

GERMANY

REGIONAL GVA INVENTORY

June 2010, Stuttgart

EUROSTAT

Grant No.: 20201.2008.001-2008.200



Baden-Württemberg
STATISTISCHES LANDESAMT

GERMANY

REGIONAL GVA INVENTORY

June 2010, Stuttgart

This inventory was written within the contractually framework
EUROSTAT Grant No.: 20201.2008.001-2008.200
with the support of EUROSTAT

Jeanette Frey
Dr. Frank Thalheimer

Contact

Dr. Frank Thalheimer
Federal Statistical Office of Baden-Württemberg
Referat 31 - "Wirtschaftswissenschaftliche Analysen,
Volkswirtschaftliche Gesamtrechnungen"
Böblinger Str. 68
70199 Stuttgart
Tel.: 0711/641-2650
Fax: 0711/641-2479
E-Mail: vgr@stala.bwl.de
E-Mail: Poststelle@stala.bwl.de
Internet: <http://www.statistik-bw.de>

CONTENTS

Chapter 1 Summary: Overview of organisation, methodology and sources ..6

- 1.1 Organisation of the statistical process for compiling regional GVA6
- 1.2 Overview of the methodology of regional GVA compilation.....8
- 1.3 Main sources used for the compilation of regional GVA.....9

Chapter 2 Release and Publication Timetable, Revision Policy, Access for the Public10

- 2.1 Timetable for release and publication of provisional and final estimates.....10
- 2.2 Policy on benchmark revisions10
 - 2.2.1 Current revisions10
 - 2.2.2 Major revisions11
- 2.3 Comparability over time11
- 2.4 Transmission to international institutions other than Eurostat11
- 2.5 Accessibility for the public.....11
 - 2.5.1 Website of the Working Group “Regional Accounts” (AK VGR d L)11
 - 2.5.2 Common provision of data from the Federal Statistical Office and Statistical Offices of the Länder12
 - 2.5.3 Publications by the Statistical Offices of the Länder12
- 2.6 Policy for metadata12

Chapter 3 Methodology for the calculation of regional GVA14

- 3.1 Principles applicable to all industries14
 - 3.1.1 Available sources and Information14
 - 3.1.1.1 *Data from specialised statistics*.....14
 - 3.1.1.2 *Benchmarks from the federal state accounts*14
 - 3.1.2 Use of benchmarks and extrapolations15
 - 3.1.3 Treatment of ancillary activities16
 - 3.1.4 Treatment of the extra-regio.....16
 - 3.1.5 Approach to exhaustiveness16
 - 3.1.6 Calculation of FISIM by user industries.....17
 - 3.1.7 Adjustments for commuting.....17
 - 3.1.8 Transition from GVA to GDP17
- 3.2 Specific methods and sources for compiling regional GVA18
 - 3.2.1 Agriculture, hunting and forestry (A).....18
 - 3.2.2 Fishing (B)18
 - 3.2.3 Mining and quarrying (C) and manufacturing (D).....19
 - 3.2.3.1 *Data Basis and Calculation Method*.....21
 - 3.2.3.2 *Regional Distribution***.....24
 - 3.2.3.3 *Features in manufacturing tobacco and refined petroleum products*25
 - 3.2.4 Electricity, gas and water supply (E)26
 - 3.2.4.1 *Data basis and calculation method*.....26
 - 3.2.4.2 *Regional Distribution*.....27
 - 3.2.5 Construction (F).....29
 - 3.2.5.1 *Data basis and calculation method in construction*30
 - 3.2.5.2 *Regional distribution of the GVA in construction*33
 - 3.2.6 Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods (G)33
 - 3.2.7 Hotels and restaurants (H)34
 - 3.2.8 Transport, storage and communication (I)34
 - 3.2.9 Financial intermediation (J)35
 - 3.2.10 Real estate, renting and business activities (K)35

3.2.11	Public administration and defence; compulsory social security (L).....	37
3.2.12	Education (M)	37
3.2.13	Health and social work (N)	37
3.2.14	Other community, social and personal service activities (O)	37
3.2.15	Private households with employed persons (P)	38
3.2.16	Extra-territorial organizations and bodies (Q)	38
3.3	Regional GVA at previous year prices (price-adjusted) and regional growth rates.....	38
Chapter 4 Quality assessment and improvement.....		39
4.1	Self-assessment of the methodology for the compilation of regional GVA.....	39
4.1.1	Quality in the individual industries	39
4.1.1.1	<i>Agriculture, hunting and forestry, fishing (A-B)</i>	39
4.1.1.2	<i>Mining and quarrying (C), manufacturing (D), electricity, gas and water supply (E)</i>	39
4.1.1.3	<i>Construction (F)</i>	40
4.1.1.4	<i>Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods (G)</i>	40
4.1.1.5	<i>Hotels and restaurants (H)</i>	40
4.1.1.6	<i>Transport, storage and communication (I), financial intermediation (J)</i>	40
4.1.1.7	<i>Real estate, renting and business activities (K)</i>	41
4.1.1.8	<i>Public administration and defence; compulsory social security (L), education (M), health and social work (N)</i>	41
4.1.1.9	<i>Other community, social and personal service activities (O)</i>	41
4.1.1.10	<i>Private households with employed persons (P)</i>	41
4.2	Plans for further improvement	41
4.2.1	Mining and quarrying (C), manufacturing (D).....	42
4.2.2	Construction (F).....	42
4.3	Outlook	42
ANNEX 1 Regional accounts publication timetable for the gross domestic product (GDP) and gross value added (GVA).....		43
A 1.1	Overview of the GDP/GVA publication dates at federal state level from year under review (t) 2009.....	43
A 1.2	Publications for the 16 federal states compared at the federal state level	43
A 1.3	District results compared nationwide	44
ANNEX 2 Abbreviations		45
ANNEX 3 Regional GVA Compilation Table		48
A 3.1	NUTS 1 Regions (federal states / Bundesländer).....	48
A 3.2	NUTS 2 Regions (administrative regions / Regierungsbezirke)	49
ANNEX 4 List of Industries		50
A 4.1	Gross value added at current prices (EUR bn.) – industries A to F.....	50
A 4.2	Gross value added at current prices (EUR bn.) – industries G to P	51
A 4.3	Gross value added at current prices (% of GVA) – industries A to F.....	52
A 4.4	Gross value added at current prices (% of GVA) – industries G to P	53
ANNEX 5 Classification of Economic Activities (NACE rev. 1 / WZ 2003)		54

FIGURES and TABLES

Fig.1.1:	Members of the Working Group “Regional Accounts” (AK VGR d L)	6
Table 1.1:	Division of responsibilities and human capacity in the Working Group “Regional Accounts”	7
Table 3.1:	Key indicators and data sources in agriculture and forestry	18
Table 3.2:	Key indicators and data sources in fishing.....	19
Table 3.3:	Key indicators and data sources for sections C and D	19
Overview 3.1:	Calculation ranges in the industries mining and quarrying (C) and manufacturing (D)	20
Fig. 3.1:	Calculation of gross value added (GVA) in manufacturing	23
Fig. 3.2:	GVA of an MUE in manufacturing.....	25
Table 3.4:	Key indicators and data sources in electricity, gas and water supply	26
Fig 3.3:	Example GVA distribution of a multiple-unit enterprise in energy, gas and water supply.....	28
Table 3.5:	Key indicators and data sources in construction according to calculation range.....	29
Fig. 3.4:	GVA calculation procedure in construction	32
Table 3.6:	Key indicators and data sources in wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	33
Table 3.7:	Key indicators and data sources in hotels and restaurants	34
Table 3.8:	Key indicators and data sources in transport, storage and communication.....	34
Table 3.9:	Key indicators and data sources in financial intermediation	35
Table 3.10:	Key indicators and data sources in real estate, renting and other business activities according to calculation range n.e.c.	36
Table 3.11:	Key indicators and data sources in public administration and defence; compulsory social security	37
Table 3.12:	Key indicators and data sources in education	37
Table 3.13:	Key indicators and data sources in health and social work	37
Table 3.14:	Key indicators and data sources in other community, social and personal service activities	38

Chapter 1 Summary: Overview of organisation, methodology and sources

1.1 Organisation of the statistical process for compiling regional GVA

The National accounts for Germany (NUTS 0) are the responsibility of the Federal Statistical Office. The Regional accounts however, for the federal states (NUTS 1), the districts (NUTS 3) and the administrative regions (NUTS 2) are compiled and published by the Working Group “Regional Accounts” (*Arbeitskreis „Volkswirtschaftliche Gesamtrechnungen der Länder“ – AK VGR d L*), which has existed since 1954¹. In this working group, all statistical offices of the 16 German federal states are members with voting rights. Members without voting rights are the Federal Statistical Office and the Frankfurt local public office Statistics and Elections as the Representative of the German City Congress.

The Statistical Office of Baden-Württemberg is responsible for the chairmanship and leadership of the working group. This regional authority pools all the results and represents the Working Group externally.

Fig. 1.1: Members of the Working Group “Regional Accounts” (AK VGR d L)



¹ In Germany, in accordance with the European legally-binding regional classification for NUTS statistics, (Nomenclature of Territorial Units for Statistics), NUTS 1 denotes the federal states, NUTS 2 the administrative regions and NUTS 3 the districts.

Activities of the Working Group are based on an agreed division of responsibilities (see table 1.1). Each regional authority calculates one economic aggregate and/or one economic sector (so called *coordination area*) for all 16 federal states at the federal state level (NUTS 1). This ensures that in Germany, in compliance with the ESA 95 rules, all federal state results are based on the same sources, and are calculated using identical methodologies, which makes it possible to compare results. By dividing the responsibilities in this way, each voting member of the working group can deal with the methodical particularities of each *coordination area* very intensively.

Calculations below the federal state level, such as those for the administrative regions and the districts, are wholly carried out by the Federal Statistical Office of the respective federal state. As the calculations are based on consistent data sources and methodologies, the results are fully comparable.

Table 1.1: Division of responsibilities in the Working Group “Regional Accounts”

Federal State	Coordination Roles/Main Responsibilities
Baden-Württemberg	Leadership Method documentation Data Processing of all regional accounting data Publication of “Excel workbooks” Capital stock / Fixed assets / Consumption of fixed capital / evaluation of public service personnel statistics Regional Economic Accounts for Agriculture (R-LGR / R-EAA)
Bavaria	<i>Updates</i> , provisional results (production account) Secondary income distribution
Berlin and Brandenburg	Residual items Compensation of employees (generation of income account) Domestic services (production account)
Bremen	Transport and communications (production account)
Hamburg	Trade (production account)
Hesse	Financial intermediation (production account) Subsidies
Mecklenburg-Western Pomerania	Primary income distribution
Lower Saxony	Agriculture and forestry, fishing (production account) (Main source - R-EAA)
North Rhine-Westphalia	Gas, electricity and water supply (production account) Mining, manufacturing (production account) Gross fixed capital formation Environmental protection investments
Rhineland-Palatinate	Construction (production account)
Rhineland-Palatinate / Destatis	Letting of own residential buildings and dwellings (70.20.2) (production account)
Saarland	Taxes on production and imports
Saxony	Services (production account)
Saxony Anhalt	Private household consumption
Schleswig-Holstein	Public administration (production account) government final consumption expenditure
Thuringia	Reference figures: Population

Across the Federal Statistical Offices, there are approximately 61 people employed at the Working Group “Regional Accounts” (*AK VGR d L*), as measured on a full-time equivalent (FTE) basis. Consequently, in each regional authority there is at least one person, who is primarily responsible for the regional accounts and has a university degree. Full information about capacity is only possible using the indicator for full-time equivalents, as most of those working in the regional accounts also have responsibilities outside the regional accounts and/or are employed part-time.

The first provisional results, in regional accounts the so called *1st update*, for GVA and GDP for the year under review *t* are published after *t*-plus-3 months at the federal state level (NUTS 1) by the Working Group “Regional Accounts”. The definite data, the so called *original computation* of GDP, follows two years later and is published after *t*-plus-27 months. The corresponding GVA or GDP provisional results at the NUTS 3 and NUTS 2 levels for the year under review *t* are available after *t*-plus-19 months. One year later these results are revised on the basis of the available definite data from the federal state accounts. In this way, final results at the NUTS 3 and NUTS 2 levels are also available after *t*-plus-27 months. Large revisions in the national accounts are implemented in the regional accounts at the same time. Smaller methodical changes are implemented in the current calculations, as far as it is possible, and are announced if necessary.

1.2 Overview of the methodology of regional GVA compilation

In contrast to primary surveys in the specialised statistics, the calculation process in the German national accounts does not sum the results from the smallest regional level up to the national result. The process is, rather, exactly the other way around, whereby the national benchmarks are apportioned to the regions, resulting in a reconciliation of the regional values with the national values. This means that the national accounts results for Germany, which are produced by the Federal Statistical Office, are available first. Only then does the Working Group “Regional Accounts” determine the regional results, starting with the 16 federal states (NUTS 1) and then moving on to the 429 districts (NUTS 3) in a second stage. The results for the 39 NUTS 2 regions are calculated at the end by aggregating the district results. To decentralise the national accounting aggregates, such as GVA, the Working Group “Regional Accounts” typically uses two approaches which are also recommended by ESA 1995: the bottom-up or pseudo-bottom-up and the top-down approach.

The decentralisation method which is used in the GVA calculation depends on the availability of data in each of the economic sectors. If there is sufficient differentiation in the basic statistics at the regional level, then the bottom-up approach is used. Accordingly, the starting point is the regionally available data on individual observation units, such as that from single businesses (local units). These are then added „bottom-up“ to the whole value of the respective region. The sum of all regional values should then correspond to the national total. The top-down approach is used in economic sectors where the data only lends itself to a differentiated calculation of GVA at the national level. In these cases, national GVA is apportioned to the individual regions, without trying to classify it according to regionally based business units. Data is rather apportioned using indicators specific to the economic sectors, which should correlate with the calculated value of GVA as much as possible. In Germany the top-down approach predominates the regional GVA calculation (NUTS 2). For GVA at market prices, around 30% is calculated using the bottom-up approach, and about 70% using the top-down approach.

GVA for the districts (NUTS 3) is initially calculated separately from the federal state value. Depending on the data, this is done either by using available regional data – pseudo bottom-up – such as in the economic sectors-sections (C, D, E and F), or by using appropriate key indicators – top-down – where the federal state values (NUTS 1) of GVA is directly apportioned to the districts. To compare the results of the regional accounts with those of the na-

tional accounts, the federal state values need adjustment to the national values – and later the district-level data needs reconciling with the aggregated federal state values.

The calculated reconciliation (aggregation) of the federal state values with the national level, known as the national benchmark, is a further particularity of the German regional accounts. The concept of the national accounts and the federal state accounts are aligned, but there are areas where the federal state method deviates from the national method because of regional factors and data availability. Exactly in the cases, where the (pseudo) bottom-up approach is used, and where the regional aspects are thereby apparently taken into account, is where the results of the regional accounts typically lead to approximations. Thus, the federal states sum normally doesn't correspond with the national total at first, and a reconciliation is required.² By allocating the calculated deviations (proportionately) to the federal states, the sum of the federal state aggregates ultimately corresponds with the total at the national level. This approach of aggregating to the national benchmark makes sense as it can be assumed in advance that the national accounts are more accurate than the regional accounts, because of better data. In particular, at the national level, a reconciliation of GDP between the production and expenditure approach and a controlling of GDP results with the distribution approach aggregates (three-sided calculation) is possible, using a circular flow method. For reasons of statistical practicality, the known system of accounts from the national accounts cannot be implemented at the federal state and district levels. The regional accounts are therefore limited to the central indicators of the three-sided calculation.

Similar to the reconciliation of federal state values with the national benchmarks, the accounting aggregates in the district accounts, which are only calculated after the federal state accounts, are aligned with the respective federal state benchmarks. Using this approach, consistency between the accounts at the national level and the regional levels of federal states and districts is guaranteed.

1.3 Main sources used for the compilation of regional GVA

The calculations in the economic sectors mining (C), manufacturing (D), gas, electricity and water supply (E) and construction (F) are mainly based on empirical data (collected by the Federal Statistical Office and the Statistical Offices of the Länder), where the annual surveys of companies and enterprises play a special role. The regional classification of GVA mainly results from information about the output value and/or turnover, gross wages and salaries, and investments. Important data sources for the regional apportionment of GVA in the economic sectors of services (G – P) include the VAT statistics, the projections of housing stock and residential buildings, and also employment statistics from the Federal Employment Agency. In agriculture and forestry (A) the results from the Regional Economic Accounts for Agriculture (R-LGR) and the agricultural structure survey are used.

Further main data sources for regional GVA at the NUTS 3 level are the results from the federal state accounts themselves, in which they serve as benchmarks following the calculation of GVA in the district accounts, or are used as key indicators, such as the compensation of employees.

² Deviations between the national and regional accounts occur, among other things, because of the underlying concepts (business and economic concepts), the various calculation process and data sources, the incomplete regional data base and difficulties with the regional boundaries.

Chapter 2 Release and Publication Timetable, Revision Policy, Access for the Public

2.1 Timetable for release and publication of provisional and final estimates

The publication of current GDP results and GVA at the district (NUTS 3) and administrative region (NUTS 2) levels occurs approximately t-plus 19 months following the year under review. End of July 2010, for example, is the publication date for the review year 2008. In accordance with the ESA transmission programme, this regional data is released to Eurostat at t-plus 24 months. The published time series of the district GDP results go back to 1992; annual data is available from 1995.

The accounting results of the districts and administrative regions are matched to the federal states accounts and finally to the national accounts of the Federal Statistical Office. The latest data is generally established as provisional.

2.2 Policy on benchmark revisions

In the national accounts one needs to differentiate between current revisions, which refer to corrections in current, individual and annual results, and “major” revisions, which are carried out at intervals of around five to ten years, where there is a thorough and comprehensive revision of the results, for example, by including new data sources and/or new methods, concepts and new economic classifications. Major revisions in the regional accounts are closely related to those in the national accounts in terms of content and time.

2.2.1 Current revisions

Current revisions and adaptations of results between the respective stages of the annual regional accounts calculation are primarily due to limited availability of data at the early publication dates.

