the regional accounts, by placing greater reliance on the FES, use a much more limited range of data than the national estimates, which also make use of statistics of supplies, retail sales and other statistical surveys, data from nationalised industries, and excise duties for certain items.

50. The regional estimates of consumers' expenditure using the FES require national totals for each category defined on a residence basis, in order to provide controls. It is necessary, therefore, to adjust each category for this non-residents' expenditure, and this is done by allocating the total of expenditure by foreign tourists, etc, in the United Kingdom to the individual categories using a set of weights obtained for Great Britain from surveys by the British Tourist Authority, and for Northern Ireland by the Northern Ireland Tourist Authority.

Estimates based on the Family Expenditure Survey

51. The FES provides estimates of household expenditure by detailed category for all of the standard regions. The sample is balanced at regional level, but the effective sample size is quite small (some 7,000 responding households), so that sampling errors at the regional level, even for fairly broad groupings of expenditure, can be significant. The FES regional data are aggregated to the expenditure categories shown in the national accounts, corrected to a per head basis, grossed up for each region by the regional population, and then expressed as a percentage of the UK total. Finally a moving average over three successive years (with weights 1:2:1) is used to provide a smoothed estimate for the central year of the period.

Other sources

52. There are a few items which are either not covered by the FES, or for which better regional estimates may be obtained by alternative means. The methods used for these are briefly described below:

53. Betting and gaming. Consumers' expenditure on this item is allocated by region in proportion to the regional population aged over 15.

54. Wages and salaries, etc, paid by non-profit making bodies. These are not covered by the FES and have therefore to be allocated by region using alternative means. About one-third of the total represents the wages and salaries paid by universities and these are allocated by region of location of the universities using data from "Statistics of Education", which gives information for individual universities. This treatment is also consistent with that according to the region of location of the student, the ultimate consumer of university services, which is also taken by convention to be in accordance with his or her term-time residence. No information is readily available for the remaining non-profit-making bodies, which include charities, trade union, religious organisations, friendly societies, housing associations, etc, and the wages and salaries of these are allocated accordingly to the regional employment in religious organisations and other services.

55. Income in kind not included elsewhere. Income in kind received by the Forces is allocated in proportion to the number of Forces stationed in each region. Merchant seamen's and fishermen's food is allocated in proportion to employment in fishing and sea transport combined. The rest is distributed using regional population

56. Consumers' expenditure abroad. Expenditure abroad is allocated to the region of residence of the traveller using weights provided by the National Travel Survey, and data from the Northern Ireland Tourist Authority.

I.7 Fixed Investment

57. Three main types of analysis of gross domestic fixed capital formation are published at the national level - by industry of ownership, by asset and by institutional sector. In the regional accounts the only analysis on these lines is that by industry, although results for the public authorities' sector are also identified, and are broken down by function or purpose. The industrial coverage is not complete: owing to a lack of suitable data regional estimates are not made for construction, shipping, transport and communication, distribution and other services.

58. The procedures for estimating regional fixed investment follow the pattern observed in many other parts of the regional accounts, namely to use the best regional indicator available for each category as a means of allocating the national total derived as part of the national accounts. In the great majority of cases the indicators used are direct measures of the value of fixed investment in the regions. Indirect indicators are used for parts of fixed investment in certain central government services, for which a full territorial analysis is not readily available from departmental records, for parts of other mining and quarrying and transport, and for forestry and fishing. The main sources of information and the methods used for each industry are as follows.

Agriculture, forestry and fishing

59. Fixed investment in agriculture by region is estimated from enquiries conducted by the Ministry of Agriculture, Fisheries and Food.

Mining and quarrying

60. Estimates of fixed investment by the coal mining industry are provided by region by special analyses prepared by the National Coal Board. Fixed investment by the oil and gas extraction industry is located mainly in the Continental Shelf region, which is taken as the residual after deductions from the national total for the small amounts of investment onshore have been made, based on information from the Department of Energy. There is no regional information on fixed investment by the rest of the mining and quarrying industry and this is allocated by region using employment.

