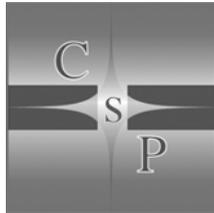# Europe and its Regions

Europe and its Regions: The Usage of European Regionalized Social Science Data

Edited by

Gerd Grözinger, Wenzel Matiaske and C. Katharina Spieß

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INTRODUCTION

Gerd Grözinger, Wenzel Matiaske, and C. Katharina Spiess

In the summer of 2004 we organized a workshop at the German Institute for Economic Research (DIW Berlin) in Berlin about regionalised social data in Germany. From our empirical work we had learned that there were increasingly datasets at many regional levels from different sources available, but that both their combination and the interdisciplinary collaboration of users and producers were still wanting. The workshop proved very stimulating, and the proceedings were published in Grözinger and Matiaske (2005).

However, in the course of the workshop the critical question was also raised if today the nation-state could still be seen as an adequate level of analysis or whether it would not be better to move toward international data. We therefore decided to organize a second workshop about regionalized social science data in Europe, which was held in the summer of 2006. Again the Socio-Economic Panel Study (SOEP) Group at DIW Berlin was the host of the workshop, since they maintain one of the most used data sets in the world. As with the first workshop we decided to invite data providers, users and methodologists – this time from all over Europe. This volume thus includes contributions from all these different sides.

Overviews

The starting point is an overview by *Jürgen H.P. Hoffmeyer-Zlotnik*, who informs us about the European central regional categories Nomenclature des Unités Territoriales Statistiques (NUTS) and Local Administrative Units (LAU) and the use of these hierarchical classifications for research. The author describes the main characteristics of the different set of classifications and explains them using the cases of Germany and Austria. Using the example of survey data, he then explores the question of whether NUTS and LAU are not only political/administrative units but also useful categories for social science research.

Claudia Brunner explains the dissemination policy of Eurostat and provides an overview of regional and urban statistical information provided by Eurostat. Since 2004 almost all Eurostat data is accessible free of charge via a single Internet portal. The Eurostat "Regio"-database covers a wide field of basic statistical information, including topics like demography, health, education, and business data. In addition, the author introduces the urban audit data collection is introduced, containing information about more than 250 EU cities and different spatial information about the units.

The access to spatial information is regarded as a key element for regional related decision-making processes in politics, economy, and society. It is unfortunately not very common that spatial data links across borders in Europe. *Kerstin Schmidtke's* contribution informs about two EU-projects – one in the area of statistics, the other in the area of planning – to build up a spatial data infrastructure (SDI) in Europe.

Special data-sets

The following section presents introductions of especially relevant European transnational social science data-sets besides the official data of Eurostat. *Daniel O'Donnell* reports on the Labour Force Survey (LFS). This survey covers all 25 EU member-states along with 3 EFTA countries, meaning a sample size of ca. 1.5 million respondents in total. Main topics of the survey are demographic information, working hours and contract form, unemployment, education, and income. The LFS contains variables with NUTS information.

Lutz C. Kaiser explores the possibilities for Cross-EU-regional comparisons using the data from the European Community Household Panel (ECHP) and its following-up Survey, the Community Statistics on Income and Living Conditions (EU-SILC). The ECHP and the EU-SILC are very unique and promising data sets for EU research, as both datasets contain harmonized panel data and therefore provide comparable information on EU-member states. The data sets cover information on the various NUTS levels, although NUTS information does not occur on the same level for every country.

David K. Jesuit's contribution on the possibilities for sub-national research using the Luxembourg Income Study (LIS) first covers an overview on the challenges for EU regional research and second reviews some of the contributions LIS data have made in the comparative study of sub-national poverty and income inequality. Like with other data sets covering several countries the LIS data cover different NUTS levels depending from the country. In the LIS the NUTS level 1 to 4 can be analyzed.

Axel Börsch-Supan and *Barbara Schaan* explore the Survey of Health, Ageing and Retirement in Europe (SHARE). SHARE provides a data infrastructure to analyse the individual and population ageing processes. For the second wave data was being collected in 14 European countries. The SHARE data also covers information on housing, the neighbourhood and the building itself. NUTS codes will be included in the data beginning with the second wave.

Loek Halman and *Ruud Luijkx* describe the European Values Study (EVS). This is as multi-wave enterprise on basic human values which is also partially combined with the World Values Survey. Many analyses have already been carried out on this basis, e.g. on the relevance of religious beliefs or the question of a common cultural transformation throughout Europe. Especially important is the possibility to combine the EVS information on beliefs and values with other data, e.g. the above described ECHP. For participating countries different levels of regionalization can be found, ranging from NUTS 1 to 3, or alternatively using national divisions.