Accounting results, which are based on a fully comprehensive data basis – measured at the available pool of regionally statistical data – can only be provided as “*original computation*” or definite data after a time interval of about two years. This is too late for many purposes so attempts are made to produce current results in the regional accounts, based on *updates* from the last available definite calculation data, using appropriate indicators. The preliminary accounting results, which are derived from such an incomplete data basis, then are continuously updated at the different stages of calculation, whilst each newly available statistical data feeds back into the corresponding calculation.

- The preliminary results for GDP and GVA at the NUTS 1 level for the year under review t are published by the Working Group *AK VGR d L* after t-plus 3 months (*1st update*).
- Provision of the corresponding NUTS 2/NUTS 3 results for the year under review t follows after t-plus 19 months, and is linked to the *3rd update* of federal state GVA, which is still a provisional figure (t-plus 13 months).
- One year later, the district results for the year under review t are revised again on the basis of updated regional data and available *original computation* data on the federal state level (t-plus 25 months).
- After four years, all required basic data is finally fully available and the regional accounting results are considered as »final« – subject to the larger time intervals in the “major” accounting revisions.

2.2.2 Major revisions

Necessary adjustments to new international conventions, the introduction of methodical improvements and new concepts, as well as the consideration of hitherto unused statistical data sources is not considered in the accounts on a constant basis, but rather in the framework of so called "major" revisions. The adopted changes can cover the entire published time series. The regional accounts are thus strongly oriented toward the national accounts.

In February 2006 the Working Group *AK VGR d L* published results from the latest 2005 revision, including revised values from 1991. From this followed adjustments, above all from new approaches, such as the European System of Accounts (ESA 2005), which is legally binding across Europe.

- Introduction of previous year's prices and chain-linking (in the district accounts (NUTS 2/3) - no price-adjusted values are calculated),
- Redefined calculation and apportioning of banking services, so called Financial Intermediation Services, Indirectly Measured (FISIM),
- Integration of newly available statistics, for example the services statistics.

The next major revision is due in 2011, with the conversion of the Classification of Economic Activities to the NACE Rev. 2 and Classification of Economic Activities 2008. First regional accounts results, according to the Economic Classification 2008, will be published at the end of March 2012 for the *1st update* of GDP 2011.

2.3 Comparability over time

Coherent time series data from the annual GDP results and GVA is available in the German regional accounts at the federal state level (NUTS 1) from 1991, and for the former West German territories (NUTS 1) back to 1970. At the NUTS 2/3 levels, the time series data of GDP and GVA start in 1992, and then annually from 1994.

Backward revisions carried out in line with major revisions are made for the time series of GVA in the regional accounts. This is done using either a new calculation on the basis of changed data sources and methods or, in the case that a new basic calculation cannot be made, by using the hitherto rates of change or economic structures of the respective regional values over a backward-looking time period.

2.4 Transmission to international institutions other than Eurostat

Regular transmission of results from the regional accounts is not made to any international institutions other than EUROSTAT.

2.5 Accessibility for the public

2.5.1 Website of the Working Group "Regional Accounts" (AK VGR d L)

As with results at the NUTS 1 level, results from the regional accounts at the NUTS 2/3 levels are currently published, according to the agreed publication dates, directly on the website (www.vgrdl.de) of the Working Group *AK VGR d L*, and are provided to the public free-of-charge as so-called "Excel workbooks" under "*Indicators for Germany by regions*": (http://www.vgrdl.de/Arbeitskreis_VGR/ergebnisse.asp?lang=en-GB#KR).

The publications and downloads for GDP and GVA at the NUTS 2/3 levels "Gross domestic product, gross value added on NUTS 3-Level": (http://www.vgrdl.de/Arbeitskreis_VGR/R0B0.asp?R2B1) includes information about:

- **Gross domestic product at current prices** for the years 1992 and annually from 1994 until 2 years before the current respective calendar year (t-minus 2)
 - absolute values in EUR million
 - annual rates of change on the previous year
 - proportions of GDP NUTS 2/3 to NUTS 1
- **Gross Value Added at current prices** (GVA total and A*3 for the years 1992, 1994, 1995 and the GVA total and A*6 from the year 1996 to t-minus 2)
- **Gross domestic product per person in employment**
- **Gross domestic product per inhabitant**
- **Gross domestic product per hours worked** (from the year 1999 to t-minus 2)

and also the respective reference values: persons in employment and inhabitants³, for the years 1992, 1994, 1995, as well as hours worked⁴ from the year 1999 to t-minus 2.

2.5.2 Common provision of data from the Federal Statistical Office and Statistical Offices of the Länder

The common “statistics portal” of the Statistical Offices of the Länder and the Federal Statistical Office offers the public central access to basic statistical information and facilitates comparisons across the different federal states. Information available at www.statistikportal.de includes, along with a large number of retrievable tables, data from the Working Group AK VGR d L. Likewise, GDP or GVA data at NUTS 3 level can be directly accessed on the regional database: <https://www.regionalstatistik.de/genesis/online/logon> and the regional atlas: <http://ims.destatis.de/indikatoren/Default.aspx>, for example.

2.5.3 Publications by the Statistical Offices of the Länder

In accordance with the state and administrative structure, the legal tasks concerning official statistics in Germany are carried out by the Statistical Offices of the Länder and the Federal Statistical Office, in line with the federal principle. This requires the results of official statistics, which are published at the level of the Statistical Offices of the Länder, also to be made available to the public. Along with the federal state-specific databases, monthly bulletins, press releases, brochures and leaflets etc., in which regional GDP or GVA data is published, the so-called statistical reports provide a further major source of information. In this way, the statistical reports are differentiated according to federal state for the relevant year under review, the form of provision, and also the payment obligation. The economic sector publications programme is, on the other hand, given by the agreed release policy of the Working Group AK VGR d L: A6 + D (see Annex 1).

2.6 Policy for metadata

In addition to the provision of statistical data, there is other information on the website of the Working Group AK VGR d L.

Under “*Method and definitions*“ (http://www.vgrdl.de/Arbeitskreis_VGR/methode.asp), a short methodology description, as well as an overview of the current classification of economic activities, can be downloaded as a .pdf document (in German only).

There is also a quality report (http://www.vgrdl.de/Arbeitskreis_VGR/Qualitaetsbericht.asp), which gives basic information about the Working Group AK VGR d L. Likewise, there are definitions of terms, explanations of the calculation stages, and the dates for publication.

³ Source: Fortschreibung des Bevölkerungsstands Statistisches Bundesamt

⁴ Working group AK ETR: <http://www.statistik-hessen.de/erwerbstaetigenrechnung/>

Contact details of the members of the Working Group *AK VGR d L* are listed under “*Contact*“ (http://www.vgrdl.de/Arbeitskreis_VGR/apartner.asp). Further up-to-date information about the calculations is available directly on the landing page of the website.

Information and data from the Working Group *AK VGR d L* is only provided on the website in German until it is translated into English:
(http://www.vgrdl.de/Arbeitskreis_VGR/ergebnisse.asp?lang=en-GB#LA-GDP).

Chapter 3 Methodology for the calculation of regional GVA

3.1 Principles applicable to all industries

As already described in chapter 1.2, there are no stand-alone calculations at the NUTS 2 level in the German regional accounts. Instead, there are the so-called district accounts (calculation at the NUTS 3 level) which follow the federal state accounts (NUTS 1). Regional gross value added (GVA) at the NUTS 2 level is then derived from the sum of each of the corresponding district results. This methodological inventory of GVA for NUTS 2 will, therefore, predominantly rest on the methodology of the district accounts. Further information on the federal state accounts from the Working Group AK VGR d L is available (in German) on the group's website http://www.vgrdl.de/Arbeitskreis_VGR/methode.asp in the methodology description http://www.vgrdl.de/Arbeitskreis_VGR/methoden.pdf.

3.1.1 Available sources and Information

3.1.1.1 Data from specialised statistics

As with the federal state accounts (NUTS 1) the data for the district-level GDP calculation is derived from GVA of a total of more than 60 different sectors of economic activity (A*60). The supporting data sources for each industry are presented in detail in chapter 3.2.

Further information and metadata on the specialised statistics used, such as the *VAT statistics* or the *monthly report for manufacturing*, will, however, not be addressed. Although the general terminology in each of the regional surveys are generally known (e.g. type of survey, sample size, questionnaire design, non-response, representative nature and amendments), in the Working Group "Regional Accounts" there are no details available about the organisation, implementation and further development of the specialised statistics. A detailed description of the individual data sources here would by far exceed the planned page count of this inventory. Reference is therefore made to the detailed reports which are published by the Federal Statistical Office on their website <http://www.destatis.de>. Examples include the monthly report for manufacturing (<http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/DE/Content/Publikationen/Qualitaetsberichte/VerarbeitendesGewerbeIndustrie/Monatsteineerden,property=file.pdf>).

3.1.1.2 Benchmarks from the federal state accounts

The district accounts (NUTS 3) are based on the GVA values derived from the federal state accounts (NUTS 1). The district level results either are aligned to the federal state values or these benchmark values are apportioned to the districts. The federal state accounts thereby constitute both a central data source and an information basis for the NUTS 3 calculations.

In the federal state accounts there are different stages involved in calculating GDP and GVA. Thus, aggregate economic indicators for federal states, which are based on an extensive data base, in terms of the available raw data, can only be provided by the Working Group AK VGR d L as *original computation* results about every two years. After four years, all the required basic data is complete and the aggregate economic indicators are considered as final.⁵ To take into account both accuracy and current relevance, efforts are made in regional accounting to estimate macroeconomic development in the federal states as early as possible. This occurs within the context of so called *updates*, whereby up-to-date provisional results can be produced, based on the latest definite *original computation* data and the help of suitable indicators. Since the respective basic data gradually feeds into the calculations, the

⁵ Subject to longer time intervals (revisions), necessary alignments to new international conventions, the introduction of methodical improvements and the consideration of new data sources.

results are continuously revised at the various stages of calculation, and published. The data base is continuously being improved between the stages of the current calculation: the three sets of *updates* and the *original computation*. This then combines the consideration of new basic statistical data - and incorporation of region-specific information on intermediate consumption data - with corresponding modifications in the federal state results.

The district-level accounts are currently produced on the basis of the federal state results from the latest (3rd) *update* (year under review t-minus 2 years). The revision of previous years (from t-minus 3 years) is based on the latest definite *original computation* at the federal state level, whereby the GVA results of the previous three years (t-minus 3, t-minus 4 and t-minus 5) are normally revised.

3.1.2 Use of benchmarks and extrapolations

In cases where the top-down approach is used, key indicators for the current year are normally already available. There are exceptions in particular in *agriculture, hunting and forestry (A)*, *fishing (B)* and *trade (section G)*. Thus the standard gross margins, which are used in the economic sectors *A* and *B* to classify GVA, are based on the, only every four years carried out, complete count of the *agriculture structure survey*. As a result, the latest district structure arising from this survey is used as a benchmark for four years. In federal states where in section *fishing (B)* the catch rate is used to distribute federal states GVA across the NUTS 3 regions, the district structure is set for 10 years, as the *inland fisheries survey* represents a partial survey in the framework of the *census of agriculture*. The census of agriculture takes place every 10 years and was last conducted for the year under review 2003. In section *G* indicators are based on the results of the *Census of Distributive Trade and the Hotel and Restaurant industry (HGZ1993)*, which has been revised (in regional accounts) since 1993 on the basis of the employment figures.

In 2002 the annual *report on small businesses* was discontinued. Among other data of this survey, the turnover values of the so-called small businesses was derived, which, in the context of the GVA calculation, is considered as output value (see. 3.2.3) in sections *C* and *D*. The latest turnover figures for the year under review 2001 are updated with the rates of change in the output of companies with 20 to 49 employees for each industry division from the structural business statistics.

Estimations and extrapolations arise from one of the already-mentioned requirements for current relevance, which is needed from the regional accounts by users from politics, commerce, administration and science. Also, when the current district accounts are based on the very latest *update* in the federal state accounts⁶, they are still results which are built on an incomplete data basis. Furthermore, the calculations for the *updated* results are not as thorough as those for the *original computation*. This applies to both the industry breakdown as well as the components of GVA. Thus, in the division *agriculture and hunting (01)*, the latest *update* provides only information on total GVA. To obtain the current values for the subcategories *01412 + 01413* and *01 excluding_(01412+01413)*, the previous year's *original computation* results are used as a benchmark for GVA. This procedure can also be found in the divisions *construction (45)*, *real estate activities (70)* and also *public administration and defence; compulsory social security (75)*. Likewise, in cases where the income approach is used, GVA is only available as one single, complete up-to-date indicator. In other words, the separate capital-based and work-based components of GVA which are to be apportioned from the federal state accounts are not yet available. Consequently, these values are initially *updated* according to the latest *original computation* results, and are apportioned to the districts using the corresponding key indicators. The economic divisions affected by this are *hotels and restaurants (55)*, *renting of machinery and equipment without operator and of per-*

⁶ Industries *C* and *D* are exceptions, where there are no *updates* in the federal state account. Here GVA is calculated on the basis of the so-called *fast structural business statistics*. The *fast structural business statistics* is not an additional survey, but a preliminary update of the current *structural business statistics*.

sonal and household goods (71), computer and related activities (72) and other business activities (74).

Furthermore, estimations are carried out in the industry sections, in which the data base is incomplete or is seen as insufficient. This is relevant to the district accounts when the GVA calculation is performed pseudo bottom-up. This is specifically addressed in chapter 3.2 so a detailed description is foregone here.

3.1.3 Treatment of ancillary activities

Depending on the data, and on whether ancillary activities can be identified, these will be assigned to the region in which they fall. The industry-specific classification typically arises, however, according to the company's principle activities.

The enterprise GVA value is assigned to associated companies using the work-based components of GVA, *wages and salaries* and/or the capital-based components *investments*.

3.1.4 Treatment of the extra-regio

Due to statistical difficulties, and also because of their minor importance, the extra-regio is not addressed separately in German national accounts. It is included at the national level in the aggregate value of the industry division 75, *public administration and defence; compulsory social security* and is, within the framework of *coordination*, apportioned to the federal states and thereby also to the districts. Allocation to the federal states is proportionate to their disaggregated share of GVA in the industry division 75.

3.1.5 Approach to exhaustiveness

Because of efforts to achieve completeness in the regional accounts, in cases where the statistical surveys show cut-off points, there are statistical additions and supplements which are initially independent from the German national accounts (see 3.2). Explicit supplements such as satellite accounts for tips, or personal contributions in connection with the building of a house, are not available, so are not calculated into the regional accounts. Similarly, activities in the informal economy are not calculated at the regional level. Additionally, there is no possibility to reconcile the income and expenditure approaches according to a circular flow model. Thus, any reconciliation of differences which would be interpreted as implicit add-ons for completeness, don't exist either.

In the German national accounts, all tests, measures and specific satellite accounts designed to ensure completeness are only conducted at the national level⁷, and are then apportioned to the federal states accounts, and ultimately the districts, by *disaggregating* the national GVA values. From the perspective of regional accounts, completeness is only achieved through adjustment to the corresponding national values.

Because of insufficient information, not all completion checks can be quantified at a regional level. So, as long as the data count is implicit, it is not possible to consider income which would not be declared for tax purposes, as there is no corresponding information. Consequently, there can be no separate aggregation in the regional accounts either. Rather, the complete aggregated difference is apportioned to the federal states, where it is assumed that the deviations between the estimated federal state levels and the unknown, but true, federal state level are the same in terms of direction and degree.⁸

⁷ For a comprehensive overview of the adjustments to ensure completeness in the German national accounts, see. Statistisches Bundesamt, pg. 387 ff.

⁸ see Method description of the federal state accounts

3.1.6 Calculation of FISIM by user industries

The calculation of the assumed FISIM („Financial Intermediation Services Indirectly Measured“) was newly regulated when the European Commission regulation came into force on 1.1.2005.⁹ This financial service comprises the indirect charges of banks which, along with direct revenue (e.g. account administration fees), create the interest rate differential.

With this revision, the FISIM is now no longer recorded for the economy as a whole as intermediate consumption on the expenditure side, but is instead apportioned to the relevant economic sectors and industries. So, on the one hand, it is recorded in the national accounts as intermediate consumption of the individual industries, thereby decreasing corresponding GVA; and on the other hand, it is booked as part of final consumption expenditure, exports or imports.

The regulation was implemented in the regional accounts with the 2005 revision. In the federal state accounts (NUTS 1) however, there is no region-specific information about the FISIM contributions per industry. Therefore, it is only possible to use an implicit method of calculation, such as the disaggregation or classification of each national value, already FISIM-adjusted according to their share of GVA in each economic sector.

3.1.7 Adjustments for commuting

Calculations incorporating the GDP contributions of commuters are not carried out at the regional level. They are, however, taken into account in the interpretation of the indicators GDP per capita and GDP per employed person.

3.1.8 Transition from GVA to GDP

To calculate GDP, first GVA at basic prices of all industries is summed up. Then the balance of taxes on products less subsidies on products (net tax on products) is added. The concept of market price arises from taking these balances into account, and this is what is used for calculating GDP. In line with the recommendations from the European System of Accounts (ESA 1995), there is a general allocation. ‘General’ means that the balance of the national accounts is allocated to the federal states proportionately in relation to their GVA – regardless of where the taxes and subsidies on products occur. Taxes on products are all taxes which are paid per unit of a produced or traded product or service. Examples include VAT, import duties (excluding import sales tax) and tax on oil and tobacco. Likewise, subsidies on products are subsidies which are paid per unit of produced product or service. Examples here include import subsidies, compensation payments in transport or export refunds to the Federal Agency for Agriculture and Food.

In line with the *original computation* of GDP, the Federal Statistical Office in Baden-Württemberg automatically sets the following for all federal states: the sum of GVA across all industries, the general allocation of net taxes on products and finally GDP (at current prices and price-adjusted).

⁹ Regulation (EU) 1889/2002 of 23 October 2002.

3.2 Specific methods and sources for compiling regional GVA

3.2.1 Agriculture, hunting and forestry (A)

In agriculture, hunting and forestry, the GVA calculation at the NUTS 3 level is initially carried out separately for each industry:

- 01412 +01413: „Laying out, planting and maintenance of gardens, parks and green areas“ as well as „Laying out, planting and maintenance of graves“,
- 01 – (01412+01413): „Agriculture, hunting and related service activities“ excluding 01412+01413,

They are then recombined following the addition of the individual results to the industry: „Agriculture, hunting and related service activities“, and also the industry:

- 02 „Forestry, logging and related service activities“.