Manufacturing

61. The annual censuses of production provide regional analyses of fixed investment in manufacturing - a five-fold breakdown by industry groups within the total is published in "Regional Trends".

Gas, electricity and water

62. Regional estimates of fixed investment by the gas and electricity industries in England and Wales are provided by special analyses for financial years provided by the Gas and Electricity Councils. The data for gas are in terms of non-standard regions, and these are roughly converted to standard regions, using population. Similar data is available for Scotland and Northern Ireland from returns provided by the corporations to the government. Regional estimates of investment by the water industry are built up separately for the local authority undertakings, the public corporations and the private sector. Separate figures for Scotland and Northern Ireland, and for the local authorities in the regions of England and Wales, are available from government records. Fixed investment by the regional water authorities in England and Wales are apportioned to standard regions from the regional water authority areas using approximate methods based on population. The relatively small amounts of investment by private water undertakings are allocated mainly to the South East region, where the great majority of them are located.

Transport and Communications; Distribution; Insurance, banking and finance and business services; Other private services; Transfer costs

63. As explained in the introduction to this section, no regional estimates of fixed investment are made for these industries.

Dwellings

64. The public sector and private sector components of fixed investment in new construction work in dwellings are allocated separately. Capital payments for new housing work by local authorities are available from returns to the Department of the Environment, and investment by new town corporations, the Scottish Special Housing Association and the Northern Ireland Housing Executive may also be easily assigned to standard regions. Housebuilding by central government, a relatively small proportion of the total public sector, is allocated according to the numbers of service personnel normally stationed in each region.

65. Reliable regional data on the values of housing construction work by the private sector is not available, and the regional estimates are based on averages of the numbers of housing starts and completions, adjusted by estimated regional value indexes for new housing construction. These indexes are compiled from average dwelling prices less price per plot of housing land. These figures are prepared for standard regions by the Department of the Environment (DoE) and the Building Societies Association. Corresponding estimates are made for Northern Ireland.

GDFCF of General Government by purpose

66. National accounts estimates of GDFCF for local authority and central government are disaggregated by function and allocated to ESA purpose group.

67. For Central Government, an appropriate regional indicator is chosen for each item. These range from direct measures of the type of capital expenditure involved (Roads and Health - about two-thirds of central government GDFCF) to numbers of civil servants employed in relevant Departmental groups (most of the remaining one-third).

68. For local authorities, figures for England and Wales, Scotland and Northern Ireland are obtained direct from national accounts data. For England and Wales, regional figures are derived by pro-ration using financial year data from relevant sectors of regional local authority capital payments returns supplied to the Department of the Environment.

I.8 The reliability of the estimates

69. Margins of error in the regional accounts are very difficult to judge. For each item the national control is provided by the national accounts, so that errors introduced by the allocation to regions are additional to those which already exist in the national accounts. The reliability of the estimates clearly reduces as one moves (i) from census data to large sample data to small sample data and also (ii) from direct measures to proxy indicators. Similarly, when sample data have been used, reliability will be inversely related to sample size and hence to regional population: the largest region, the South East, with a population of 17 million will yield more reliable results than East Anglia, with a population of less than 2 million.

70. Against these criteria, much of GDP scores highly, while the consumers' expenditure estimates and some parts of GDFCF do not do so well because of their reliance on the Family Expenditure survey and on indirect indicators. However, it is felt that all of the estimates are accurate enough to enable valid comparisons between regions to be made.

SECTION II: ESA REGIONAL ACCOUNTS

II.1. Accounts for branches

71. The basic approach to estimating regional accounts by branches of industry is to adapt the UK regional accounts to ESA requirements. To achieve this, two types of adjustment are necessary:

(i) Conversion from UK statistical units to the equivalent of "units of homogeneous production"

(ii) Conversion from the UK industrial classification (SIC) to NACE-CLIO

72. In each case, the adjustments are effected at regional level using the same methods as applied by CSO at national level. The calculations are based on the latest available input-output tables.

II.1.1 <u>Compensation of employees</u>

73. Regional estimates of compensation of employees are already available, by SIC industry, from the UK regional accounts (income from employment, described above).