Jürgen H.P. Hoffmeyer-Zlotnik reports on the European Social Survey (ESS). This survey, which was designed to chart the interaction between Europe's changing institutions and the attitudes, beliefs, and behaviour pattern of its diverse populations, covers more than 20 European countries. The increasing number of participating countries varies from round to round. All rounds took place in the new millennium and cover topics like politics, social trust, subjective well-being, human values, and a socio-demographic profile, in addition there are respective special themes. The ESS includes a variable on the area of residence.

The GfK Europe Report is reported by *Bernd Lochschmidt*. The GfK Report combines data from different sources with a different depth of regionalization not only for the EU15 member states but also for the Eastern Europe. Main topics of the data set are commercial data, retail sales, and consumer potentials including sociodemographic characteristics, income, milieu type, and psychographic descriptions which may be of high interest also beyond market research.

Applications

This section explores various applications of social scientific research on Europe, with a strong emphasis on economic questions. Some contributions here rely on regional data from several countries, some compare two regions across the border, and two papers use specialized economic data sets in only one large EU member state (UK, Italy), showing a richness in national regional data that can be easily overlooked by foreign researchers.

Christoph Hauser, Gottfried Tappeiner, and *Janette Walde's* article "On the Geography and Characteristics of Regional Innovation Regimes in Europe" fo-

cuses on different levels of innovation and their spatial distribution in 51 regions in Europe. Using data from the EVS as well, the authors find that patent applications display a high degree of spatial autocorrelation. They can identify different types of innovation regimes in the form of clearly interrelated input factor patterns with different endowments of economic and social capital.

Katarzyna Kopczewska's contribution "Geographical Rent in Socio-Economic Development in Central and East Europeans Countries' aims to determine the geographical benefits that characterize the development of the border regions from that of other regions. Combining EVS and EUROSTAT data, the author developed spatial models for income convergence and social awareness of economy-related issues. The results show that contrary to expectations, border regions retained their peripheral nature. With regard to social development the geographical benefit of border regions was negative.

Another border region phenomenon is discussed by *Torben Dall Schmidt*. The north of Germany and the south of Denmark exhibit two very different labour markets: the much acclaimed Danish "flexicurity" and the conservative German model. Also different here are the employment cycles. Using both Danish and German micro labour market data, the author investigates not only the respective properties and performances of the two labour market arrangements but also their interplay. The outcome is somewhat ambiguous: a steep increase in cross-border commuting coincides with quite brief average terms of employment.

In his article "Empirical Evidence on the Finance-Growth-Nexus of the Regional Level" *Andrea Vaona* uses data from the Bank of Italy and working on the NUTS level 3 to provide an answer to the long-debated question in economics about the causality of the growth of finance and of value added. The author finds that credit, especially short term credit for private firms, indeed does stimulate growth. And the findings are robust, as many econometric tests show.

Anthony Plumridge, Don J. Webber, Martin Boddy and *John Hudson* discuss the reasons for regional disparities in business performance across the United Kingdom. It is difficult to explain why labour rates vary across the country when only aggregate data are available, as it is mostly the case. Having access to firm-level data, the authors show on the basis of a commonly used Cobb-Douglas production function that spatial location matters. Although there is a common production function, regional differences in relevant dimensions such as skills remain, even suggesting that under certain circumstances the insulating effect of a greater distance to core cities may have a beneficial impact on productivity.

Methodological questions

The volume is closed by three additional contributions on methodological questions. *Annett Steinführer, Annegret Haase*, and *Sigrun Kabisch* explore the challenges of cross-national research basing on a project in urban empirical research that was carried out in four European cities. The focus of the project was on the development of central city regions in European urban areas and whether or not there is a potential for re-urbanisation potential. Of interest here for cross-national research are the fieldwork findings, which are discussed in detail.

Peter Löwe describes the tools for geo-statistical analysis. The article highlights the combination of the Open Source tools R (a dialect of the well known S-language for statistical computing and data analysis) and GRASS, a geo-information system. The author provides a brief introduction to these powerful tools, the R/GRASS interface, and presents some pointers on the use of map servers.

Franc Grimm informs us about a software tool for developing a comprehensive regional development concept based on available regional statistical data. The CONSIDEO MODELER combines techniques of consensus management and mental modeling to construct causal loop diagrams. Regional statistical data can be imported to test different scenarios.

Thanks

The workshop and this volume were enabled by the support of the EU program Citizens and Governance in the Knowledge-Based Society. We are very grateful for this funding and in particular we would like to thank Angela Schindler-Daniels from the National Contact Point at the German Aerospace Center in Bonn. Without her unbureaucratic and quick support the conference would not have been so successful. Last but not least we would like to thank all the contributors for their very stimulating presentations and lively discussions.

Literature

Grözinger, Gerd and Wenzel Matiaske. 2005. *Deutschland regional*. Sozialwissenschaftliche Daten im Forschungsverbund. Munich and Mering: Hampp.