The reason for the separate procedure in the area “Agriculture, hunting and related service activities” (01) is that GVA results at the NUTS 2 level in the Regional Economic Accounts for Agriculture (R-LGR) contain neither “Laying out, planting and maintenance of gardens, parks and green areas“ nor „Laying out, planting and maintenance of graves“,

On the basis of the results of the federal state accounts (VGR d L and R-LGR), the corresponding GVA figures at basic prices (NUTS 1 results) are apportioned to the respective districts (NUTS 3) using the top-down approach and the key indicators listed below. Then these results of the districts are finally added to the NUTS 2 level.

Table 3.1: Key indicators and data sources in agriculture and forestry

Calculation range	Key indicators	Data sources
01412 + 01413	Sum of employees subject to social insurance contributions at the NUTS 3 level in industries 01412 und 01413	Employment statistics from the Federal Employment Agency at 30 th June
01 <u>excluding</u> 01412+01413	Standard gross margins at the NUTS 3 level in industry 01 <u>excluding</u> 01412+01413	Agricultural structure survey Regional Economic Accounts for Agriculture (R-EAA)
01	(01412 + 01413) + 01 <u>excluding</u> 01412+01413	
02	Compensation of employees at NUTS 3 in industry 02	Working group VGR d L: generation of income account
AA and A	01 + 02	

3.2.2 Fishing (B)

In fishing, the method of calculating GVA at the NUTS 3 level varies, depending on the importance of this sector in the individual federal states. Thus, in federal states where fishing is of minor importance, the regional benchmarks of GVA are apportioned to the NUTS 3 districts. These are disaggregated from the federal state accounts using the standard gross margins of the agricultural holdings recorded in the agricultural structure survey. In the other federal states there is a separate calculation for the areas:

- 05011 „Fishing in ocean and coastal waters“,
- 05012 „Fishing in inland waters“, and
- 0502 „Fish farming“.

NUTS 1 GVA is apportioned to the NUTS 3 districts according to the top-down approach, using the indicators listed in table 3.2.

Table 3.2: Key indicators and data sources in fishing

Calculation range	Key indicators	Data sources
05011	<ul style="list-style-type: none"> Taxable turnover from deliveries and output 	<ul style="list-style-type: none"> VAT statistics
05012 + 0502	<ul style="list-style-type: none"> Catch rate Standard gross margins 	<ul style="list-style-type: none"> Inland fishing survey Agricultural structure survey
05	05011 + (05012 + 0502)	

3.2.3 Mining and quarrying (C) and manufacturing (D)

Since the revision in 2000, the GVA calculations in sections C and D are based on the so called “company concept”. That is, the economic classification is based on the regional economic entities (businesses and/or companies). The GVA calculation is then performed pseudo bottom-up, and on the basis of enterprise and company-specific data about the output, intermediate consumption, investment in goods for resale, wages and salaries, and investments. It is therefore assumed that the enterprise and company-specific ratios portray regional GVA development better than those at the national level, which are differentiated according to industry. In this way, the available data sources which are shown in table 3.3 are also fully exploited in both sections. As a result, only unadjusted (not adjusted to national accounts) GVA at the district level (NUTS 3) exists according to the industry divisions.

Table 3.3: Key indicators and data sources for sections C and D

Calculation range	Key indicators	Data sources
10 to 37, but 23 <u>excluding</u> 23.2		<ul style="list-style-type: none"> Structural business statistics (SBS) in manufacturing, mining and quarrying Monthly reports including order intake surveys for businesses in manufacturing, mining and quarrying Annual report for businesses in manufacturing, mining and quarrying Annual report for companies in manufacturing, mining and quarrying Quarterly production survey in manufacturing, mining and quarrying Investment surveys of businesses in manufacturing, mining and quarrying Annual industry report for small businesses 2001 (revised since 2002) Quarterly trade reports
23.2 Manufacture of refined petroleum products	<p><u>Capital-based GVA:</u></p> <ul style="list-style-type: none"> Refinery production at the NUTS 3 level <p><u>Work-based GVA:</u></p> <ul style="list-style-type: none"> Wages and salaries in industry 23.2 at NUTS 3 level 	<ul style="list-style-type: none"> Data from the Petroleum Industry Association (MWV) Monthly reports including order intake surveys for businesses in manufacturing, mining and quarrying

The following overview illustrates the various calculation ranges in the industries mining and quarrying (C) and manufacturing (D):

Overview 3.1: Calculation ranges in the industries mining and quarrying (C) and manufacturing (D)

C		Mining and quarrying
CA		Mining and quarrying of energy producing materials
	10	Mining of coal and lignite; extraction of peat
	11	Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying
	12	Mining of uranium and thorium ores
CB		Mining and quarrying, except of energy producing materials
	13	Mining of metal ores
	14	Other mining and quarrying
D		Manufacturing
DA		Manufacture of food products, beverages and tobacco
	15	Manufacture of food products and beverages
	16	Manufacture of tobacco products
DB		Manufacture of textile and textile products
	17	Manufacture of textiles
	18	Manufacture of wearing apparel; dressing and dyeing of fur
DC	19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
DD	20	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
DE		Manufacture of pulp, paper and paper products; publishing and printing
	21	Manufacture of pulp, paper and paper products
	22	Publishing, printing and reproduction of recorded media
DF	23	Manufacture of coke, refined petroleum products and nuclear fuel
DG	24	Manufacture of chemicals and chemical products
DH	25	Manufacture of rubber and plastic products
DI	26	Manufacture of other non-metallic mineral products
DJ		Manufacture of basic metals and fabricated metal products
	27	Manufacture of basic metals
	28	Manufacture of fabricated metal products, except machinery and equipment
DK	29	Manufacture of machinery and equipment n.e.c.
DL		Manufacture of electrical and optical equipment
	30	Manufacture of office machinery and computers
	31	Manufacture of electrical machinery and apparatus n.e.c.
	32	Manufacture of radio, television and communication equipment and apparatus
	33	Manufacture of medical, precision and optical instruments, watches and clocks
DM		Manufacture of transport equipment
	34	Manufacture of motor vehicles, trailers and semi-trailers
	35	Manufacture of other transport equipment
DN		Manufacturing n.e.c.
	36	Manufacture of furniture; manufacturing n.e.c.
	37	Recycling

Due to the common data base, the same calculation method is used in sections C and D so a separate explanation is foregone. There is one exception, however, in the case of manufacture of refined petroleum products, which is addressed separately in 3.2.3.3.

3.2.3.1 Data Basis and Calculation Method

As can be seen in table 3.3, the two-digit divisions of NACE, rev. 1.1 represent the most thorough calculation level. This means that for each of the 5 economic divisions of mining and quarrying, as well as the 23 divisions of manufacturing, GVA is determined separately, using the production approach (GVA = output less intermediate consumption). The method of calculating GVA varies, depending on the data base, as well as the perspective of the determined output and intermediate consumption.

For companies which have more than 20 employees, and which participate in the structural business statistics (the so-called SBS companies), total output is taken as the output value, and is adjusted by other taxes on products and consumption to stay in line with the concept of producers' prices. There is no information about other taxes on products and applicable services which are to be deducted from the output value in the same way. However, the structural business statistics do provide data about the total subsidies received. There is no breakdown of the other subsidies on products which are included in the output value according to the concept of producers' price. They are therefore taken from other sources and added to division 15 (manufacture of food products and beverages) after calculating the unadjusted GVA.¹⁰

The output value still includes the total turnover of goods for resale. Thus, in line with the requirements of ESA 95, this value is reduced by the companies' intermediate consumption of goods for resale, so that only the trade margin remains in the output value – and thereby in GVA. Intermediate consumption is comprised of the following positions in the structural business statistics:

- Use of raw materials and other primary products and production materials,
- Cost of external labour,
- Cost of labour carried out by contract workers,
- Costs for repairs, maintenance, installations, fittings etc.,
- Rents and leases,
- Other costs, such as advertising costs, travel costs, commissions, licence fees, transport costs, audit, consulting and legal costs, and bank charges. Not however, insurance premiums paid.

In the structural business statistics for mining and quarrying, and manufacturing, not all economic entities are recorded. Instead, a sample of companies with over 20 employees is taken. Nevertheless, the largest companies with over 500 employees, covering the bulk of GVA, are fully incorporated. This, however, is not representative of the federal states so the figures for the remaining economic entities need to be estimated.

For companies which do not participate in the structural business statistics, the turnover is taken as the output¹¹. Depending on the type of enterprise, this is derived from the annual multiple-unit enterprise reports, the monthly single-unit enterprise reports and, in the case of small businesses, the industry reports or quarterly trade reports. The turnover figure is then reduced by the indicator *investment in goods for resale*, and then multiplied by a national average factor. This ratio for investment in goods for resale is derived from the structural business statistics, where output excluding investments in goods for resale is linked to output

¹⁰ The other subsidies on products are first added to the federal state values (NUTS 1) and only apportioned to the districts in the course of disaggregation. That is, the other subsidies on products are not initially relevant for the district account.

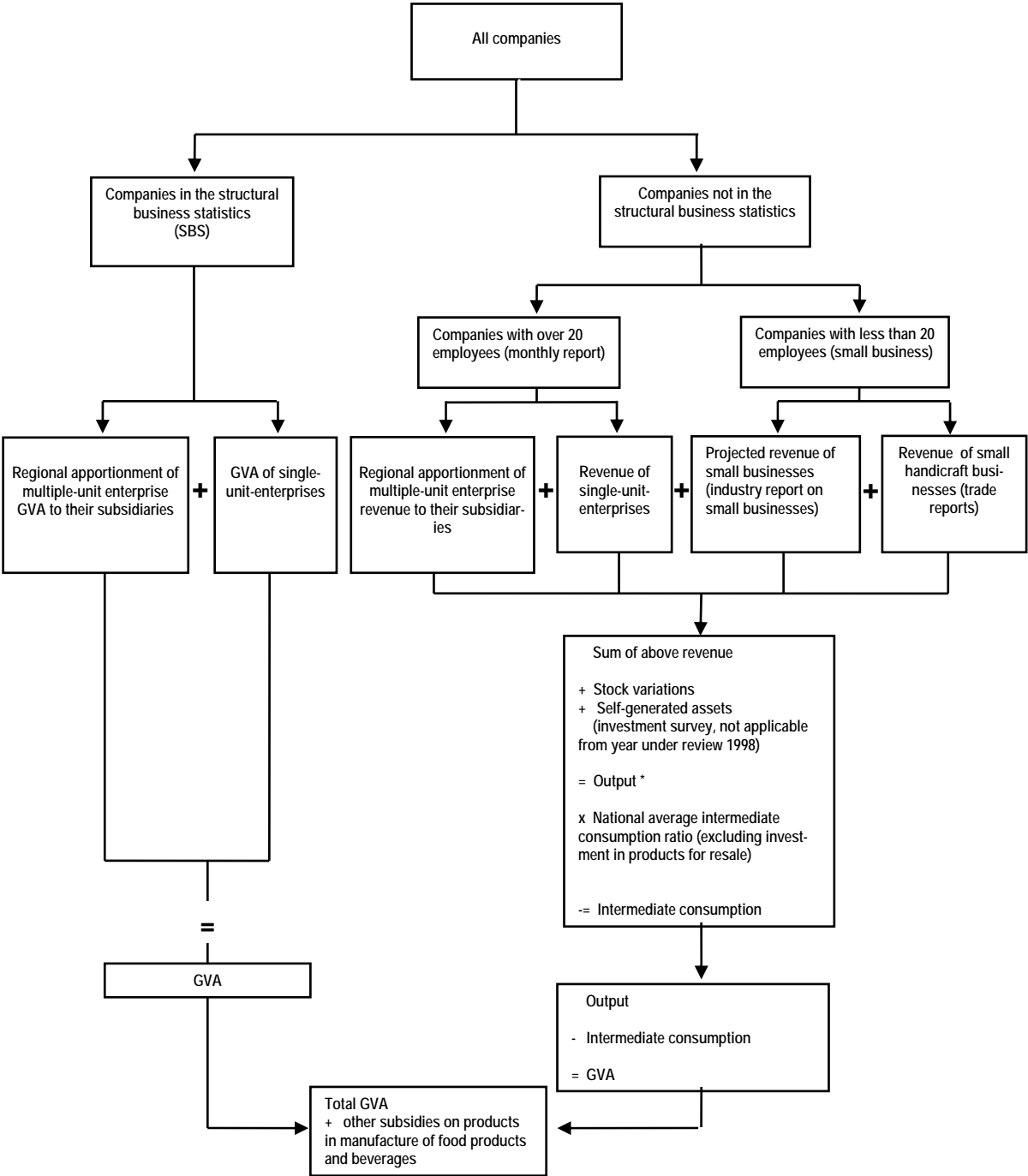
¹¹ Turnover is also considered as the output value as, since the year under review 1998, businesses whose share of capitalisation is so low that it can be disregarded, no longer include stock variations in finished and unfinished products (from the business' own production) in the annual investment survey.

including goods for resale for all companies according to industry and division. The factor applied to the turnover of the small businesses is based on an estimated output for enterprises with 20 to 49 employees. All factors are provided by the Federal Statistical Office.

There is no information on the intermediate consumption of the remaining economic entities. They are therefore estimated, by multiplying the output separately per industry and federal state by the corresponding national average ratio for intermediate consumption. The national average is derived from the structural business statistics, and represents the proportion of intermediate consumption excluding investment in goods for resale.

Fig. 3.1: Calculation of gross value added (GVA) in manufacturing

Calculation of gross value added (GVA) in manufacturing on the basis of the GVA apportionment of multiple-unit enterprises



* Estimated investment in products for resale using national average ratios

3.2.3.2 Regional Distribution

As a result of the information on enterprise headquarters, the GVA values of single-unit enterprises can be directly classified to the regions. The GVA of multiple-unit enterprises (MUEs) and multiple-region enterprises (MREs) however, has to be apportioned to their local units.

Because of difficulties with regional boundaries, the calculation method is taken directly from the GVA of each individual multiple-unit enterprise from the annual structural business statistics. In the absence of knowledge about the actual inter-regional economic flows, it is then apportioned, with suitable business-based indicators, to the corresponding subsidiaries.

In line with the “company concept” principle, only the values of the productive branches of the enterprise can be included in the calculation. As the share of the non-productive branches is unknown, the value for the “core enterprise” (sum of the values of the productive branches) is determined using an estimation technique: A ratio, determined by the indicator *wages and salaries of the productive subsidiaries* in relation to the indicator *wages and salaries of the whole enterprise*, is referred to the output value and GVA of the enterprise as a whole. When the rest of this document refers to enterprises or multiple-unit enterprises (MUEs), the meaning is core enterprises which are defined in this way.

The production factors work and capital can be included regionally by different ratios in the production result. Thus, the GVA value of each MUE is split into work-based and capital-based parts before being apportioned to the corresponding businesses. This is done in accordance with the proportion of which the work-based characteristics are linked to the capital-based characteristics of the MUE. The work-based characteristics are taken from the structural business statistics, and entail gross wages and salaries, as well as social contributions paid by employers. The capital-based characteristics are also taken from the structural business statistics, and entail consumption-related depreciation of tangible assets and borrowing costs.

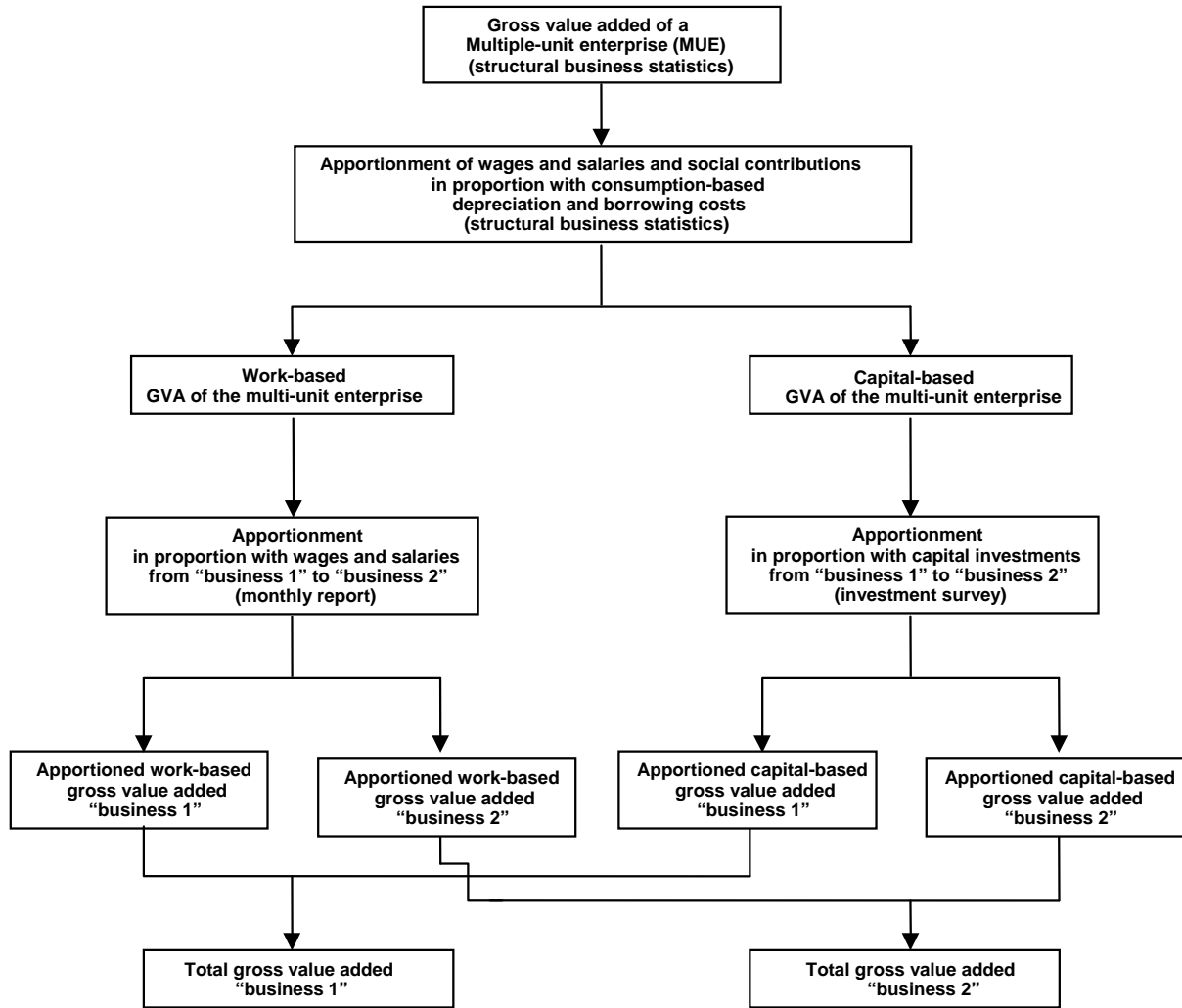
Finally, the work-based GVA of the MUE is apportioned to the subsidiaries, in accordance with the extent to which the wages and salaries of these businesses (systematically classified according to the “company concept” principle) are related to each other. The data is taken from the *Monthly Report on Enterprises and Single-Unit Enterprises*. As a result, the regionally apportioned and classified work-based GVA is determined, according to the district as per the company headquarters.