74. First, estimates for "market services" (Branches 69 and 74 and "non-market services" (branch 86) are derived from SIC orders XXIV to XXVII by splitting the estimates for orders XXV and XXVI. This is done in order to match the industry breakdown of the input-output tables. Income from employment in market services is estimated by taking the figures for SIC orders XXIV, XXV and XXVI, and subtracting estimates for the non-market services included in them. These non-market service are public sector health (pro-rata employment in medical and dental services), private

domestic services (pro-rata numbers in service), private non-profit making bodies (pro-rata employment in other services) and local authority eductional series (pro-rata numbers of teachers). Income from employment for non-market services consists of order XXVII (Public administration and defence) plus the four categories above.

75. The data are then converted to the basis of "units of homogeneous production" by means of a program which, using input-output tables of output by industry x commodity (the "make matrix"), reallocates the compensation of employees from a classification based on the main industry of each establishment to a classification based directly on the relative outputs of each commodity.

76. The next step is to convert from SIC to NACE-CLIO. This is achieved by means of a conversion routine based on a reconciliation between the two classifications resulting from studies by the input-output branch of CSO. Although the current estimates (those for 1977 and 1978) are based on conversion from the old SIC (formulated in 1968), future estimates will be based on conversion from the new SIC (1980), which is designed to be congruent with NACE. The scope for error from this source in the future estimates will thus be much reduced.

77. At the final stage, for consistency, the regional estimates thus obtained of the compensation of employees by branch are pro-rated to the national estimates. The wages and salaries of non-residents (not allocated by region) are added to branch 86.

II 1.2 Gross value added (GVA) at factor cost

78. Gross value added can be seen as comprising two components, viz:

(i) Compensation of employees
(ii) profits and surpluses, self-employment income, rent, imputed charge for capital consumption, less stock appreciation.

79. The first component, compensation of employees, has already been dealt with. The second component is simply the remainder of GDP at factor cost from the UK regional accounts, the gross operating surplus. However, the modifications made to market and non-market services differ. Market services is estimated by taking the gross operating surplus in orders XXIV, XXV and XXVI, adding the residual error (pro-rated to income from employment in orders XXV, XXVI) and deducting the imputed output of bank services, and the imputed changes for non-trading capital consumption in local authority education services and public health service (all estimated as part of the UK regional accounts). Rent from the ownership of dwellings (local authority rent, owner-occupiers' imputed rent and private rent) is added to the total at a later stage. Non-market services are made up of the gross operating surplus in order group XXVII, plus the imputed changes for consumption of non-trading capital deducted from market services.

80. The procedures to convert gross operating surplus data to units of homogeneous production are much the same as those already described above, based on UK input-output data. The final results are again constrained to the UK ESA branch totals, with an adjustment for the continental shelf region in Branch 06. By adding the results for (i) and (ii), estimates are obtained of Gross value added at factor cost by region and by NACE Branch (RR17).

II. 1.3 Taxes and subsidies linked to production and imports

81. The estimates provided for ESA differ from those published in the UK regional accounts in three main respects, viz:

(i) Value added tax is excluded
(ii) Consumers' expenditure on vehicle licence duty, driving licences and fees and fines is excluded
(iii) Taxes on imports are adjusted to include tobacco duty, parts of the alcholic drink duties, other customs and excise duties and some hydrocarbon oil duty.

82. The methods used are the same as those described above for the regional accounts, except that some taxes are excluded. The allocation to industry is consistent with that provided by CSO at the national level.

II. 1.4 Gross fixed capital formation

83. These figures are taken direct from the UK regional estimates: the selected industries compiled in the UK regional accounts are allocated to the appropriate NACE branches as follows:

Agriculture, forestry and fishing - all in branch 01
Mining and quarrying - all in branch 06
Gas electricity and water - all in branch 06
Manufacturing - :
Coal and petroleum products - all in branch 06
Chemicals and metal manufacturing - all in branches 13 and 17 combined
Engineering and allied industries - all in branches 19 and 28 combined
Food, drink and tobacco - all in branch 36
Textiles, leather and clothing - all in branch 42
Other manufacturing - all in branches 15, 47 and 50 combined

Air transport	- all in Branch 60
Harbours docks and canals	- "
Communications	- "
Road passenger transport	- "
Road Haulage	- "
Railways	- "

Adjustments to regional accounts data are only necessary for coal and petroleum products: this is not compiled separately from chemicals and metal manufacturing, and is allocated according to employment in Order IV (Coal and petroleum products).