PART I

OVERVIEWS

NUTS AND LAU: ONLY POLITICAL OR ALSO ANALYTICAL UNITS?

Jürgen H.P. Hoffmeyer-Zlotnik

1 The principles of NUTS

NUTS, the *"Nomenclature des unités territoriales statistiques"*, presents a hierarchical list of the nomenclature of territorial units for statistics in the 25 Member States of the European Union, the Candidate Countries (CC): Bulgaria, Romania, Croatia, Macedonia, and Turkey, the 3 EFTA countries (Norway, Iceland, and Liechtenstein) which are members of the European Economic Area (EEA), and Switzerland (which is a member of the EFTA but not a part of EEA). LAU, the **L**ocal **A**dministrative **U**nits reproduce the lowest two hierarchical steps of the NUTS, in the past known as NUTS 4 and NUTS 5, but in 2003 organized as a second instrument (Council Regulation EEC1988; Eurostat 2005; Eurostat 2003a). They replaced the specific divisions used in the various statistical domains of the Member States. Since 1981 this nomenclature represents the statistical regions of the European Union. It has been created and developed according to the following principles (European Commission 2005a):

1. The NUTS favours institutional breakdowns.

In subdividing national territory into regions different criteria may be used. These criteria normally pertain to normative and analytic regions:

- Normative regions are the expression of a political will; their limits are fixed according to the tasks allocated to the territorial communities, according to the sizes of population necessary to carry out these tasks efficiently and economically, and according to historical, cultural and other factors.

- Analytical or functional regions are defined according to analytical require-
  ments; they group together zones using geographical criteria (e.g. altitude or
  type of soil) or using socio-economic criteria (e.g. homogeneity, complemen-
  tarity or polarity of regional economies).

For practical reasons to do with data availability and the implementation of re-
gional policies, the NUTS nomenclature is based primarily on the institutional
divisions currently in force in the Member States. So, NUTS are normative re-
gions.

2. The NUTS favours regional units of a general character.

Territorial units specific to certain fields of activity (industrial regions, farming
regions, labour-market regions, etc.) may sometimes be used in certain Member
States. But NUTS excludes territorial units of specific fields of activity and favours
regional units of a general character.

3. The NUTS is a three-level hierarchical classification.

The NUTS represents a hierarchical classification. The NUTS subdivides each
member state into a whole number of NUTS 1 regions, each of which is in turn
subdivided into a whole number of NUTS 2 regions, each of which is in turn sub-
divided into a whole number of NUTS 3 regions. In the past, there were two more
hierarchical levels: NUTS 4: local authorities association and NUTS 5: communi-
ties or townships. Today, these two levels have been cut off the NUTS nomencla-
ture, generating a separate nomenclature of two levels: the Local Administrative
Units, LAU 1 representing former NUTS 4 level, and LAU 2 representing former
NUTS 5 level.

2   Main characteristics

At the regional level, without taking the municipalities into account, the ad-
ministrative structure of the member states generally comprises two main regional
levels (Länder and Kreise in Germany, régions and départements in France,
Comunidades autonomas and provincias in Spain, regioni and provincie in Italy,
etc.). An additional third level "corresponds to a less important or even non-exist-
ing administrative structure, and its classification level varies within the first three
levels of the NUTS, depending entirely on the Member State: NUTS 1 for France,
Italy, Greece, and Spain, NUTS 2 for Germany, NUTS 3 for Belgium, etc." (Euro-
pean Commission/Eurostat 2004: 11).

The NUTS regulation puts forth a minimum and a maximum of inhabitants for each level. These are thresholds for the average size of the NUTS regions (European Commission/Eurostat 2004: 11).

Table 2.1: Thresholds for the average size of the NUTS regions

level	minimum	maximum
NUTS1	3 million	7 million
NUTS2	800,000	3 million
NUTS3	150,000	800,000

Source: European Commission 2005a

In schematic representation the hierarchy of the NUTS is as follows:

Table 2.2: NUTS and LAU schema

NUTS 0	nation or state
NUTS 1	larger regions/parts of the country (in DE: federal states, in AT: aggregation of federal states; in BE: the three regions of the speech communities, in LU: the whole country)
NUTS 2	middle sized regions/territories (in DE: Regierungsbezirke, former and actual, if there are none then subdivision is federal state, yet in Brandenburg an artificial division in two development areas is made; in AT: federal states; in BE: provinces; in LU: the whole country)
NUTS 3	smaller regions/big cities (in DE: Kreise and kreisfreie Städte; in AT: a aggregation of Bezirke; in BE: Arrondissements; in LU: the whole country
LAU 1	local authorities association
LAU 2	communities, townships

The schematic representation shows that the NUTS often are non-comparable units. The regions of the different EU member states differ in terms of area and in terms of population:

The largest regions of all three NUTS levels are found in Finland (FI) or Sweden (SE): NUTS level 1: Manner-Suomi (FI) with 303,000 km^2, NUTS level 2: Övre Norrland (SE) with 154,310 km^2, Pohjois-Suomi (FI) with 133,580 km^2, NUTS level 3: Norrbottens län (SE) with 98,910 km^2, and Lappi (FI) with 93,000 km^2. A small region on NUTS level 1 is Bremen with 327 km^2.