The capital-based GVA value of the MUE follows the same procedure, and is apportioned to the subsidiaries, along with the gross fixed capital formation (systematically classified according to “company concept” principle). The data is taken from the annual investment surveys of business’ principle activities. Capital expenditure is obtained by summing the gross fixed capital formation over a time period of 10 years.

The regionalised capital and work-based GVA parts of the MUE are combined as total gross value added per subsidiary, and then aggregated according to their industry, region and district.

Fig. 3.2: GVA of an MUE in manufacturing

**Individual apportionment of GVA in a Multiple-unit enterprise (MUE)
in manufacturing
– an example of two subsidiaries –**



3.2.3.3 Features in manufacturing tobacco and refined petroleum products

Special features in the manufacturing of tobacco and refined petroleum products arise from the regionalization of GVA.

While manufacturing of tobacco apportions the work-based GVA values according to the method defined above, capital-based GVA is apportioned to the subsidiaries, along with the output of the division (16) from the quarterly production surveys.

In the subcategory manufacture of refined petroleum products (DF 23.2) of the division „manufacture of coke, refined petroleum products and nuclear fuel“ (DF 23), GVA of each individual MUE is not apportioned to the subsidiaries, but the whole division is rather handled as a single enterprise. This is because of the strong ties between the oil companies. The

starting point of the calculation is therefore total GVA at basic prices in area DF 232, taken from the structural business statistics. As with an MUE, it is disaggregated into a single work and capital-based component. The work and capital-based GVA parts then are apportioned top-down to the federal states. This is done for the work-based GVA part using the federal-state level – NUTS 1 – aggregated wages and salaries from the monthly report on businesses and single-unit enterprises, and for the capital-based GVA with the *refinery production* taken from data from the Petroleum Industry Association (MWV). Regionalization at the NUTS 3 level then occurs in that the federal state-level results of the work and capital-based GVA are apportioned along with the corresponding sum of wages and salaries and refinery production, to the districts. The sum of work and capital-based components then gives GVA for the industry manufacturing of refined petroleum products for each NUTS 3 district. Consequently, GVA for the industry division 23 is the sum of GVA for division 23.2 and 23 excluding 23.2.

3.2.4 Electricity, gas and water supply (E)

The regional GVA calculation in electricity, gas and water supply is carried out in the same way as in economic sectors C and D. As a result, only unadjusted (not adjusted to national accounts) GVA at the district level (NUTS 3) is available according to the industry division.

Table 3.4: Key indicators and data sources in electricity, gas and water supply

Calculation range	Key indicators	Data sources
40 41		<ul style="list-style-type: none"> • Structural business statistics (SBS) at electricity, gas and water supply companies. • Monthly reports from businesses in electricity, gas and water supply. • Monthly reports on the electricity supply • German Heat and Power Association (AGFW)
EA and E	40 + 41	

3.2.4.1 Data basis and calculation method

GVA for the industries electricity, gas and water supply is determined based on the data and statistics listed in table 3.4.

From the year under review 1998, the underlying structural business statistics have been brought in line with the requirements of the EU structural regulations and have since included all enterprises in the industry - with the exception of water utility companies which manage a water volume of less than 200 000 m³. This then also requires small businesses to provide information on their intermediate consumption. The output for the enterprise is determined from the total output values in the structural business statistics. Deducting other taxes on products from output distinguishes it from the concept of basic prices. As in the industry manufacture of food products, beverages and tobacco, other subsidies on products which are to be considered in the output value are incorporated after calculating the unadjusted GVA for division 40 (electricity and gas).

In accordance with ESA 95, the output value, which still includes the whole turnover from goods for resale, is to be reduced by the value for companies' recorded intermediate consumption in investment in goods for resale. In this way, only the trade margin is included in the output value, and thereby also in GVA. In the same way, output and intermediate consumption are to be reduced by the investment in external energy and water. As a result, it is the difference between bought and sold energy and water which remains in the output value.

Similarly, intermediate consumption derived from the structural business statistics is comprised of the following positions:

- Use of raw materials and other primary products and production materials,
- Cost of external labour,
- Cost of labour carried out by contract workers,
- Costs for repairs, maintenance, installations, fittings etc.,
- Rents and leases,
- Other costs, such as advertising costs, travel costs, commissions, licence fees, transport costs, audit, consulting and legal costs, and bank charges. Not, however the insurance premiums paid.

3.2.4.2 Regional Distribution

Also in section E, in the absence of knowledge of the actual inter-business and inter-regional economic flows, GVA of each individual MUE is apportioned to the regions where the subsidiaries are located, using suitable business-based indicators.

In gas manufacturing, MUE's GVA is regionalised using the indicator *wages and salaries* from the monthly report on *businesses in electricity, gas and water supply*. This method is used as there is no production of gas at the MBU, but only the purchase of grid gas, and distribution of it to consumers. Also, in the industry *collection, purification and distribution of water*, in the absence of other suitable key indicators, GVA from the structural business statistics is apportioned to the businesses using only the indicator *wages and salaries*.

In contrast, in the industry *electricity and hot water supply*, GVA of each individual MUE is handled as a work and capital-based part using data from the structural business statistics, and in accordance with the ratio "*wages, salaries and social contributions*" to "*consumption-based depreciation of tangible assets and borrowing costs*". This takes into account the fact that production results in different regions can include different ratios in the factors work and capital.

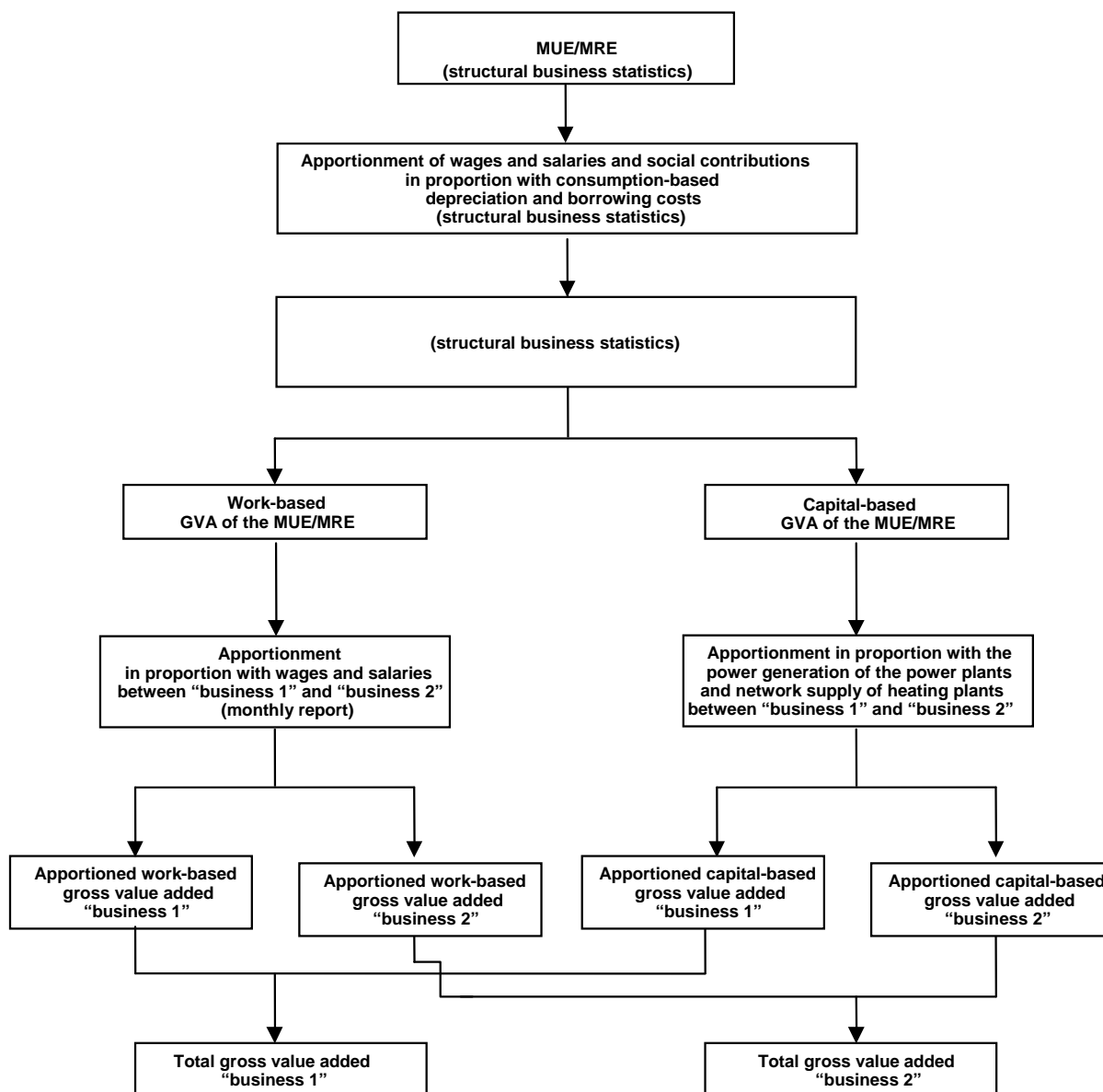
The work-based GVA value of each individual MUE is then apportioned to the subsidiaries according to how they correlate to the wages and salaries in the monthly report. In this way, the subsidiaries are systematically classified according to the principle activities of the enterprise. In this way it is possible to obtain the classified work-based GVA value, apportioned regionally in line with the company headquarters. For businesses, wages and salaries taken from the monthly report on businesses and single-unit enterprises are used. This only contains local units of companies which have over ten employees, and which have electricity, gas and water supply as their principle activity. If an MUE has one or several local units, where the principle activities lie outside electricity, gas and water supply, a location-specific classification of work-based GVA for this industry is not possible. The method of apportionment causes the work-based GVA value to be proportionately allocated to the businesses which are required to produce the monthly report on businesses and single-unit enterprises.

Capital-based GVA of the MUE is apportioned to the regions according to their connection with the electricity supply, based on information about power generation of the power plants in the monthly report on the public electricity supply, as well as information about hot water supply, based on information about the network supply of heating plants from the German Heat and Power Association (AGFW).

The work and capital-based parts of GVA, which are regionalized in this way, are summed up to total GVA according to region/district and industry.

Fig 3.3: Example GVA distribution of a multiple-unit enterprise in energy, gas and water supply

**Individual distribution of GVA
in a multi-region and multi-unit enterprise
in Energy, Gas and Water Supply – an example of two subsidiaries**



*) – Electricity supply: Electricity generation of the power station,
Monthly report on the public electricity supply
- District heating supply: Network supply of heating plants, information from the
German Heat and Power Association
- Gas and water supply: Wages and salaries,
Monthly reports

3.2.5 Construction (F)

Similarly, the economic output of the construction industry is defined using the production approach (GVA = output – intermediate consumption). Depending on the data, the pseudo bottom-up approach can also be used, whereby the missing data for businesses can be estimated from the existing enterprise values, using work-based components.

Due to the data base, there are different existing methods of calculating GVA at the NUTS 3 level. This requires an additional presentation of the calculation range with the internal notations *construction* and *outfitting*:

- 45111 to 45256 (*construction*) „Site preparation“ and „civil engineering“,
- 45310 to 45502 (*outfitting*) „Building installation“, „other outfitting“ and „renting of construction or demolition equipment with operator“.

Thus, for construction there are (unadjusted) GVA results at the NUTS 3 level, taken from the federal state accounts, which can be directly used in the district accounts. The method of doing so is presented in 3.2.5.1.

In outfitting there are also results at the NUTS 3 level taken from the federal state accounts, but they don't completely cover GVA for outfitting. Calculation of GVA at NUTS 1 level covers enterprises which have over 10 employees. There are no comparable statistics to any of the full surveys in the construction industry. The annual survey only includes companies with over 10 employees. However, it is the small businesses in outfitting, those with less than 10 employees, which are more important. This gives rise to the need for an additional calculation. This additional calculation doesn't focus on individual enterprises, but it rather sums the whole category of enterprises based on this size at the federal state level (NUTS 1), and also separately for the industry group 45.3 building installation und 45.4 building completion. By summing the GVA values from the additional calculation with those for enterprises which have over 10 employees, results GVA in outfitting for federal states. Regionalization at the NUTS 3 level needs to use a key indicator. Hereto, the number of employed persons can be used.

Table 3.5: Key indicators and data sources in construction according to calculation range

Calculation range	Key indicators	Data sources
45111 to 45256		<ul style="list-style-type: none"> • Structural business statistics on construction • Annual survey including investment survey for construction • Monthly reports for construction • Complete and extended surveys for construction • Monthly reports for manufacturing
453+454+455	<ul style="list-style-type: none"> • Employed persons at the NUTS 3 level in areas 453+454+455 	<ul style="list-style-type: none"> • Working Group „Regional Employment“ - „Erwerbstätigenrechnung des Bundes und der Länder“ (AK ETR)
45, FA and F	<ul style="list-style-type: none"> • (45111 to 45256) + (453 to 455) 	

3.2.5.1 Data basis and calculation method in construction

The calculations in construction are based on the statistics and sources listed in Table 3.5. By the individual data records from the survey in construction and outfitting, the construction industry is completely portrayed. In addition, the enterprise data includes the control data and raw data from the structural business statistics, the annual surveys and investment surveys. The operating data includes information from the monthly report, the annual survey, the monthly report for manufacturing as well as other specific data which is relevant to the calculation. In this way, the complete gathering of all available raw data is guaranteed. Gaps in information can be revealed and missing data can be extrapolated, ensuring an accurate representation of the different groups of respondents. At subsidiaries of MUE's, the enterprise's registration number is also included in the operating data records, so that the context of the company's operations can be determined.

As construction companies can have subsidiaries which are classified according to a different industry, due to their principle activities, their details, as far as they are available, are also included in the calculation.

As can be seen in the diagram, the GVA calculation is based on various output values and intermediate consumption. This results in different definitions of the output values, depending on the statistic used. While the indicator „*annual construction operations, incl. other turnover*“ from the annual survey and investment survey, and „*total turnover*“ from the full survey are seen as approximations for the output, „*total registered operations*“ from the structural business statistics does correspond with the general definition of output. For this reason, only enterprises which have over 20 employees, and which participate in the structural business statistics, can express their total operations as their output value. In construction, the following indicators are particularly used:

- the annual construction operations,
- the turnover from their own products and industrial/technical services, from goods for resale and other non-industrial/non-technical activities,
- the change in inventory of self-produced products - finished and unfinished,
- the self-built machines and other self-generated fixed assets, which are not construction operations.

For the remaining enterprises with more than 20 employees, but which are not included in the structural business statistics, the *annual construction operations incl. other turnover*, taken from the annual survey, including the investment survey, is considered as the output value. Those *individual subsidiaries with fewer than 20 employees*, which are also to be included in the calculation, are labeled as single-unit enterprises and working groups from the reporting area of the full and extended survey. In these cases, total turnover is presented as the output value, comprising the construction turnover and other turnover.¹²

Intermediate consumption which has been recorded in the structural business statistics can be directly used for enterprises which belong to this reporting area.