II 1.5 Wage and salary earners
84. The source data are numbers of wage and salary earners from the UK Census of Employment. As with the components of Gross Value added, after adjustments for market and non-market services, these are first converted to a basis of "units of homogenous production" and then from SIC orders to NACE-CLIO as described above.

II 1.6 Self-employed persons

85. The source for this information is the 1971 census of population.

II. 2 Accounts for households

II. 2.1 to II. 2.6

86. Separate estimates for these items are not given.

II. 2.7 Disposable income

(a) Gross Disposable income

87. The approach adopted here is again one of adapting the UK measure - personal disposable income - to meet ESA definitions, which differ from UK definitions, and are implemented, in the following ways:

88. Life assurance and occupational pensions: in the UK national accounts, life assurance companies and occupational pension schemes are included in the personal sector, and personal income includes the net contributions to these funds. Under ESA conventions however, it is benefits from these sources that form the corresponding component of personal income.

89. Accordingly, net contributions are removed from personal disposable income and replaced by benefits. Regional allocation of the former assumes a distribution which follows the pattern of wages and salaries, while regional data on receipts of occupational pensions from the Inland Revenue's Survey of Personal Incomes are used to give the regional spread of benefits.

90. Taxes (vehicle licence duties). Contrary to UK practice, vehicle licence duties on private cars are regarded as a tax on income. These therefore have to be deducted from personal disposable income. Regional allocation is effected according to the numbers of cars with current licences.

91. Taxes (capital gains tax). Under the ESA system, taxes on capital are also deducted. This is achieved by deducting capital gains tax from personal disposable income. Regional allocation is based on regional data of receipts supplied by the Inland Revenue.

92. Stock appreciation of the personal sector. This item also has to be subtracted from personal disposable income: a regional breakdown is readily available from the UK regional accounts estimates.

(b) Net disposable income

93. Under the ESA system, net disposable income is equal to gross disposable income less the capital consumption of the household sector. Figures for the capital consumption of the personal sector are available from the UK national accounts. Regional breakdowns are achieved by splitting the estimates into (i) dwellings and (ii) other fixed assets. The former are allocated to regions in proportion to the rent of private dwellings, while the latter are set in proportion to self-employment income.

II. 2.8. Consumers' expenditure

94. Again the method used is to adapt the estimates made for the UK regional accounts, the methodology of which is described above. Two adjustments are needed to convert from UK to ESA conventions, as follows:

95. Vehicle licence duties on private vehicles, regarded as a tax on expenditure in the United Kingdom, but as a tax on income under ESA conventions, have to be deducted from the UK consumers' expenditure estimates. As noted above, a regional allocation is achieved according to the regional distribution of current licences.

96. Expenditure by foreign tourists etc. For ESA, two alternative definitions of consumers' expenditure are required: (i) expenditure by United Kingdom residents and (ii) expenditure within the United Kingdom. The first definition accords with the United Kingdom estimates. To achieve the second, expenditure abroad by United Kingdom residents must be deducted and expenditure by foreign residents in the United Kingdom must be added. National aggregates are available in both cases from the national accounts. A regional breakdown of expenditure abroad by United Kihgdom residents is available from the UK regional estimates. Regional estimates of expenditure in the United Kingdom by foreign residents are effected using data on the numbers of nights spent by foreign tourists in the different regions, the distribution of US forces in the United Kingdom and information on the distribution of foreign students.

97. For ESA, the consumers' expenditure estimates are split into separate figures for (i) food, drink and tobacco and (ii) "other". This subdivision falls readily out of the UK estimates.

II.3 Accounts for general government

98. There exists in the United Kingdom a system of statistical returns from local to central government which gives a full and detailed coverage of local authority receipts and expenditure. Separate data for England and Wales, Scotland and Northern Ireland are collected in the course of constructing the national accounts of general government for the United Kingdom, and this information has been used directly.