In terms of population, North Rhine Westphalia (DE) with 18 million and Nord-Ovest (IT) with 15 million have the most inhabitants. Åland (FI) with 26,000

inhabitants is the least populated of the NUTS level 1 regions. On NUTS level 2 there are Île de France (FR) with 11 million and Lombardia (IT) with 9 million inhabitants and on the other side 15 regions with fewer then 300,000 inhabitants. On Nuts level 3 there are regions like Madrid and Roma and cities like Berlin with more then 3 million inhabitants and on the other side there are several NUTS 3 regions in Germany, Belgium, Austria, the United Kingdom and Greece as well as the island of Gozo in Malta with fewer then 50,000 inhabitants. (European Commission/Eurostat 2004: 13/14).

As could be shown, thresholds for the average size of the NUTS regions are one thing, the actual variance in magnitudes of areas and of populations quite another. The subdivisions of regions on the same NUTS level differ in magnitude of area and population from country to country. Therefore, Belgium and Germany are not comparable on all three levels of NUTS. But the subdivision of the regions even differ in the same country: in Germany, on NUTS 3 level, Berlin with 3,395 million inhabitants is the biggest unit populationwise, Memmingen with 41 thousand inhabitants is one of the smallest units; regarding area size, Emsland with 2,881 km^2 is one of the biggest, Frankenthal with 44 km^2 one of the smallest units in this category. But regions of one NUTS level do not only differ greatly in terms of area and population. They also differ greatly in terms of economic strength and administrative powers. "This heterogeneity at Community level is often only the reflection of the situation existing at Member State level" (Eurostat 2003a: 2).

If necessary, the NUTS regions can/will be rearranged. In 2003, the NUTS-99 version was not only changed in terms of names of regions but also territorial changes were undertook, mostly at NUTS 2 level. In Italy, NUTS level 1 was completely rearranged and the number of level 1 regions was reduced from 11 to 5. In Germany, Spain, and Italy, on NUTS level 2, one region each was split into two, in Portugal, a rearrangement of NUTS 2 level areas had been made around the capital, in Finland, by rearranging of NUTS level 2, the amount of different areas had decreased by one. In Germany (between 2000 and 2005), altogether ten level 2 regions lost their administrative status. In Germany, in 2001, changes were also made on NUTS level 3: one by uniting the two administrative parts of Berlin and one by merging Hannover City with the surrounding rural district to one region (European Commission/Eurostat 2004: 14).

3   A country's subdivision by NUTS: The case of Germany

In Germany, NUTS level 1 and NUTS level 3 represent administrative areas in a countrywide national hierarchy. NUTS level 2 also represents actual or former administrative areas except for two cases. In some cases, however, units of NUTS level 1 and NUTS level 2 are identical.

The NUTS level 1 consists of the 16 federal states. The federal states are administrative units. They differ greatly in magnitude of area (from Bremen to Bavaria) and population (from Bremen to North Rhine Westphalia) as well as in economic strength (a divide from south to north and from west to east).

The NUTS level 2 consists of 41 regions. 22 of them are "Regierungsbezirke", administrative regions subdividing 5 of the federal states: Baden-Wuerttemberg (BaWü) into 4 regions, Bavaria (BY) into 7 regions, Hesse (HE) into 3 regions, North Rhine Westphalia (NRW) into 5 regions and Saxony (SN) into 3 regions. 10 of the NUTS 2 regions are former "Regierungsbezirke" which were liquidated as administrative units by rearrangements between 2000 and 2005; they lost their administrative status but not their boundary: struck were 3 regions in Rhineland-Palatinate (RP), 3 regions in Saxony-Anhalt (SA), and 4 regions in Lower Saxony (NDS). Brandenburg was divided into two non-administrative new regions: North East and South West. This was done in order to attract business development for the poorer North East part after the EU-enlargement in 2004. For 7 federal states, NUTS level 2 is identical with NUTS level 1, because these federal states have no administrative subdivision into "Regierungsbezirke": These are the federal states of Mecklenburg-Western Pomerania (MV), Schleswig-Holstein (SH), Saarland (SL), Thuringia (TH), and the city states: Berlin (B), Hamburg (HH), and Bremen (HB).

On NUTS level 3, there are 439 "Kreise" (in 2003) differentiated into administrative districts of cities with and without rural surrounding in the sense of "borough" or "county". "Kreis" is an administrative area all over the country.

LAU level 1 represents 539 federations of communities. However, these federations do not exist in all federal states. These units are administrative units but not useful for national regionalization.