Intermediate consumption includes the following:

- use of building materials and other purchased primary products and production materials,
- investment in goods for resale,
- costs for work carried out by third-parties and subcontractors,

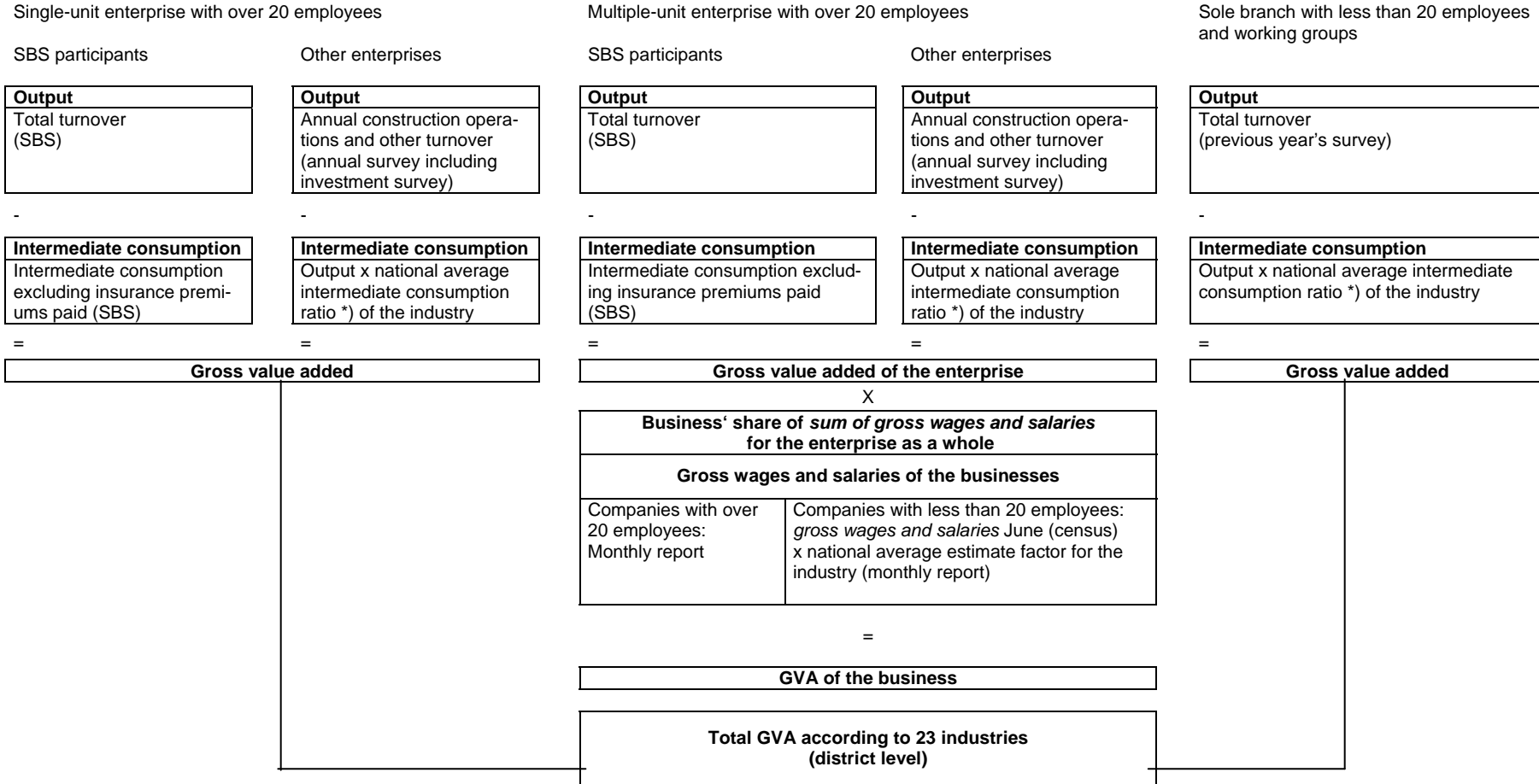
¹² While with *other turnover*, the boundaries in the various surveys match, construction turnover represents the invoiced taxable amounts, which are registered with the tax authorities for the sales tax calculation. Thus, construction turnover does not correspond to the annual construction operations.

- costs for repairs, maintenance, installation and fitting carried out by other companies,
- rents and leases,
- other costs, such as advertising costs, travel costs, commissions, licence fees, transport costs, audit, consulting and legal costs, and bank charges. Not however, the insurance premiums paid.

For the remaining enterprises, intermediate consumption is estimated using national average ratios. These ratios arise from linking intermediate consumption to *annual construction operations* including *other turnover* – both indicators from the structural business statistics. As intermediate consumption is mainly determined from the production structure of the enterprise, a structure which is broken-down to the lowest operating level is aimed for. In this way, the ratios for the branch-specific intermediate consumption for the industries and subcategories of construction are calculated. Intermediate consumption is then reached by multiplying the output of an enterprise with the national average ratio for intermediate consumption in the same industry. In a further stage of calculation, the enterprise's GVA is given by deducting intermediate consumption from output.

Fig. 3.4: GVA calculation procedure in construction

GVA Calculation Procedure in the Construction Industry



*) Intermediate consumption related to the annual construction operations and other turnover according to the structural business statistics (SBS).

3.2.5.2 Regional distribution of the GVA in construction

Because of the information about enterprise headquarters, it is possible to classify GVA of single-unit enterprises directly according to their regions. GVA of MBUs, however, still has to be apportioned to the local units.

As the actual economic flows between the different units of an enterprise are not known, the calculation has to start from GVA of each and every multiple-region and multiple-unit enterprise. This GVA value is apportioned to the corresponding subsidiaries, using appropriate company-based indicators. In contrast to the industries mining and quarrying, manufacturing and energy, gas and water supply, construction does not break down GVA of the enterprise into separate work and capital-based components, which are to be apportioned to the local units using key indicators. Rather, whole GVA of an enterprise is broken down to the level of the business units, in proportion to their value of wages and salaries. In this way, it is assumed that a business' contribution to GVA, which is attributed to the enterprise's capital expenditure, also depends on the local unit's value of wages and salaries. This also seems justified as, in contrast to manufacturing, it is far less common in construction to have enterprises with several specialist business operations with strongly different levels of capital intensity.

In businesses with more than 20 employees, the applied key indicators, *gross wages and salaries* of the businesses can be taken directly from the monthly and quarterly reports. Businesses with less than 20 employees only report *gross wages and salaries* for the month of June in the full survey and annual outfitting surveys. The annual amount is extrapolated from the June figure. To determine the national average extrapolation factors, the annual values of *gross wages and salaries* are correlated with the June values, as per the results in the monthly report in construction and the quarterly report in outfitting. The extrapolation factors are differentiated according to branch across the 41 industries.

Given the indicators on company headquarters, GVA for the multiple-unit enterprises can now also be regionally classified. For construction, there are therefore (unadjusted) results for GVA at the NUTS 3 level, which are directly used in the district account.

3.2.6 Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods (G)

In section G, the GVA calculation at the NUTS 3 level is not split according to industry. Instead, federal state GVA of the divisions 50 to 52 are distributed top-down across the NUTS 3 districts, using turnover taken from the Census of Distributive Trade and the Hotel and Restaurant Industry.¹³ This turnover values have been projected on the basis of the development of the number of employees in section G since 1993.

Table 3.6: Key indicators and data sources in wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods

Calculation range	Key indicators	Data sources
G	<ul style="list-style-type: none"> Turnover in section G, annual revisions of employed persons in section G 	<ul style="list-style-type: none"> Census of Distributive Trade, and the Hotel and Restaurant Industry (HGZ 1993) Working Group „Regional Employment“ - „<i>Erwerbstätigenrechnung des Bundes und der Länder</i>“ (AK ETR)

¹³ The Census of Distributive Trade, and the Hotel and Restaurant Industry was last carried out in 1993 und has been discontinued since 01.07.2004. Consequently, the last revenue figure for this survey is for the year 1992.

3.2.7 Hotels and restaurants (H)

In section H division 55, GVA at the NUTS 3 level is calculated according to the income approach, whereby both GVA components are determined separately at first, and then summed again afterwards. In doing so, the capital-based component gross operating surplus is apportioned top-down to the NUTS 3 level on the basis of the previously determined federal state benchmarks – using the registered taxable turnover, as well as deliveries and other services. The work-based component, in the form of *compensation of employees*, can, however, be taken directly from the calculation of *compensation of employees* in the district accounts.

Table 3.7: Key indicators and data sources in hotels and restaurants

Calculation range	Key indicators	Data sources
55	<p>Capital-based component: operating surplus:</p> <ul style="list-style-type: none"> • Taxable turnover from deliveries and other services at the NUTS 3 level of 55 <p>Work-based component: Compensation of employees</p> <ul style="list-style-type: none"> • Compensation of employees at the NUTS 3 level in industry 55 	<ul style="list-style-type: none"> • VAT statistics • Working Group VGR d L: generation of income account

3.2.8 Transport, storage and communication (I)

In the section transport, storage and communication, federal states GVA is apportioned top-down for the industries listed below:

- 60 „Land transport, transport via pipelines“,
- 61 „Water transport“,
- 62 „Air transport“,
- 63 „Supporting and auxiliary transport activities, activities of travel agencies“, and also
- 64 „Post and telecommunications“

using the number of employees in each industry, according to the domestic territory concept. The number of employees at NUTS 3 is derived from the calculations of the Working Group „Regional Employment“ „*Erwerbstätigenrechnung des Bundes und der Länder*“ (AK ETR).

Table 3.8: Key indicators and data sources in transport, storage and communication

Calculation range	Key indicators	Data sources
60	• Employed persons at the NUTS 3 level in industry 60	• Working Group „Regional Employment“ - „ <i>Erwerbstätigenrechnung des Bundes und der Länder</i> “ (AK ETR)
61	• Employed persons at the NUTS 3 level in industry 61	
62	• Employed persons at the NUTS 3 level in industry 62	
63	• Employed persons at the NUTS 3 level in industry 63	
64	• Employed persons at the NUTS 3 level in industry 64	
I	60+61+62+63+64	

3.2.9 Financial intermediation (J)

As in section I, federal states GVA in financial intermediation is apportioned top-down for the industries listed below:

- 65 „Financial intermediation, excluding insurance and pension funding“,
- 66 „Insurance and pension funding, excluding compulsory social security“,
- 67 „Activities auxiliary to financial intermediation“.

using the number of employees in each industry, according to the domestic territory concept.

Table 3.9: Key indicators and data sources in financial intermediation

Calculation range	Key indicators	Data sources
65	• Employed persons at the NUTS 3 level in industry 65	Working Group „Regional Employment“ - „Erwerbstätigenrechnung des Bundes und der Länder“ (AK ETR)
66	• Employed persons at the NUTS 3 level in industry 66	
67	• Employed persons at the NUTS 3 level in industry 67	
J	65+66+67	

3.2.10 Real estate, renting and business activities (K)

In section K, GVA at the NUTS 3 level is initially calculated separately for the two industries:

- 70202: „Letting of own residential buildings and dwellings“, and
- 70 – 70202: „Real estate activities“ excluding 70202,

which are later recombined by adding the separate results to industry 70 „real estate activities“, and the industries

- 71 „Renting of machinery and equipment without operator and of personal and household goods“,
- 72 „Computer and related activities“,
- 73 „Research and development“ and
- 74 „Other business activities“.

In divisions 71, 72 and 74 the income approach is used, whereby the capital-based component in the form of the available gross operating surplus at NUTS 1 is apportioned to the districts (NUTS 3) using the taxable turnover from deliveries and services. With the work-based component in the form of compensation of employees, no apportionment is required, as this is already available per district (NUTS 3) from the generation of income account. GVA at the NUTS 3 level arises by adding the operating surplus to the compensation of employees. There is special treatment in division 71, due to leasing charges. The income approach is also used here, but the leasing charges can be apportioned differently. There is then the possibility to increase the operating surplus by the leasing charge, and to apportion it to the NUTS 3 level, using the taxable deliveries and services. Alternatively, a so-called 3-component model can be used, in which the leasing charge is apportioned to the districts as a third component, using the number of new car registrations. In division 74, the VAT statistics don't give any indicators appropriate to the regional accounts for category 7415 (management activities of holding companies) or for the subcategory 74877 (other asset consulting). These are therefore excluded from deliveries and services. In division 73 the entire federal state benchmark of GVA is apportioned using compensation of employees.

Table 3.10: Key indicators and data sources in real estate, renting and other business activities according to calculation range n.e.c.

Calculation range	Key indicators	Data sources
70202	<ul style="list-style-type: none"> Living area of 100 m² at the NUTS 3 level 	<ul style="list-style-type: none"> Update of residential buildings and housing stock
70 excluding 70202	<ul style="list-style-type: none"> Taxable turnover from deliveries and other services¹⁴ at the NUTS 3 level of industry 70 excluding 70202 	<ul style="list-style-type: none"> VAT statistics
70	70202 + 70 excluding 70202	
71	<p><u>Capital-based component: operating surplus:</u></p> <ul style="list-style-type: none"> Taxable turnover from deliveries and other services at the NUTS 3 level of industry 71 <p><u>Work-based component:</u></p> <p><u>Compensation of employees</u></p> <ul style="list-style-type: none"> Compensation of employees at the NUTS 3 level in industry 71 <p><u>Leasing charges:</u></p> <ul style="list-style-type: none"> Taxable turnover from deliveries and other services at the NUTS 3 level of industry 71 or New passenger car registrations 	<ul style="list-style-type: none"> VAT statistics Working Group VGR d L: generation of income account VAT statistics Registration figures from the Federal Bureau of Motor Vehicles (KBA)
72	<p><u>Capital-based component: operating surplus:</u></p> <ul style="list-style-type: none"> Taxable turnover from deliveries and other services at the NUTS 3 level of industry 72 <p><u>Work-based component:</u></p> <p><u>Compensation of employees</u></p> <ul style="list-style-type: none"> Compensation of employees at the NUTS 3 level in industry 72 	<ul style="list-style-type: none"> VAT statistics Working Group VGR d L: generation of income account
73	<ul style="list-style-type: none"> Compensation of employees NUTS 3 in industry 73 	<ul style="list-style-type: none"> Working Group VGR d L: generation of income account
74	<p><u>Capital-based component: operating surplus:</u></p> <ul style="list-style-type: none"> Taxable turnover from deliveries and other services at the NUTS 3 level of industry 74 (excluding 7415 and 74877) <p><u>Work-based component:</u></p> <p><u>Compensation of employees</u></p> <ul style="list-style-type: none"> Compensation of employees at the NUTS 3 level in industry 74 	<ul style="list-style-type: none"> VAT statistics Working Group VGR d L: generation of income account
K	70+71+72+73+74	

¹⁴ Main types of turnover in sales tax law come under the category "deliveries and other services" (§ 1 section. 1 UStG).

3.2.11 Public administration and defence; compulsory social security (L)

In section L there is a separate classification for the industries:

- 75220: „Defence activities“, and
- 75 – 75220: „Public administration, compulsory social security“,

whereby the available NUTS 1 level GVA results are apportioned to the NUTS 3 levels according to the personnel costs for soldiers and civilian personnel in the German Armed Forces („Defence activities“) and the number of employees in the industry „public administration and compulsory social security“.

Table 3.11: Key indicators and data sources in public administration and defence; compulsory social security

Calculation range	Key indicators	Data sources
75220	Personnel costs for soldiers and civilian personnel of the German Armed Forces at the NUTS 3 level.	German Federal Ministry of Defence
75 <u>excluding</u> 75220	Employed persons at the NUTS 3 level in industry 75 <u>excluding</u> 75220	Working Group „Regional Employment“ - „Erwerbstätigenrechnung des Bundes und der Länder“ (AK ETR)
75 and L	75220 + 75 <u>excluding</u> 75220	

3.2.12 Education (M)

For the complete section M, the federal state results of GVA are apportioned to the NUTS 3 districts, using the district-specific compensation of employees from the generation of income account.

Table 3.12: Key indicators and data sources in education

Calculation range	Key indicators	Data sources
80 and M	Compensation of employees at the NUTS 3 level in industry 80	Working Group VGR d L: generation of income account

3.2.13 Health and social work (N)

In section N, the federal state results of GVA are apportioned to the NUTS 3 districts, using the number of employed persons according to the domestic territory concept.

Table 3.13: Key indicators and data sources in health and social work

Calculation range	Key indicators	Data sources
85 and N	Employed persons at the NUTS 3 level in industry 85	Working Group „Regional Employment“ - „Erwerbstätigenrechnung des Bundes und der Länder“ (AK ETR)

3.2.14 Other community, social and personal service activities (O)

In section O, GVA at the NUTS 3 level is calculated separately in the divisions:

- 90: „Sewage and refuse disposal, sanitation and similar activities“,

- 91: „Activities of membership organizations n.e.c.
- 92 „Recreational, cultural and sporting activities“ and
- 93 „Other service activities“,

where the income approach can be used in the latter division. As the VAT statistics for the regional accounts in category 9305 give no usable key indicators, they are calculated using deliveries and operations.

In the other industries, the GVA results of federal states are apportioned to the NUTS 3 districts using the following key indicators.

Table 3.14: Key indicators and data sources in other community, social and personal service activities

Calculation range	Key indicators	Data sources
90	• Average population at the NUTS 3 level	• Revision of the size of population
91	• Employed persons at the NUTS 3 level in industry 91	• Working Group „Regional Employment“ - „ <i>Erwerbstätigenrechnung des Bundes und der Länder</i> “ (AK ETR)
92	• Employed persons at the NUTS 3 level in industry 92	
93	<u>Capital-based components: operating surplus:</u> <ul style="list-style-type: none"> • Taxable revenue from deliveries and other services at the NUTS 3 level of industry 93 excluding 9305 <u>Work-based components:</u> <ul style="list-style-type: none"> • <u>Compensation of employees</u> • Compensation of employees at the NUTS 3 level in industry 93 	VAT statistics Working Group VGR d L generation of income account
O	<u>90+91+92+93</u>	

3.2.15 Private households with employed persons (P)

In section P, GVA corresponds with compensation of employees and, as in the NUTS 1 calculations, is taken from the generation of income account calculations. That is, GVA NUTS 3 in industry 95 = compensation of employees NUTS 3 in industry 95.

3.2.16 Extra-territorial organizations and bodies (Q)

Section Q is not included in the regional accounts as it is here not relevant.

3.3 Regional GVA at previous year prices (price-adjusted) and regional growth rates

While the calculation of GVA at the federal state level (NUTS 1) is based on both current prices, as well as previous year prices, calculations at the levels of the districts (NUTS 3) and the regions (NUTS 2) are carried out using only the current prices. The reason is that at these regional levels there is no reliable macroeconomic price index which takes deflation into account. Even in the previous years' NUTS 1 level accounts, there are no federal state-specific price indices. It is therefore only possible to make use of the deflators in the national accounts. This requires the assumption of a price trend which is uniform at the national level.

Chapter 4 Quality assessment and improvement

4.1 Self-assessment of the methodology for the compilation of regional GVA

The district results (NUTS 3) of GVA are predominantly determined using the top-down method. Due to the lack of alternative data sources, the calculation is based on key values, such as number of employed persons or compensation of employees, when apportioning the federal states values (NUTS 1) to the districts. This is justifiable, as a tight connection/high correlation between the results to be computed and the key values can be assumed. At the end, the district results are summed up to the NUTS 2 regions (administrative regions).

Statistical surveys which only deliver district results every 4 years, such as the Agricultural Structure Survey, are updated in the interim years. Because of this, their accuracy is limited. Data on VAT statistics, which is used in various sectors of economic activity, only deliver results for taxable legal entities (enterprises) at their headquarters' location. This has the disadvantage of only roughly matching the economic activity of multiple-unit businesses to their districts.

In the industries C - F, the calculation methods at the district level (pseudo bottom-up) are either identical to those in the federal state accounts or they lean closely on them, partly using primary regional data sources, such as the structural business statistics, as well as the monthly and annual reports for businesses in the economic sector manufacturing, mining and quarrying. Here, the highest level of accuracy is reached.

Because of limited data quality, the district-level GVA results are only published in a highly summarized form (A*6 plus manufacturing).