99. For the regions of England and Wales, the estimation of the accounts reduces to the straightforward but onerous task of bringing together the appropriate information for the groups of local authorities which comprise the standard regions. The data are available for financial years ended 31 March. Regional breakdowns are obtained for financial years and pro-rated to the corresponding calendar year totals derived from the national accounts.

II.3.1 Current expenditure of local government

100. To estimate the total current expenditure of local authorities according to the components set out in Table S62 of the ESA publication "General government accounts and statistics" would involve the collation of a very great deal of data. However, many of the different components include as negative amounts items which appear in other components as positive amounts. After elimination of these self-cancelling items, one is left with a definition of total current expenditure as follows for 1979.

	£ million
Current expenditure on goods and services	14,637
Subsidies	1,947
Gross interest	3,472
Local authority housing and transport subsidies	737
Local authority pensions	671
Rent rebates	197
Other miscellaneous current transfers	711
less:	
Pensions	- 456
Gross trading surplus	- 129
Rent	-2,588
TOTAL CURRENT EXPENDITURE	19,199

101. The local authority data which equate to these components are collated by region, pro-rated to the calendar year totals and summed to give an estimate of the total current expenditure of local authorities.

102. Components of total expenditure specifically requested by SOEC are estimated separately, as follows:

R10: Actual compensation of employees

103. this item comprises, for 1979:

	£ million
Gross wages and salaries	10,601
National insurance	510
Superannuation	607
	11,718

104. Data for wages and salaries (excluding wages and salaries charged to capital account) are extracted direct from local authority returns. National insurance contributions are deemed to be proportional to wages and salaries. Employers' superannuation contributions (funded schemes) are also extracted direct from local authority returns.

R30: Subsidies

105. This item comprises, for 1979:

	£ million
Local authority subsidies to housing	372
Local authority subsidies to passenger transport etc	365
	737

R64: Social benefits

106. This item comprises, for 1979:

	£ million
Local authority pensions paid	671
Local authority sick pay	260
Rent rebates	197
	1,128

107. Both items R30 and R64 are estimated by extracting the equivalent regional data from local authority returns for the financial year 1979/80 and pro-rating to the given calendar year totals from the national ESA accounts. Since there are no transfers from local to central government in the United Kingdom, there is no value for R65.

II.3.2 Capital expenditure

P41 Gross fixed capital formation of general government by purpose

108. Estimation of this item is effected for the United Kingdom regional accounts and is described above in section I.7.

R71 Investment grants

109. Local authorities: the regional spread of investment grants by local authorities is determined by recourse to the appropriate local authority returns. Allocation by group of function is determined by the purpose of each grant. The grants in question include improvement grants (housing), clean air grants and grants to Passenger Transport Executives.

110. Central Government: because of the large variety of investment grants from central government and the lack of collated regional data in the many different government departments involved, it is not possible to provide a regional breakdown of this item.

II.3.3 Current receipts of local government

111. As with expenditure, local authority receipts are estimated direct from local authority returns to central government. there are no taxes on income and wealth (R61), and R20 (taxes related to production and imports) consists solely of local authority rates, a tax on occupiers of dwellings based on the rent which the accommodation could command in the market. This item amounted to £6,526 million for the United Kingdom in 1979. Current transfers from central to local government were £11,429 million in 1979 comprising a wide variety of specific grants. Together these two items accounted for 87 per cent of total current receipts (£20,744 million).

II.3.4 Capital receipts of local government

112. Capital receipts of local government (£351 million in 1979) consist of investment grants from central government (£315 million) and from public corporations (£36 million). Regional breakdowns are estimated directly from local government returns.

II.3.5 Sales of goods and services and own account production (local government)

113. The United Kingdom 1979 total comprises the following:

	£ million
Sales of goods and services -	
Trading receipts from sales	654
Non-trading receipts from sales	1,577
Housing rent receipts	1,990
	4,221
Production on own account	502
TOTAL	4,723

114. These components are, as usual, estimated directly from the appropriate local authority returns.