Lau level 2 represents 13,176 communities in 2003, rearranged in 2004 to 12,504 units. The communities are the lowest countrywide administrative areas of the Federal Republic of Germany but they differ greatly in magnitude of area and population.

Table 3.1: Hierarchy of NUTS and LAU in Germany

NUTS 1:	**16**	federal states (including B, HH, HB)
NUTS 2:	**41**	regions:
	22	"Regierungsbezirke" in the states BaWü (4), BY (7), HE (3), NRW (5) and SN (3)
	10	former "Regierungsbezirke" liquidated 2000-05: RP (3), SA (3), NDS (4),
	2	non-administrative regions in BB: North East and South West
	7	federal states without partition in "Regierungsbezirke": B, HH, HB, MV, SH, SL and TH, (ident. NUTS 1)
NUTS 3:	**439**	"Kreise" and "kreisfreie Städte" (borough and county)
LAU 1	**539**	"Amt"/"Verbandsgemeinde" (federations of communities)
		(not existing in all federal states)
LAU 2	**13,176**	"Gemeinde" (communities or municipalities) (in 2003)

Source: European Commission/Eurostat 2004, part 2

4   A country's subdivision by NUTS: The case of Austria

In Austria, NUTS level 1 and NUTS level 3 represents aggregations of administrative units. Only NUTS level 2 represents administrative units. NUTS level 1 represents an aggregation of the federal states: East Austria ("Ostösterreich") containing Burgenland, Lower Austria, and Vienna; South Austria ("Südösterreich") containing Carinthia and Styria; Western Austria ("Westösterreich") containing Upper Austria, Salzburg, Tyrol, and Vorarlberg. However, the federal states are historically grown and politically self-contained units. These 9 units are represented on NUTS level 2. NUTS level 3 aggregates the 84 political districts ("Bezirke") to 35 units. 26 of these units are formed by one or more political districts, 8 are additionally bordered by circuits. Yet the real "building blocks" of NUTS level 3 are the communities: The units of NUTS level 3 are aggregates of communities. Vienna remains undivided as one unit of NUTS level 3. This aggregation of communities, normally bigger then a political district, is neither a political unit nor an economic unit. Most of these aggregates are artificial. In Austria, the non-aggregated units from NUTS level 3 should be represented on LAU level 1 – but they are not. LAU level 1 does not exist. The communities are represented on LAU level 2 . (Statistik Austria 2006)

Table 4.1: Hierarchy of NUTS and LAU in Austria

NUTS 1	**3**	groups of federal states
		"Ostösterreich" containing Burgenland (B), Lower Austria (NÖ), and Vienna (W);
		"Südösterreich" containing Carinthia (K) and Styria (St);
		"Westösterreich" containing Upper Austria (OÖ), Salzburg (S), Tyrol (T), and Vorarlberg (V)
NUTS 2	**9**	federal states
NUTS 3	**35**	groups of political districts: "Bezirke"
	6	political districts (non-aggregates), including Vienna
	22	aggregations of political districts
	7	aggregations of two or more political districts or parts of them
	8	of the aggregations were bordered by circuits
LAU 1	**0**	entity the 84 political districts: "Bezirke" were not seen as an analytical unit for EU
LAU 2	**2,381**	communities: "Gemeinden"

Source: Statistik Austria 2006

In Austria today, the hierarchy of NUTS is used as statistical units. But only NUTS 2 and LAU 2 are analytical levels for sociological analysis, because the level of NUTS 2 is historically and culturally developed and the community is the smallest unit for a national regionalization.

Not only in Austria, but also in Estonia, Greece, Italy, Portugal, Spain, and other countries administrative regions were aggregated to statistical regions as NUTS regions.

5   The hierarchical order for an analytical regionalization

Normally, regionalization starts with a modular system. The lowest level of administrative units – the community – is the "basic module". The first level of aggregation in an analytical as well as a political sense concerns the surroundings about a centre: the commuter belt. In the sociologist's view, the commuter belt can be defined by the rate of those persons which are commuting into the centre for working. In the economist's view, the commuter belt can be defined by the rate of those persons using a centre of commerce. In a politician's view, the belt can be defined as an administrative unit with centres of administration, culture, hospital and education facilities. Transformed to the EU's statistical system, the "basic

module" is LAU level 2. The first level of aggregation is in some countries represented by LAU level 1 and by NUTS level 3 in other countries. In 8 countries of EU-25 the LAU level 1 does not exist. In some other countries, LAU level 1 is not a national regional level. In some other countries LAU level 1 represents areas of specific fields. In these cases, the researcher needs specific information to detect what the actual level of the first aggregation is.

The second level of aggregation is a historically or politically defined area and can be accepted as a cultural and/or an economic area. Often this level is the NUTS level 2 but in small countries this can be the NUTS level 3 – if NUTS level 3 is not identical with the first level of aggregation.