4.1.1 Quality in the individual industries

4.1.1.1 Agriculture, hunting and forestry, fishing (A-B)

For the economic sector 01 „agriculture and hunting“ there is a sound data basis for the federal states (NUTS 1) and administrative regions (NUTS 2) with Regional Economic Accounts for Agriculture (R-EAA) – prepared by the Federal Statistical Office of Baden-Württemberg. Using these results and the EAA, the corresponding GVA values for the various economic sectors are apportioned to the districts (NUTS 3) using the top-down method.

4.1.1.2 Mining and quarrying (C), manufacturing (D), electricity, gas and water supply (E)

By basing the GVA calculation on results from individual enterprises and companies (pseudo-bottom-up), such as output and intermediate consumption from the structural business statistics, a high level of accuracy is reached in the data situation of the federal states (NUTS 1) and districts (NUTS 3).

An estimation method is however used for the regional apportionment of GVA from multiple-unit enterprises (MUE) and multiple-region enterprises (MRE) using their work and capital-based GVA proportions. Thus, the indicators for differentiating MRE GVA in a work and capital-based proportion also have an influence on the quality of results (missing here is equity interest as an important part of cost of capital), and also on the final apportionment of the work and capital-based GVA parts of the MRE to the subsidiaries (they only represent the costs of the production factors to a limited degree).

4.1.1.3 Construction (F)

In the context of the district calculations, the economic sector construction is split across the two calculation ranges of construction (WZ 2003: groups 45.1 + 45.2) and outfitting (WZ 2003: groups 45.3 to 45.5).

The economic output of construction is determined using the production approach. As information about intermediate consumption and output is not available for all units, a pseudo bottom-up method is used, whereby in construction, GVA from the multiple-region and multiple-unit enterprises is estimated using regional work-based components, i.e. from the businesses. Through this, it seems justified that, unlike in manufacturing, construction companies with several specialized parts of enterprises rarely have strongly differentiated capital-intensity.

In outfitting, an extended calculation is needed. The annual survey in outfitting only includes businesses with 10 or more employees. However, small businesses with less than 10 employees are of significant importance in this area of economic activity. They produce a good third of the branch's total turnover. Regionalization at the NUTS 3 level is derived from the corresponding federal state values, using the number of employed persons.

In addition, supplements from the Federal Statistical Office for the informal economy can only be taken by grossing up regional accounts GVA to the national total.

4.1.1.4 Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods (G)

The GVA calculation in section G of WZ 2003 is based on turnover data from full surveys, such as the *Census of Distributive Trade, and the Hotel and Restaurant Industry* and the *Census of crafts*, which are updated on the federal state level (NUTS 1) using sample surveys. From the year under review, 2006, sample surveys on new businesses will be integrated into the monthly and annual surveys, typically on an annual basis, so that systematic distortions can be mitigated and avoided, for example, by forward chaining the results from January 2008 (retrospectively from 2006).

At the district level (NUTS 3), the federal state GVA values in section G are updated entirely using the updated turnover – top-down – with the help of a key indicator – the development of employment in section G.

4.1.1.5 Hotels and restaurants (H)

An improvement in quality could have been achieved in the hotels and restaurants value added calculation by changing from the production approach to the income approach as part of the 2005 revision. This leads to better consideration of the local units, as the data about employees in the location feed into the results of this calculation. Information about enterprises which arise from the VAT statistics – in the case of lacking alternative data sources – is only used when regionalizing gross operating surplus. The VAT statistics only deliver results for taxable, legal units (enterprises) at the enterprise headquarters, so the economic performance of multiple-unit enterprises, which operate across many regions, cannot be apportioned to the local units.

4.1.1.6 Transport, storage and communication (I), financial intermediation (J)

As there is a lack of corresponding data at the regional level, the NUTS 1 GVA values in economic classification sections I und J are apportioned to the NUTS 3 districts according to the top-down method using the number of employed persons (domestic territory concept) in the respective economic divisions.

4.1.1.7 Real estate, renting and business activities (K)

In section K, the GVA calculation at the NUTS 3 level is carried out separately for each individual area of economic activity. In industries 70.20.2 „Letting of own residential buildings and dwellings“, and 70 „Real estate activities“ excluding 70.20.2, the federal state GVA values are apportioned (top-down) according to the living floor space and taxable turnover from deliveries and services of the VAT statistics. On the other hand, in divisions 71 to 74 the income approach is used. There, the capital component of GVA (gross operating surplus) at the NUTS 1 level is apportioned to the districts (NUTS 3), using taxable turnover. The district-specific work-based component (compensation of employees) is already available in the generation of income account. Alternatively, in division 71 a so-called 3-component model can be used in which the leasing charge is apportioned to the districts using the number of new car registrations. This approach contributes to stability of results. In division 73 the entire federal state benchmark of GVA is apportioned using compensation of employees.

4.1.1.8 Public administration and defence; compulsory social security (L), education (M), health and social work (N)

The apportioning of federal states GVA results to the NUTS 3 districts is carried out for sections L, M and N according to the top-down method, using various indicators. One of these is personnel expenses for soldiers and civilian personnel in the German Armed Forces for the area of defence. The others are the number of employed persons in sections L and N, and also the district-specific compensation of employees in section M.

4.1.1.9 Other community, social and personal service activities (O)

In section O, the GVA calculation at the NUTS 3 level is carried out separately for the individual economic divisions. In divisions 90 to 92 this is carried out according to the top-down method, using various key indicators, such as the population and number of employed persons. In division 93 „Other service activities“, the income approach is used.

4.1.1.10 Private households with employed persons (P)

In section P, GVA at the NUTS 3 level corresponds to compensation of employees and is taken directly from the calculations in the generation of income account.

4.2 Plans for further improvement

Until now, the first annual results for gross domestic product (GDP) per federal state – as an indicator for regional economic development and economic growth – have been published as the 1st update on GDP on 6th February of the following year. There are various methodical and data-related reasons, however, for completing the calculation of the 1st update at a later date. In future, the first regional results of the GDP will therefore be published in the last week of March – GDP 2009 on Tuesday, 30th March 2010. At this later date, the updated federal state results (NUTS 1) for the earlier year under review will also be prepared. Until now, they have also been published on 6th February. In 2010, the GDP 2008 (previous 3rd update, new 2nd update) and the GDP 2007 and earlier years (definite data i.e. *original computation* data) will form the basis and benchmarks for the following district calculations (NUTS 3).

By postponing the calculation, in addition to improving the quality of the new 1st update at the end of March, further qualitative improvements can be made to future 2nd updates – as a basis for the district-level GDP calculations.

- To calculate GVA in manufacturing, a complete delivery status of the fast structural business statistics can be used. In this way, the fast structural business statistics correspond

approximately to the data from the structural business statistics which are used for the *original computation*.

- In the future, federal state-specific data can be used in various service industries. Until now, on the basis of data uniform to all federal states, the development was only implied in the national accounts.

4.2.1 Mining and quarrying (C), manufacturing (D)

Until now, the GVA calculation of small businesses in construction and manufacturing has been carried out separately for crafts and industrial small businesses. The reasons were the revenue information from the quarterly report, “*survey of crafts*” and the last survey of industrial small businesses (2001), which were updated using current output values of enterprises with between 20 and 49 employees. This kind of turnover gives the output value for small companies at the same time. GVA of small businesses is determined using this, on the basis of nationwide ratios for goods for resale and intermediate consumption.

In Germany in 2005, the proportion of GVA from small businesses to entire GVA was at about 10.5 % in section C and just 7 % in section D. The update of the last small business survey results from 2001 is subject to unavoidable uncertainties. Since 2009, the quarterly report “*survey on crafts*” has used administrative data. Compared to the primary survey which has been carried out unit now, significant flaws are expected in the area of small crafts businesses.

Within the context of the 2011 revision, the Working Group *VGR d L* is striving to convert these calculation procedures to one which is based on the business register. Here, taxable turnover from construction and manufacturing, which are listed in the register, will be used. A good reason for this is, above all, that the business register serves as a comparatively complete inventory of data from small businesses, and thereby provides the calculation with a much more sustainable data basis.

4.2.2 Construction (F)

The current *original computation* method in the industry outfitting (WZ 2003: group 45.3 to 45.5) intends to determine GVA of small businesses (less than 10 employees) using data from the quarterly report “*survey on crafts*”. They include a good third of the branch’s total turnover.

As the most recent available results from the quarterly report “*survey on crafts*” are for the year under review 2007, the Working Group *VGR d L* has searched for an alternative data source. Sample surveys were conducted, using information in the business register about taxable turnover from the VAT statistics, whereby turnover was equated to the gross output value, and GVA calculated using nationwide intermediate consumption ratios.

Consequently, the determination of GVA from small businesses in outfitting should certainly arise from a more solid data basis, so that a corresponding change in method can be carried out for the 2011 revision.

4.3 Outlook

With the upcoming 2011 revision, a focal point of work in the regional accounts is the conversion of the calculations to the new economic sector classification WZ 2008 i.e. the implementation of the NACE Rev.2 in the national accounts. Thus, there will be significant challenges in transferring the WZ transpositions from the federal states (NUTS 1) to the district accounts (NUTS 3), and also in the backward calculation of the regional accounting aggregates from the WZ 2003 in the WZ 2008.

ANNEX 1 Regional accounts publication timetable for the gross domestic product (GDP) and gross value added (GVA)

A 1.1 Overview of the GDP/GVA publication dates at federal state level from year under review (t) 2009

- Half-year accounts GDP 2009 on 24th September 2009
- 1st update GDP/GVA 2009 during the last week of March 2010 (t plus 3 months)
- 2nd update GDP/GVA 2009 during the last week of March 2011 (t plus 15 months)
- Definite data GDP/GVA 2009 during the last week of March 2012 (t plus 27 months)

A 1.2 Publications for the 16 federal states compared at the federal state level

Half-year accounts

Aggregates:

Only rates of change of GDP at current prices and price-adjusted

Level of detail:

–

Time of publication:

24th September (year t)

1st Update

Aggregates:

GDP/GVA at current prices/price-adjusted, in EUR 1000, rates of change, proportions, and indices

Level of detail: A 6 and Manufacturing

- Agriculture, hunting, forestry, and fishing (A+B)
- Production industries (excluding construction) (C-E)
 - Manufacturing (D)
- Construction (F)
- Wholesale and retail trade, hotels and restaurants, transport, storage and communication (G-I)
- Financial intermediation, real estate, renting, and business activities (J+K)
- Public and private services (L-P)

Time of publication:

During the last week of March (year t plus 3 months)

2nd Update

Aggregates:

GDP/GVA at current prices/price-adjusted, in EUR 1000, rates of change, proportions and indices

Level of detail:

A 6 and Manufacturing
(see 1st update)

Time of publication:

During the last week of March (year t plus 15 months)

Definite data

Aggregates:

GDP/GVA at current prices and price-adjusted, in EUR 1000, rates of change, proportions and indices

Level of detail: A 17

- Agriculture, hunting, and forestry (A)
- Fishing (B)
- Mining and quarrying (C)
- Manufacturing (D)
- Electricity, gas, and water supply (E)
- Construction (F)
- Wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods (G)
- Hotels and restaurants (H)
- Transport, storage, and communication (I)
- Financial intermediation (J)
- Real estate, renting, and business activities (K)
- Public administration and defence; compulsory social security (L)
- Education (M)
- Health and social work (N)
- Other community, social and personal service activities (O)
- Private households with employed persons (P)

Time of publication:

During the last week of March (year t plus 27 months)

A 1.3 District results compared nationwide

Using the federal state results of the 2nd update as a basis, the GDP/GVA calculations are first made at the district level. They are then revised during the course of the subsequent stages of calculation.

Publication timetable GDP/GVA at the district level e.g. for year under review (t) 2009: End of July 2011 (t plus 19 months)

Aggregates:

GDP/GVA at current prices, in EUR 1000, rates of change, proportions and indices

Level of detail: A 6 and Manufacturing

- Agriculture, hunting, forestry, and fishing (A+B)
- Production industries (excluding construction) (C-E)
 - Manufacturing (D)
- Construction (F)
- Wholesale and retail trade, hotels and restaurants, transport, storage, and communication (G-I)
- Financial intermediation, real estate, renting, and business activities (J+K)
- Public and private services (L-P)

Time of publication:

End of July (year t plus 19 months)

ANNEX 2 Abbreviations

List of Abbreviations			
German		English	
Abb.	Abbildung	Fig.	figure
a.n.g.	Anderweitig nicht genannt	n.e.c.	not elsewhere classified
AK ETR	Arbeitskreis „Erwerbstätigenrechnung des Bundes und der Länder“	AK ETR	Working group “Regional Employment”
AK VGR d L	Arbeitskreis „Volkswirtschaftliche Gesamtrechnungen der Länder“	AK VGR d L	Working Group „Regional Accounts“
AN	Arbeitnehmer	–	employee
ANE	Arbeitnehmerentgelt	–	compensation of employees
AV	Anlagevermögen	–	fixed assets
BAI	Bruttoanlageinvestitionen	GFCF	gross fixed capital formation
BB	Brandenburg	BB	Brandenburg
BBB	Berlin und Brandenburg	BBB	Berlin and Brandenburg
BE	Berlin	BE	Berlin
BIP	Bruttoinlandsprodukt	GDP	gross domestic product
BLG	Bruttolöhne und -gehälter	–	wages and salaries
BNE	Bruttonationaleinkommen	GNI	gross national income
BBÜ	Bruttobetriebsüberschuss	–	gross operating surplus
BW	Baden-Württemberg	BW	Baden-Württemberg
BWS	Bruttowertschöpfung	GVA	gross value added
BY	Bayern	BY	Bavaria
CPA	Statistische Güterklassifikation (in Verbindung mit den Wirtschaftszweigen in der Europäischen Wirtschaftsgemeinschaft)	CPA	classification of products by activity
CPC	Zentrale Güterklassifikation	CPC	central product classification
DE	Deutschland	DE	Germany
Destatis	Statistisches Bundesamt	FSO	Federal Statistical Office
DV	Datenverarbeitung	–	data processing
EBU	Einbetriebsunternehmen	–	single-unit enterprise
ESVG	Europäisches System Volkswirtschaftlicher Gesamtrechnungen	ESA	European System of Accounts
ET	Erwerbstätige	–	persons in employment
EU	Europäische Union	EU	European Union
EUR	Euro	EUR	Euro
Eurostat	Statistisches Amt der Europäischen Gemeinschaften	Eurostat	Statistical Office of the European Communities
EVS	Einkommens- und Verbrauchsstichprobe	–	sample survey of household income and expenditure
EW	Einwohner	–	inhabitant
FISIM	Finanz-Serviceleistung indirekte Messung (unterstellte Bankgebühr)	FISIM	Financial Intermediation Services Indirectly Measured
FS	Fortschreibung	FS	update
GfB	geringfügig Beschäftigte	–	marginal part-time employees
H. v.	Herstellung von	–	manufacture of
HB	Bremen	HB	Bremen

HE	Hessen	HE	Hesse
HGZ	Handels- und Gaststättenzählung	–	census of distributive trade and the hotel and restaurant industry
HH	Hamburg	HH	Hamburg
Hj.	Halbjahr	–	half-year
HWB	Handwerksberichterstattung	–	reporting of crafts
IOT	Input-Output-Tabelle	IOT	input-output table
IOR	Input-Output-Rechnung	IOR	input-output computations
ISIC	international standardisierte Industrie klassifikation	–	International standart industrial clas-sification
j.	jährlich	–	yearly
Kfz.	Kraftfahrzeuge	–	motor vehicles
KL	Koordinierungsländer	–	Coordination-Länder
KSE	Kostenstrukturerhebung	–	cost structure survey
MBU	Mehrbetriebsunternehmen	MUE	multiple-unit enterprise
Mill.	Million(en)	mio.	million
MLU	Mehrländerunternehmen	MRE	multiple-region enterprise
Mrd.	Milliarde(n)	bn.	billion
MV	Mecklenburg-Vorpommern	MV	Mecklenburg-Western Pomerania
MwSt	Mehrwertsteuer	VAT	value-added tax
MZ	Mikrozensus	–	microcensus
NACE	Statistische Systematik der Wirtschaftszweige in der Europäischen Gemein-schaft (Nomenclature générale des activés économiques dans les Communautés euro-péennes)	NACE	Statistical Classification of Economic Activities in the European Commu-nity
NI	Niedersachsen	NI	Lower Saxony
NW	Nordrhein-Westfalen	NW	North Rhine-Westphalia
OB	Originärberechnung	–	original computation / definite data
P.O.o.E.	Private Organisationen ohne Er-werbszweck	NPISHs	non-profit institutions serving house-holds
PEK	Primäreinkommen	–	primary income
PW	Produktionswert	–	output
Rep. v.	Reparatur von	–	repair of
R-LGR	Regionale Landwirtschaftliche Gesamt rechnung	R-EAA	Regional Economic Accounts for Agriculture
RP	Rheinland-Pfalz	–	Rhineland-Palatinate
SiD	Strukturerhebung im Dienstleistungsbe-reich	–	structural survey in the services sector
SH	Schleswig-Holstein	SH	Schleswig-Holstein
SL	Saarland	SL	Saarland
SN	Sachsen	SN	Saxony
ST	Sachsen-Anhalt	ST	Saxony Anhalt
StBA	Statistisches Bundesamt	FSO	Federal Statistical Office
t	Berichtsjahr	t	year under review
Tab.	Tabelle	Tab.	table
TH	Thüringen	TH	Thuringia
UGR	Umweltökonomische Gesamtrechnun-gen	–	environmental-economic accounting
URS	Unternehmensregister	–	business register

UstStat	Umsatzsteuerstatistik	–	value added tax (VAT) statistics
VEK	Verfügbares Einkommen	–	disposable income
VGR	Volkswirtschaftliche Gesamtrechnungen	NA	national accounts
VL	Vorleistungen	–	intermediate consumption
VZÄ	Vollzeit-Äquivalente	FTE	full-time equivalents
WZ	Wirtschaftszweigsystematik	NACE	economic sector classification
z. F.	zu Faktorkosten	–	at factor costs
z. H.	zu Herstellungspreisen	–	at basic prices
z. M.	zu Marktpreisen	–	at market prices

ANNEX 3 Regional GVA Compilation Table

A 3.1 NUTS 1 Regions (federal states / Bundesländer)

DE Compilation Table Regional GVA

Germany 2003

GVA, at current prices (EUR mio.)

NUTS1 Regions

Industries A17 (NACE rev. 1)		NUTS1 Regions																	Industries A17 (NACE rev. 1)	
		Bottom-up methods								Sub-total bottom-up	Top-down methods				Sub-total top-down	Sub-total of regional values	Adjustment to National Accounts	Total		Share of GVA
		Survey data				Administrative data					Survey or census data		Administrative data							
		Exhaustive coverage		Sample data		mono- regional units	multi regional units	Closely related indicators	Data based on extra- polations or models		Closely related indicators	Extra- polations or models	Closely related indicators	Extra- polations or models						
		mono- regional units	multi regional units	mono- regional units	multi regional units															
1	2	3	4	6	7	8	10	11 (=5+9+10)	12	13	15	16	18 (=14+17)	19 (=11+18)	20	21 (=19+20)	22			
EUR mio.																	%			
A	Agriculture, hunting and forestry	15.384	-	-	-	-	-	-	15.384	1.910	-	2.946	-	4.856	20.240	930	21.170	1,1	A	
B	Fishing	-	-	-	-	-	-	-	-	120	-	100	-	220	220	-	220	0,0	B	
C	Mining and Quarrying	3.276	-	2	-	-	-	463	3.741	-	-	-	-	3.741	109	3.850	0,2	C		
D	Manufacture	373.001	-	13.305	-	-	-	15.576	401.881	-	-	-	-	401.881	32.069	433.950	22,3	D		
E	Electricity, gas and water supply	38.127	-	-	-	-	-	-	38.127	-	-	-	-	38.127	773	38.900	2,0	E		
F	Construction	49.513	-	12.496	-	-	-	-	62.009	-	-	-	-	62.009	22.451	84.460	4,3	F		
G	Wholesale and retail trade; repair	-	-	234.471	-	-	-	-	273.670	-	-	-	-	273.670	-63.310	210.360	10,8	G		
H	Hotels and Restaurants	-	-	-	-	-	-	-	-	21.650	-	8.830	-	30.480	30.480	-	30.480	1,6	H	
I	Transport and communication	-	-	-	-	-	-	-	-	108.840	-	-	-	108.840	108.840	-	108.840	5,6	I	
J	Financial intermediation	1.180	-	-	-	-	-	-	1.180	92.240	-	-	-	92.240	93.420	-	93.420	4,8	J	
K	Real estate, renting	-	-	-	-	-	-	158.750	158.750	7.450	-	308.370	-	315.820	474.570	-	474.570	24,3	K	
L	Public administration, defence	120.200	-	-	-	-	-	-	120.200	-	-	-	-	-	120.200	-	120.200	6,2	L	
M	Education	-	-	-	-	-	-	-	-	88.590	-	-	-	88.590	88.590	-	88.590	4,5	M	
N	Health and Social Work	110.086	-	-	-	-	-	-	110.086	21.940	-	29.457	-	51.397	161.483	-21.403	140.080	7,2	N	
O	Other service activities	14.810	-	-	-	-	-	-	14.810	22.460	-	62.653	-	85.113	99.923	-6.413	93.510	4,8	O	
P	Activities of households	-	-	-	-	-	-	-	-	6.440	-	-	-	6.440	6.440	-	6.440	0,3	P	
A-P	GVA total	725.576	0	260.274	0	0	0	0	213.988	1.199.837	371.640	0	412.356	0	783.996	1.983.833	147.459	1.949.040	100	A-P

(E: Regional Data of 2002)

GVA, at current prices (% of GVA)

NUTS1 Regions

Industries A17 (NACE rev. 1)		NUTS1 Regions																	Industries A17 (NACE rev. 1)	
		Bottom-up methods								Sub-total bottom-up	Top-down methods				Sub-total top-down	Sub-total of regional values	Adjustment to National Accounts	Total		Share of GVA
		Survey data				Administrative data					Survey or census data		Administrative data							
		Exhaustive coverage		Sample data		mono- regional units	multi regional units	Closely related indicators	Data based on extra- polations or models		Closely related indicators	Extra- polations or models	Closely related indicators	Extra- polations or models						
		mono- regional units	multi regional units	mono- regional units	multi regional units															
1	2	3	4	6	7	8	10	11 (=5+9+10)	12	13	15	16	18 (=14+17)	19 (=11+18)	20	21 (=19+20)	22			
% (of sub-total [19=100])																	%			
A	Agriculture, hunting and forestry	76,0	-	-	-	-	-	-	76,0	9,4	-	14,6	-	24,0	95,6	4,4	100	1,1	A	
B	Fishing	-	-	-	-	-	-	-	-	54,5	-	45,5	-	100,0	100,0	-	100	0,0	B	
C	Mining and Quarrying	87,6	-	0,1	-	-	-	12,4	100,0	-	-	-	-	97,2	2,8	100	0,2	C		
D	Manufacture	92,8	-	3,3	-	-	-	3,9	100,0	-	-	-	-	92,6	7,4	100	22,3	D		
E	Electricity, gas and water supply	100,0	-	-	-	-	-	-	100,0	-	-	-	-	98,0	2,0	100	2,0	E		
F	Construction	79,8	-	20,2	-	-	-	-	100,0	-	-	-	-	73,4	26,6	100	4,3	F		
G	Wholesale and retail trade; repair	-	-	85,7	-	-	-	14,3	100,0	-	-	-	-	130,1	-30,1	100	10,8	G		
H	Hotels and Restaurants	-	-	-	-	-	-	-	-	71,0	-	29,0	-	100,0	100,0	-	100	1,6	H	
I	Transport and communication	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100	5,6	I	
J	Financial intermediation	1,3	-	-	-	-	-	-	1,3	98,7	-	-	-	98,7	100,0	-	100	4,8	J	
K	Real estate, renting	-	-	-	-	-	-	33,5	33,5	1,6	-	65,0	-	66,5	100,0	-	100	24,3	K	
L	Public administration, defence	100,0	-	-	-	-	-	-	100,0	-	-	-	-	-	100,0	-	100	6,2	L	
M	Education	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100	4,5	M	
N	Health and Social Work	68,2	-	-	-	-	-	-	68,2	13,6	-	18,2	-	31,8	115,3	-15,3	100	7,2	N	
O	Other service activities	14,8	-	-	-	-	-	-	14,8	22,5	-	62,7	-	85,2	106,9	-6,9	100	4,8	O	
P	Activities of households	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100	0,3	P	
A-P	GVA total	36,6	-	13,1	-	-	-	10,8	60,5	18,7	-	20,8	-	39,5	101,8	7,6	100	100	A-P	

A 3.2 NUTS 2 Regions (administrative regions / Regierungsbezirke)

DE Compilation Table Regional GVA

Germany 2003

GVA, at current prices (EUR mio.)

NUTS2(3) Regions

Industries A17 (NACE rev. 1)		NUTS2(3) Regions																Industries A17 (NACE rev. 1)		
		Bottom-up methods								Sub-total bottom-up	Top-down methods				Sub-total top-down	Sub-total of regional values	Adjustment to National Accounts		Total	Share of GVA
		Survey data				Administrative data			Data based on extra- polations or models		Survey or census data		Administrative data							
		Exhaustive coverage		Sample data		mono- regional units	multi regional units	Closely related indicators			Closely related indicators	Extra- polations or models	Closely related indicators	Extra- polations or models						
		mono- regional units	multi regional units	mono- regional units	multi regional units															
1	2	3	4	6	7	8	10	11 (=5+9+10)	12	13	15	16	18 (=14+17)	19 (=11+18)	20	21 (=19+20)	22			
EUR mio.																	%			
A	Agriculture, hunting and forestry	15.384	-	-	-	-	-	-	15.384	1.910	-	2.946	-	4.856	20.240	930	21.170	1,1	A	
B	Fishing	-	-	-	-	-	-	-	-	120	-	100	-	220	220	-	220	0,0	B	
C	Mining and Quarrying	3.276	-	2	-	-	-	463	3.741	-	-	-	-	-	3.741	109	3.850	0,2	C	
D	Manufacture	373.001	-	13.305	-	-	-	15.576	401.881	-	-	-	-	-	401.881	32.069	433.950	22,3	D	
E	Electricity, gas and water supply	38.127	-	-	-	-	-	-	38.127	-	-	-	-	-	38.127	773	38.900	2,0	E	
F	Construction	32.106	-	-	-	-	-	-	32.106	46.806	-	-	-	46.806	78.912	5.548	84.460	4,3	F	
G	Wholesale and retail trade; repair	-	-	-	-	-	-	-	-	210.360	-	-	-	210.360	210.360	-	210.360	10,8	G	
H	Hotels and Restaurants	-	-	-	-	-	-	-	-	30.480	-	-	-	30.480	30.480	-	30.480	1,6	H	
I	Transport and communication	-	-	-	-	-	-	-	-	108.840	-	-	-	108.840	108.840	-	108.840	5,6	I	
J	Financial intermediation	-	-	-	-	-	-	-	-	93.420	-	-	-	93.420	93.420	-	93.420	4,8	J	
K	Real estate, renting	-	-	-	-	-	-	158.750	158.750	178.060	-	137.760	-	315.820	474.570	-	474.570	24,3	K	
L	Public administration, defence	-	-	-	-	-	-	-	-	120.200	-	-	-	120.200	120.200	-	120.200	6,2	L	
M	Education	-	-	-	-	-	-	-	-	88.590	-	-	-	88.590	88.590	-	88.590	4,5	M	
N	Health and Social Work	-	-	-	-	-	-	-	-	140.080	-	-	-	140.080	140.080	-	140.080	7,2	N	
O	Other service activities	-	-	-	-	-	-	-	-	59.330	-	34.180	-	93.510	93.510	-	93.510	4,8	O	
P	Activities of households	-	-	-	-	-	-	-	-	6.440	-	-	-	6.440	6.440	-	6.440	0,3	P	
A-P	GVA total	461.893	0	13.307	0	0	0	174.789	649.989	1.084.636	0	174.986	0	1.259.622	1.909.611	39.429	1.949.040	100	A-P	

(E: Regional Data of 2002)

GVA, at current prices (% of GVA)

NUTS2(3) Regions

Industries A17 (NACE rev. 1)		NUTS2(3) Regions																Industries A17 (NACE rev. 1)		
		Bottom-up methods								Sub-total bottom-up	Top-down methods				Sub-total top-down	Sub-total of regional values	Adjustment to National Accounts		Total	Share of GVA
		Survey data				Administrative data			Data based on extra- polations or models		Survey or census data		Administrative data							
		Exhaustive coverage		Sample data		mono- regional units	multi regional units	Closely related indicators			Closely related indicators	Extra- polations or models	Closely related indicators	Extra- polations or models						
		mono- regional units	multi regional units	mono- regional units	multi regional units															
1	2	3	4	6	7	8	10	11 (=5+9+10)	12	13	15	16	18 (=14+17)	19 (=11+18)	20	21 (=19+20)	22			
% (of sub-total [19=100])																	% (of total [21=100])	%		
A	Agriculture, hunting and forestry	76,0	-	-	-	-	-	-	76,0	9,4	-	14,6	-	24,0	95,6	4,4	100,0	1,1	A	
B	Fishing	-	-	-	-	-	-	-	-	54,5	-	45,5	-	100,0	100,0	-	100,0	0,0	B	
C	Mining and Quarrying	87,6	-	0,1	-	-	-	12,4	100,0	-	-	-	-	-	97,2	2,8	100,0	0,2	C	
D	Manufacture	92,8	-	3,3	-	-	-	3,9	100,0	-	-	-	-	-	92,6	7,4	100,0	22,3	D	
E	Electricity, gas and water supply	100,0	-	-	-	-	-	-	100,0	-	-	-	-	-	98,0	2,0	100,0	2,0	E	
F	Construction	40,7	-	-	-	-	-	-	40,7	59,3	-	-	-	59,3	93,4	6,6	100,0	4,3	F	
G	Wholesale and retail trade; repair	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	10,8	G	
H	Hotels and Restaurants	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	1,6	H	
I	Transport and communication	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	5,6	I	
J	Financial intermediation	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	4,8	J	
K	Real estate, renting	-	-	-	-	-	-	33,5	33,5	37,5	-	29,0	-	66,5	100,0	-	100,0	24,3	K	
L	Public administration, defence	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	6,2	L	
M	Education	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	4,5	M	
N	Health and Social Work	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	7,2	N	
O	Other service activities	-	-	-	-	-	-	-	-	63,4	-	36,6	-	100,0	100,0	-	100,0	4,8	O	
P	Activities of households	-	-	-	-	-	-	-	-	100,0	-	-	-	100,0	100,0	-	100,0	0,3	P	
A-P	GVA total	24,2	-	0,7	-	-	-	9,2	34,0	56,8	-	9,2	-	66,0	98,0	2,0	100,0	100	A-P	

ANNEX 4 List of Industries

A 4.1 Gross value added at current prices (EUR bn.) – industries A to F

List of industries in National and Regional Accounts of Germany

Gross value added at current prices		Germany					
		EUR bn.					
No.	NACE rev.1 Industries	2003	2004	2005	2006	2007	2008
1	A to B Agriculture, hunting and forestry; fishing	19,08	21,90	17,52	17,90	20,67	20,25
2	A Agriculture, hunting and forestry	18,85	21,67	17,29	17,66	20,43	...
3	01 Agriculture, hunting and related service activities	17,10	19,76	15,45	15,61	17,78	...
4	02 Forestry, logging and related service activities	1,75	1,91	1,84	2,05	2,65	...
5	B Fishing	0,23	0,23	0,23	0,24	0,24	...
6	C to F Industry	562,62	584,81	589,89	627,92	656,66	667,95
7	C to E Industry (excluding construction)	477,09	501,55	509,75	545,84	568,38	572,72
8	C Mining and quarrying	3,82	4,09	3,92	4,86	4,81	5,73
9	CA Mining and quarrying of energy producing materials	1,65	1,77	1,70	2,37	2,31	...
10	10 Mining of coal and lignite; extraction of peat	- 0,12	- 0,07	0,29	0,39	0,42	...
11	11 Extraction of crude petroleum and natural gas; service activities ..	1,77	1,84	1,41	1,98	1,89	...
12	12 Mining of uranium and thorium ores	-	-	-	-	-	-
13	CB Mining and quarrying, except of energy producing materials	2,17	2,32	2,22	2,49	2,50	...
14	13 Mining of metal ores .....	.	.	.	.	.	.
15	14 Other mining and quarrying .....	.	.	.	.	.	.
16	D Manufacturing	436,08	452,14	458,69	490,94	514,63	517,45
17	DA Manufacture of food products, beverages and tobacco	38,02	38,27	37,15	37,37	37,71	...
18	15 Manufacture of food products and beverages	36,38	36,66	35,52	35,75	36,31	...
19	16 Manufacture of tobacco products	1,64	1,61	1,63	1,62	1,40	...
20	DB Manufacture of textiles and textile products	7,76	7,67	7,36	7,50	7,51	...
21	17 Manufacture of textiles	4,99	4,91	4,77	4,83	4,73	...
22	18 Manufacture of wearing apparel; dressing and dyeing of fur	2,77	2,76	2,59	2,67	2,78	...
23	DC Manufacture of leather and leather products	1,02	1,03	0,93	0,95	0,96	...
24	DD Manufacture of wood and wood products	6,90	7,40	7,02	7,46	7,56	...
25	DE Manufacture of pulp, paper and paper products; publishing and printing	30,58	31,52	32,17	32,26	32,80	...
26	21 Manufacture of pulp, paper and paper products	10,03	10,16	10,10	10,35	10,56	...
27	22 Publishing, printing and reproduction of recorded media	20,55	21,36	22,07	21,91	22,24	...
28	DF Manufacture of coke, refined petroleum products and nuclear fuel	4,32	5,02	4,78	6,26	3,99	...
29	DG Manufacture of chemicals, chemical products and man-made fibres	44,20	45,93	47,93	49,76	52,61	...
30	DH Manufacture of rubber and plastic products	20,86	21,95	21,96	22,77	23,01	...
31	DI Manufacture of other non-metallic mineral products	13,67	14,02	13,65	14,66	15,39	...
32	DJ Manufacture of basic metals and fabricated metal products	56,17	58,61	61,89	68,41	72,52	...
33	27 Manufacture of basic metals	17,12	19,04	20,74	22,41	25,69	...
34	28 Manufacture of fabricated metal products, except machinery and equipment	39,05	39,57	41,15	46,00	46,83	...
35	DK Manufacture of machinery and equipment n.e.c.	64,63	67,70	69,79	74,59	81,75	...
36	DL Manufacture of electrical and optical equipment	62,98	67,94	67,49	74,08	77,85	...
37	30 Manufacture of office machinery and computers	3,68	4,10	3,83	3,71	4,36	...
38	31 Manufacture of electrical machinery and apparatus n.e.c.	30,48	32,92	32,09	36,31	34,70	...
39	32 Manufacture of radio, television and communication equipment and apparatus	10,75	12,28	11,52	12,11	15,20	...
40	33 Manufacture of medical, precision and optical instruments, watches and clocks	18,07	18,64	20,05	21,95	23,59	...
41	DM Manufacture of transport equipment	73,53	73,63	74,93	82,19	87,82	...
42	34 Manufacture of motor vehicles, trailers and semi-trailers	64,38	64,91	64,18	71,76	77,22	...
43	35 Manufacture of other transport equipment	9,15	8,72	10,75	10,43	10,60	...
44	DN Manufacturing n.e.c.	11,44	11,45	11,64	12,68	13,15	...
45	36 Manufacture of furniture; manufacturing n.e.c.	10,44	10,38	10,57	11,42	11,32	...
46	37 Recycling	1,00	1,07	1,07	1,26	1,83	...
47	E Electricity, gas and water supply	37,19	45,32	47,14	50,04	48,94	49,54
48	40 Electricity, gas, steam and hot water supply	31,46	39,38	41,05	43,86	42,78	...
49	41 Collection, purification and distribution of water	5,73	5,94	6,09	6,18	6,16	...
50	F Construction	85,53	83,26	80,14	82,08	88,28	95,23