Table 5.1: Correspondence between the NUTS levels and the national administrative units (2003)

	NUTS 1		NUTS 2		NUTS 3		LAU 1		LAU 2	
BE	Gewesten/ Régions	3	Provincies/ Provinces	11	Arrondissementen/Arrondissements	43	-		Gemeenten/ Communes	589
CZ	Území	1	Oblasti	8	Kraje	14	Okresy	77	Obce	6,249
DK	-	1	-	1	Amter	15	-		Kommuner	271
DE	Länder	16	Regierungsbezirke	41	Kreise	439	Verwaltungsgemeinsch.	539	Gemeinden	13,176
EE	-	1	-	1	Groups of Maakond	5	Maakond	15	Vald, Inn	241
GR	Groups of development regions	4	Periferies	13	Nomoi	51	Dimoi/Koinotites	1034	Demotiko diamerisma/ Koinotiko diamerisma	6,130
ES	Agrupación de comunidades autónomas	7	Comunidades y ciudades autónomas	19	Provincias + Ceuta y Melilla	52	-		Municipios	8,108
FR	Z.E.A.T + DOM	9	Régions + DOM	26	Départements + DOM	100	-		Communes	36 678
IE	-	1	Regions	2	Regional Authority Regions	8	Counties/County Boroughs	34	DEDs/Wards	3,440
IT	Gruppi di regioni	5	Regioni	21	Provincie	103	-		Comuni	8,100
CY	-	1	-	1	-	1	Eparchies	6	Dimoi, koinotites	614
LV	-	1	-	1	Reģioni	6	Rajoni, republikas pilsētas	33	Pilsētas, novadi, pagasti	536
LT	-	1	-	1	Apskritys	10	Savivaldybės	60	Seniūnijos	515

	NUTS 1		NUTS 2		NUTS 3		LAU 1		LAU 2	
LU	-	1	-	1	-	1	Cantons	13	Communes	118
HU	Statisztikai nagyrégiók	3	Tervezési-statisztikai régiók	7	Megyék + Budapest	20	Statisztikai kistérségek	168	Települések	3,145
MT	-	1	-	1	Gzejjer	2	Distretti	6	Kunsilli	68
NL	Landsdelen	4	Provincies	12	COROP regio's	40	-		Gemeenten	489
AT	Gruppen von Bundesländern	3	Bundesländer	9	Gruppen von Politischen Bezirken	35	-		Gemeinden	2,381
PL	Regiony	6	Województwa	16	Podregiony	45	Powiaty i miasta na prawach powiatu	379	Gminy	2,478
PT	Continente	3	Comissões de coordenação regional + Regiões autónomas	7	Grupos de Concelhos	30	Concelhos - Municípios	308	Freguesias	4 257
SI	-	1	-	1	Statistične regije	12	Upravne enote	58	Občine	193
SK	-	1	Oblasti	4	Kraje	8	Okresy	79	Obce	2,928
FI	Manner-Suomi, Ahvenanmaa / Fasta Finland, Åland	2	Suuralueet / Storområden	5	Maakunnat / Landskap	20	Seutukunnat / Ekonomiska regioner	82	Kunnat / Kommuner	446
SE	-	1	Riksområden	8	Län	21	-		Kommuner	290
UK:	Government Office Regions; Country	12	Counties (some grouped); Inner and Outer London; Groups of unitary authorities	37	Upper tier authorities or groups of lower tier authorities (unitary authorities or districts)	133	Lower tier authorities (districts) or individual unitary authorities; Individual unitary authorities or LECs (or parts thereof); Districts	443	Wards (or parts thereof)	10,679
EU-15		72		213		1,091		2,453		95,152
EU-25		89		254		1,214		3,334		112,119

Source: Eurostat 2003b

Table 5.1 demonstrates how different the arrangements of administrative regions are from country to country.

Belgium, Czech Republic, and Portugal nearly have the same number of inhabitants: between 10 and 10.5 million. With 32.5 thousand square kilometres, Belgium is the smallest and Portugal, with 92 thousand square kilometres, the biggest of these three countries. On NUTS level 2 there are 11 units in Belgium, 8 units in the Czech Republic and 7 units in Portugal. On NUTS level 3 there are 43 units in Belgium, the smallest of the three countries, but only 14 units in the Czech Republic. However, the area of the Czech Republic is more then twice as large as that of Belgium. Looking at LAU level 1, in Portugal there are 308 regional units, in the Czech Republic there are 77, and in Belgium this category is not used. At LAU level 2, in Belgium there are 589 regional units, in Portugal 4,257 regional units, and in the Czech Republic 6,249 regional units. These three countries are not comparable on any regional level . Still, all three countries have nearly the same number of inhabitants. While the area of the biggest of the three, Portugal, is thrice as large as that of the smallest, Belgium, the number of units on LAU level 2 is nearly eight times higher in Portugal than in Belgium and nearly 11 times higher in the Czech Republic compared to Belgium. Only by means of defining local centres with their surrounding (merged by specific indicators as commuting to work, or for shopping, etc.) these regional units can be compared. Unfortunately, we do not have information on two variables needed for defining a centre with a commuting belt or a catchment area. On average, a Belgium "commune" has 17,700 inhabitants, a Czech "obce" has 1,600 inhabitants. Is a "commune" in Belgium the same as an "obce" in Czech Republic? Are both regional units defined by one settlement with higher density of population and a surrounding area which is connected to the nucleus of the whole unit, the town centre?