A 4.2 Gross value added at current prices (EUR bn.) – industries G to P

List of industries in National and Regional Accounts of Germany

Gross value added at current prices			Germany					
			EUR bn.					
No.	NACE rev.1	Industries	2003	2004	2005	2006	2007	2008
51	G to P	Services activities	1 367,71	1 391,65	1 416,48	1 451,35	1 499,24	1 551,04
52	G to I	Trade, hotels, transport and communications	346,12	353,41	357,47	368,10	379,58	397,43
53	G	Wholesale and retail trade; repair of motor vehicles, ... and household goods	203,33	204,32	208,21	212,37	219,26	231,35
54	50	Sale, maintenance and repair of motor vehicles and ... sale of automotive fuel	36,07	37,27	38,21	38,66	36,36	...
55	51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	83,83	85,35	89,95	90,52	100,22	...
56	52	Retail trade, except of motor vehicles ...; repair of personal and household goods	83,43	81,70	80,05	83,19	82,68	...
57	H	Hotels and restaurants	30,90	31,79	33,10	33,70	37,04	38,04
58	I	Transport, storage and communication	111,89	117,30	116,16	122,03	123,28	128,04
59	60	Land transport; transport via pipelines	29,57	28,34	29,14	31,14	32,43	...
60	61	Water transport	4,31	5,62	6,77	5,46	6,75	...
61	62	Air transport	5,02	5,60	5,78	5,91	6,18	...
62	63	Supporting and auxiliary transport activities; activities of travel agencies	30,77	32,76	34,46	37,15	38,91	...
63	64	Post and telecommunications	42,22	44,98	40,01	42,37	39,01	...
64	J to K	Financial, real-estate, renting and business activities	570,22	581,02	593,71	613,26	639,37	659,16
65	J	Financial intermediation	92,13	101,71	95,75	93,90	86,00	84,20
66	65	Financial intermediation, except insurance and pension funding	65,80	70,55	68,89	65,33	55,89	...
67	66	Insurance and pension funding, except compulsory social security	15,39	17,93	12,85	14,12	15,52	...
68	67	Activities auxiliary to financial intermediation	10,94	13,23	14,01	14,45	14,59	...
69	K	Real estate, renting and business activities	478,09	479,31	497,96	519,36	553,37	574,96
70	70	Real estate activities	232,82	232,12	237,24	249,40	263,10	...
71	71	Renting of machinery ... without operator and of personal and household goods	36,62	36,97	40,13	38,64	40,85	...
72	72	Computer and related activities	29,16	30,36	31,52	32,53	36,13	...
73	73	Research and development	7,45	7,57	7,26	7,39	8,37	...
74	74	Other business activities	172,04	172,29	181,81	191,40	204,92	...
75	L to P	Other service activities	451,37	457,22	465,30	469,99	480,29	494,45
76	L	Public administration and defence; compulsory social security	121,84	121,85	121,74	122,14	123,64	126,88
77	M	Education	88,44	91,39	92,75	91,50	95,73	98,08
78	N	Health and social work	140,53	142,45	146,80	150,80	152,85	158,54
79	O	Other community, social and personal service activities	94,12	94,91	97,25	98,61	101,00	103,70
80	90	Sewage and refuse disposal, sanitation and similar activities	13,06	13,60	14,25	14,91	15,05	...
81	91	Activities of membership organizations n.e.c.	16,79	16,89	16,18	16,29	16,69	...
82	92	Recreational, cultural and sporting activities	36,81	36,02	37,69	37,93	38,91	...
83	93	Other service activities	27,46	28,40	29,13	29,48	30,35	...
84	P	Activities of households	6,44	6,62	6,76	6,94	7,07	7,25
85	A to P	Total	1 949,41	1 998,36	2 023,89	2 097,17	2 176,57	2 239,24
86		+ taxes on products	225,02	223,15	225,00	234,43	257,86	262,58
87		- subsidies on products	10,63	10,61	6,69	6,50	6,23	6,02
88		= gross domestic product	2 163,80	2 210,90	2 242,20	2 325,10	2 428,20	2 495,80

Explanation of Symbols

- = no figures or magnitude zero
- / = no data because the numerical value is not sufficiently reliable
- . = numerical value unknown or not to be disclosed
- ... = data will be available later
- x = cell blocked for logical reasons

A 4.3 Gross value added at current prices (% of GVA) – industries A to F

List of industries in National and Regional Accounts of Germany

Gross value added at current prices			Germany					
			% of gross value added					
No.	NACE rev.1	Industries	2003	2004	2005	2006	2007	2008
1	A to B	Agriculture, hunting and forestry; fishing	1,0	1,1	0,9	0,9	0,9	0,9
2	A	Agriculture, hunting and forestry	1,0	1,1	0,9	0,8	0,9	...
3	01	Agriculture, hunting and related service activities	0,9	1,0	0,8	0,7	0,8	...
4	02	Forestry, logging and related service activities	0,1	0,1	0,1	0,1	0,1	...
5	B	Fishing	0,0	0,0	0,0	0,0	0,0	...
6	C to F	Industry	28,9	29,3	29,1	29,9	30,2	29,8
7	C to E	Industry (excluding construction)	24,5	25,1	25,2	26,0	26,1	25,6
8	C	Mining and quarrying	0,2	0,2	0,2	0,2	0,2	0,3
9	CA	Mining and quarrying of energy producing materials	0,1	0,1	0,1	0,1	0,1	...
10	10	Mining of coal and lignite; extraction of peat	0,0	0,0	0,0	0,0	0,0	...
11	11	Extraction of crude petroleum and natural gas; service activities ..	0,1	0,1	0,1	0,1	0,1	...
12	12	Mining of uranium and thorium ores	-	-	-	-	-	-
13	CB	Mining and quarrying, except of energy producing materials	0,1	0,1	0,1	0,1	0,1	...
14	13	Mining of metal ores .....	.	.	.	.	.	.
15	14	Other mining and quarrying .....	.	.	.	.	.	.
16	D	Manufacturing	22,4	22,6	22,7	23,4	23,6	23,1
17	DA	Manufacture of food products, beverages and tobacco	2,0	1,9	1,8	1,8	1,7	...
18	15	Manufacture of food products and beverages	1,9	1,8	1,8	1,7	1,7	...
19	16	Manufacture of tobacco products	0,1	0,1	0,1	0,1	0,1	...
20	DB	Manufacture of textiles and textile products	0,4	0,4	0,4	0,4	0,3	...
21	17	Manufacture of textiles	0,3	0,2	0,2	0,2	0,2	...
22	18	Manufacture of wearing apparel; dressing and dyeing of fur	0,1	0,1	0,1	0,1	0,1	...
23	DC	Manufacture of leather and leather products	0,1	0,1	0,0	0,0	0,0	...
24	DD	Manufacture of wood and wood products	0,4	0,4	0,3	0,4	0,3	...
25	DE	Manufacture of pulp, paper and paper products; publishing and printing	1,6	1,6	1,6	1,5	1,5	...
26	21	Manufacture of pulp, paper and paper products	0,5	0,5	0,5	0,5	0,5	...
27	22	Publishing, printing and reproduction of recorded media	1,1	1,1	1,1	1,0	1,0	...
28	DF	Manufacture of coke, refined petroleum products and nuclear fuel	0,2	0,3	0,2	0,3	0,2	...
29	DG	Manufacture of chemicals, chemical products and man-made fibres	2,3	2,3	2,4	2,4	2,4	...
30	DH	Manufacture of rubber and plastic products	1,1	1,1	1,1	1,1	1,1	...
31	DI	Manufacture of other non-metallic mineral products	0,7	0,7	0,7	0,7	0,7	...
32	DJ	Manufacture of basic metals and fabricated metal products	2,9	2,9	3,1	3,3	3,3	...
33	27	Manufacture of basic metals	0,9	1,0	1,0	1,1	1,2	...
34	28	Manufacture of fabricated metal products, except machinery and equipment	2,0	2,0	2,0	2,2	2,2	...
35	DK	Manufacture of machinery and equipment n.e.c.	3,3	3,4	3,4	3,6	3,8	...
36	DL	Manufacture of electrical and optical equipment	3,2	3,4	3,3	3,5	3,6	...
37	30	Manufacture of office machinery and computers	0,2	0,2	0,2	0,2	0,2	...
38	31	Manufacture of electrical machinery and apparatus n.e.c.	1,6	1,6	1,6	1,7	1,6	...
39	32	Manufacture of radio, television and communication equipment and apparatus	0,6	0,6	0,6	0,6	0,7	...
40	33	Manufacture of medical, precision and optical instruments, watches and clocks	0,9	0,9	1,0	1,0	1,1	...
41	DM	Manufacture of transport equipment	3,8	3,7	3,7	3,9	4,0	...
42	34	Manufacture of motor vehicles, trailers and semi-trailers	3,3	3,2	3,2	3,4	3,5	...
43	35	Manufacture of other transport equipment	0,5	0,4	0,5	0,5	0,5	...
44	DN	Manufacturing n.e.c.	0,6	0,6	0,6	0,6	0,6	...
45	36	Manufacture of furniture; manufacturing n.e.c.	0,5	0,5	0,5	0,5	0,5	...
46	37	Recycling	0,1	0,1	0,1	0,1	0,1	...
47	E	Electricity, gas and water supply	1,9	2,3	2,3	2,4	2,2	2,2
48	40	Electricity, gas, steam and hot water supply	1,6	2,0	2,0	2,1	2,0	...
49	41	Collection, purification and distribution of water	0,3	0,3	0,3	0,3	0,3	...
50	F	Construction	4,4	4,2	4,0	3,9	4,1	4,3

A 4.4 Gross value added at current prices (% of GVA) – industries G to P

List of industries in National and Regional Accounts of Germany

Gross value added at current prices			Germany					
			% of gross value added					
No.	NACE rev.1	Industries	2003	2004	2005	2006	2007	2008
51	G to P	Services activities	70,2	69,6	70,0	69,2	68,9	69,3
52	G to I	Trade, hotels, transport and communications	17,8	17,7	17,7	17,6	17,4	17,7
53	G	Wholesale and retail trade; repair of motor vehicles, ... and household goods	10,4	10,2	10,3	10,1	10,1	10,3
54	50	Sale, maintenance and repair of motor vehicles and ... sale of automotive fuel	1,9	1,9	1,9	1,8	1,7	...
55	51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	4,3	4,3	4,4	4,3	4,6	...
56	52	Retail trade, except of motor vehicles ...; repair of personal and household goods	4,3	4,1	4,0	4,0	3,8	...
57	H	Hotels and restaurants	1,6	1,6	1,6	1,6	1,7	1,7
58	I	Transport, storage and communication	5,7	5,9	5,7	5,8	5,7	5,7
59	60	Land transport; transport via pipelines	1,5	1,4	1,4	1,5	1,5	...
60	61	Water transport	0,2	0,3	0,3	0,3	0,3	...
61	62	Air transport	0,3	0,3	0,3	0,3	0,3	...
62	63	Supporting and auxiliary transport activities; activities of travel agencies	1,6	1,6	1,7	1,8	1,8	...
63	64	Post and telecommunications	2,2	2,3	2,0	2,0	1,8	...
64	J to K	Financial, real-estate, renting and business activities	29,3	29,1	29,3	29,2	29,4	29,4
65	J	Financial intermediation	4,7	5,1	4,7	4,5	4,0	3,8
66	65	Financial intermediation, except insurance and pension funding	3,4	3,5	3,4	3,1	2,6	...
67	66	Insurance and pension funding, except compulsory social security	0,8	0,9	0,6	0,7	0,7	...
68	67	Activities auxiliary to financial intermediation	0,6	0,7	0,7	0,7	0,7	...
69	K	Real estate, renting and business activities	24,5	24,0	24,6	24,8	25,4	25,7
70	70	Real estate activities	11,9	11,6	11,7	11,9	12,1	...
71	71	Renting of machinery ... without operator and of personal and household goods	1,9	1,9	2,0	1,8	1,9	...
72	72	Computer and related activities	1,5	1,5	1,6	1,6	1,7	...
73	73	Research and development	0,4	0,4	0,4	0,4	0,4	...
74	74	Other business activities	8,8	8,6	9,0	9,1	9,4	...
75	L to P	Other service activities	23,2	22,9	23,0	22,4	22,1	22,1
76	L	Public administration and defence; compulsory social security	6,3	6,1	6,0	5,8	5,7	5,7
77	M	Education	4,5	4,6	4,6	4,4	4,4	4,4
78	N	Health and social work	7,2	7,1	7,3	7,2	7,0	7,1
79	O	Other community, social and personal service activities	4,8	4,7	4,8	4,7	4,6	4,6
80	90	Sewage and refuse disposal, sanitation and similar activities	0,7	0,7	0,7	0,7	0,7	...
81	91	Activities of membership organizations n.e.c.	0,9	0,8	0,8	0,8	0,8	...
82	92	Recreational, cultural and sporting activities	1,9	1,8	1,9	1,8	1,8	...
83	93	Other service activities	1,4	1,4	1,4	1,4	1,4	...
84	P	Activities of households	0,3	0,3	0,3	0,3	0,3	0,3
85	A to P	Total	100,0	100,0	100,0	100,0	100,0	100,0
86		+ taxes on products	x	x	x	x	x	x
87		- subsidies on products	x	x	x	x	x	x
88		= gross domestic product	x	x	x	x	x	x

Explanation of Symbols

- = no figures or magnitude zero
- / = no data because the numerical value is not sufficiently reliable
- . = numerical value unknown or not to be disclosed
- ... = data will be available later
- x = cell blocked for logical reasons

Fachserie 18, Reihe 1.4 "Detaillierte Jahresergebnisse 2008"

Computation date: August 2009

Published: 07.09.2009

Code number: 2180140087005

© Statistisches Bundesamt, Wiesbaden 2009

Distribution or reproduction for non-commercial purposes is permitted. In any case, the user has to make sure that the source "Statistisches Bundesamt" is quoted accurately.

ANNEX 5 Classification of Economic Activities (NACE rev. 1 / WZ 2003)

Classification of Economic Activities (WZ 2003) in German National and Regional Accounts

A60	A31	A17	A6	A3	Total Economy (sum of industries)
01 Agriculture, hunting and related service activities	AA Agriculture, hunting and forestry	A Agriculture, hunting and forestry	A - B Agriculture, hunting and forestry; fishing	A - B Agriculture, hunting and forestry; fishing	
02 Forestry, logging and related service activities	BA Fishing	B Fishing			
05 Fishing					
10 Mining of coal and lignite; extraction of peat		C Mining and quarrying			
11 Extraction of crude petroleum and natural gas; service activities ..	CA Mining and quarrying of energy producing materials				
12 Mining of uranium and thorium ores					
13 Mining of metal ores					
14 Other mining and quarrying	CB Mining and quarrying, except of energy producing materials				
15 Manufacture of food products and beverages		D Manufacturing	C - E Industry (excluding construction)	C - F Industry	
16 Manufacture of tobacco products	DA Manufacture of food products, beverages and tobacco				
17 Manufacture of textiles					
18 Manufacture of wearing apparel; dressing and dyeing of fur	DB Manufacture of textiles and textile products				
19 Manufacture of leather and leather products	DC Manufacture of leather and leather products				
20 Manufacture of wood and wood products	DD Manufacture of wood and wood products				
21 Manufacture of pulp, paper and paper products					
22 Publishing, printing and reproduction of recorded media	DE Manufacture of pulp, paper and paper products; publishing and printing				
23 Manufacture of coke, refined petroleum products and nuclear fuel	DF Manufacture of coke, refined petroleum products and nuclear fuel				
24 Manufacture of chemicals, chemical products and man-made fibres	DG Manufacture of chemicals, chemical products and man-made fibres				
25 Manufacture of rubber and plastic products	DH Manufacture of rubber and plastic products				
26 Manufacture of other non-metallic mineral products	DI Manufacture of other non-metallic mineral products				
27 Manufacture of basic metals					
28 Manufacture of fabricated metal products, except machinery and equipment	DJ Manufacture of basic metals and fabricated metal products				
29 Manufacture of machinery and equipment n.e.c.					
30 Manufacture of office machinery and computers					
31 Manufacture of electrical machinery and apparatus n.e.c.					
32 Manufacture of radio, television and communication equipment and apparatus	DL Manufacture of electrical and optical equipment				
33 Manufacture of medical, precision and optical instruments, watches and clocks					
34 Manufacture of motor vehicles, trailers and semi-trailers					
35 Manufacture of other transport equipment	DM Manufacture of transport equipment				
36 Manufacture of furniture; manufacturing n.e.c.					
37 Recycling	DN Manufacturing n.e.c.				
40 Electricity, gas, steam and hot water supply		E Electricity, gas and water supply			
41 Collection, purification and distribution of water	EA Electricity, gas and water supply				
45 Construction	FA Construction	F Construction	F Construction		
50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel		G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	G - I Trade, hotels, transport and communications		
51 Wholesale trade and commission trade, except of motor vehicles and motorcycles	GA Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods				
52 Retail trade, except of motor vehicles ...; repair of personal and household goods					
55 Hotels and restaurants	HA Hotels and restaurants	H Hotels and restaurants			
60 Land transport; transport via pipelines		I Transport, storage and communication			
61 Water transport					
62 Air transport	IA Transport, storage and communication				
63 Supporting and auxiliary transport activities; activities of travel agencies					
64 Post and telecommunications					
65 Financial intermediation, except insurance and pension funding		J Financial intermediation	J - K Financial, real-estate, renting and business activities	G - P Service activities	
66 Insurance and pension funding, except compulsory social security	JA Financial intermediation				
67 Activities auxiliary to financial intermediation					
70 Real estate activities		K Real estate, renting and business activities			
71 Renting of machinery ... without operator and of personal and household					
72 Computer and related activities	KA Real estate, renting and business activities				
73 Research and development					
74 Other business activities					
75 Public administration and defence; compulsory social security	LA Public administration and defence; compulsory social security	L Public administration and defence; compulsory social security	L - P Other service activities		
80 Education	MA Education	M Education			
85 Health and social work	NA Health and social work	N Health and social work			
90 Sewage and refuse disposal, sanitation and similar activities		O Other community, social and personal service activities			
91 Activities of membership organizations n.e.c.					
92 Recreational, cultural and sporting activities	OA Other community, social and personal service activities				
93 Other service activities					
95 Activities of households	PA Activities of households				P Activities of households