6   NUTS as an analytical region

On the basis of the NUTS, regional sections of the Community surveys were defined. In 1961, the Brussels Conference on Regional Economies found:

NUTS 1 (major socio-economic regions grouping together basic regions) should be used for analyzing regional Community problems.

NUTS 2 (basic regions) was the framework generally used by Member States for the application of their regional policies and should therefore constitute the appropriate level for analyzing regional-national problems.

For the purpose of appraising eligibility for aid from the Structural Funds, regions whose development is lagging behind (regions concerned by Objective 1) have been classified at the NUTS level 2.

The periodic report on the social and economic situation and development of the regions of the Community (Article 8 of Council Regulation (EEC) No 4254/88 concerning the European Regional Development Fund) has been prepared at the NUTS level 2.

NUTS 3 broadly comprises regions which are too small for complex economic analyses, NUTS 3 may be used to establish specific diagnoses or to pinpoint where regional measures need to be taken.

7   The Eurostat Data: Coverage, Periodicity and Timeliness (Eurostat 2004)

Eurostat 2004: "To ensure coherence in the data, data are stored only for the currently applicable version of the NUTS nomenclature (the official regional breakdown for all EU countries). In the event of a modification to the NUTS no-menclature, data series are withdrawn for all regions affected by the change (in terms of gaining or losing territory). Until data collected in accordance with the new NUTS breakdown becomes available, there may as a result be temporary gaps in the data coverage.

The regional statistics held in the Regio domain of the New Cronos data base comprise data predominately at the NUTS level 2, although individual collections and tables within them also feature data at the NUTS 3 level. Occasionally, data are available only at NUTS 1.

Data for candidate countries and any data for other non-EU25 countries are stored in parallel tables to those for EU 25 member States. These tables can be recognised by an initial 'X' in the table name."

Thematic structure of regional data:

- Agriculture

- Demographic statistics

- Economic accounts

- Education statistics

- Community labour force survey - annual average, from 1999

- Community labour force survey - second quarter, up to 2001

- Migration statistics

- Science and Technology (research and development, patents)

- Structural business statistics

- Health statistics

- Tourism statistics

- Transport and energy statistics

- Unemployment - annual average, from 1999

- Unemployment - second quarter, up to 2001

Time Coverage: The Regio domain was established in 1975. So some data series are available from this date on. New collections have been created at irregular intervals since then.

Periodicity: All of the data are disseminated yearly.

Timeliness: 12-24 months. Incomplete delivery of data by some Member States may in some collections occasionally lead to poorer timeliness.

Legal basis for data provision (Eurostat 2004): "As regional data is usually a subset of data collected at national level, the legal basis varies from collection to collection within Regio and the user should therefore consult the relevant base page. There are three possible structures:

- EU legislation makes the supply of regional data mandatory

- EU legislation makes the supply of national data mandatory but regional data is not specifically mentioned and countries supply it voluntarily (under a so-called "gentleman's agreement)

- No EU legislation requiring data provision exists and regional data is supplied by countries voluntarily (under a so-called "gentleman's agreement)."

Regulation on statistical confidentiality (Eurostat 2004): "Council Regulation (CE) No 322/97 of 17 February 1997 (OJ No L 52/1) and Council Regulation (EURATOM, EEC) no 1588/90 of 11 June 1990 on the transmission of the data subject to statistical confidentiality to the Statistical Office of the European Communities (OJ No L 151/ 1) stipulates the detailed rules used for receiving, processing and disseminating the confidential data."

8   Analysis with NUTS 2

NUTS 2 is the regional level for complex economic analyses. On this level, differences in crop yield of different type of corn, in productivity, in economic development, in social disparities can be shown (see figure 1). NUTS 2 is the level for financial support for less developed regions. But as can be exemplified for Germany: In some states of the Federal Republic of Germany there is a partition of the state into several "Regierungsbezirke", in other states there is no partition. The state of Brandenburg was divided into two regions only for getting financial aid from the European Union for the poorer north-eastern part of that state. Here the division into two regions is a political one, oriented on the criteria for financial aid. Other states annulled the partition of their territory, but the former "Regierungsbezirke" remain as analytical units for EU until today. Therefore, in Germany level NUTS 2 is a mixture of NUTS 1 units and a subdivision of some of them into NUTS 2 units.

From a sociological view, NUTS level 3 is an accepted level for analysis measuring social disparities. On this level, the regions can be used as units for an aggregation of units for a synthetic regionalization as well as for an analytic regionalization. The NUTS level 3 units are not useful for regionalization if the basic module is a synthetic one built by aggregation like in Austria. The basic module for regionalization should be something like a "natural area" composed of an urban area or a town and its surrounding.

Figure 8.1: Gross Domestic Product (GDP) per inhabitant (in PPS) in % of EU-25 = 100 (average 2000-02)

Source: http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/GISCO/mapjobs2006/mp200616-1-e.pdf

9 Analysis with survey data on different levels of NUTS and LAU

For the following analysis, survey data that sociologists normally can get were used: Data from Allbus 1996 (German Social Survey). The analyses are done on NUTS level 1 for the 16 states of the Federal Republic of Germany and on LAU level 2 for the communes.

Table 9.1: "General education", measured by grades distributed over NUTS 1: Federal States

Fed.states	9 years	10 years	12 years	Abitur	Total
SH	49.5%	27.4%	6.3%	16.8%	100.0%
HH	32.7%	25.0%	13.5%	28.9%	100.0%
NDS	51.1%	28.6%	8.4%	11.8%	100.0%
HB	46.2%	35.9%	5.1%	12.8%	100.0%
NRW	50.3%	24.9%	6.3%	18.6%	100.0%
HE	41.0%	32.3%	5.6%	21.1%	100.0%
RP	56.7%	22.5%	3.3%	17.5%	100.0%
BW	51.5%	23.0%	3.3%	22.1%	100.0%
BY	54.6%	23.1%	4.6%	17.8%	100.0%
SL	66.7%	13.3%	20.0%		100.0%
B-W	34.2%	32.9%	6.8%	26.0%	100.0%
B-O	19.4%	47.8%	7.5%	25.4%	100.0%
MV	40.8%	43.3%	.8%	15,0%	100.0%
BB	40.8%	39.1%	8.2%	11.9%	100.0%
SA	51.2%	37.9%	2.5%	8.4%	100.0%
TH	45.0%	38.7%	3.6%	12.6%	100.0%
SN	39.4%	39.4%	5.2%	16.0%	100.0%
Total					3,253

Source: Allbus 1996, calculation by the author

SH=Schleswig-Holstein, HH = Hamburg, NDS = Lower Saxony, HB = Bremen, NRW = North Rhine Westphalia, HE = Hesse, RP = Rhineland-Palatinate, BW = Baden-Wuerttemberg, BY = Bavaria, SL = Saarland; B = Berlin (B-W = Berlin-West, B-O = Berlin-East), MV = Mecklenburg-Western Pomerania, BB = Brandenburg, SA = Saxony-Anhalt, TH = Thuringia, SN = Saxony

In SL today there is no difference between 12 years and Abitur
Berlin is divided into former Berlin-West and former Berlin-East

Table 9.2: General education, measured in grades distributed over LAU 2, administrative communes, grouped by the number of inhabitants

	education				Total
inhabitants	9 years	10 years	12 years	Abitur	
till 1,999	44.8%	42.9%	3.1%	9.0%	100.0%
2,000 – 4,999	56.9%	28.6%	3.6%	10.9%	100.0%
5,000 – 19,999	56.1%	26.3%	5.7%	11.8%	100.0%
20,000 – 49,999	47.1%	31.4%	3.9%	17.5%	100.0%
50,000 – 99,999	49.6%	29.4%	7.3%	13.8%	100.0%
100,000 – 499,999	39.9%	28.6%	6.3%	25.1%	100.0%
500,000 and more	33.2%	33.2%	7.2%	26.5%	100.0%
Total					3,253

Source: Allbus 1996, calculation by the author

Table 9.3: General education, measured in grades distributed over urban regions constructed on LAU 2: communes by analytical regionalization. Modules are communes, analytical criterion: commuting

	education				Total
BIK-7	9 years	10 years	12 years	Abitur	
till 1,999	46.1%	42.3%	3.1%	8.5%	100.0%
2,000 – 4,999	57.2%	28.8%	3.5%	10.4%	100.0%
5,000 – 19,999	58.9%	25.6%	5.4%	10.1%	100.0%
20,000 – 49,999	54.6%	24.8%	4.4%	16.2%	100.0%
50,000 – 99,999	39.3%	38.9%	7.6%	14.3%	100.0%
100,000 – 499,999	45.9%	31.4%	4.3%	18.4%	100.0%
500,000 and more	35.5%	31.0%	7.3%	26.2%	100.0%
Total					2,929

Source: Allbus 1996, calculation by the author

Tables 9.1 to 9.3 point out the general education of about 3,000 respondents in a national survey and their regional distribution over Germany. Hereby table 9.1