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ESPON also provides an ESPON OLAP Cube, a multidimensional database tool to access the spatially very disaggregated data of the territorial databases.

Typically access to the data files are restricted, however some of the databases (ESPON OLAP database, Location quotient and land use at LAU2 level), are freely downloadable from the ESPON Database Portal. For further information contact the ESPON Coordination Unit.

#### UNIVERSITY OF GOTHENBURG; THE QUALITY OF GOVERNMENT INSTITUTE

The Quality of Government Institute of the University of Gothenburg provides a survey-based measure of quality of government at the regional level within the EU that fluctuates around the national-level value the World Governance Indicator (World Bank, 2013). The corruption survey of the Quality of Government Institute covers all 27 member states and 172 NUTS 1 and NUTS 2 regions and it was answered by 34 000 respondents.

The regional quality of governance index and its component indicators (Per capita number of small firms, Autonomous dummy, Capital region dummy, regional survey scores) are freely downloadable in xlsx format from the website of the Quality of Government Institute, together with a detailed description of the data file.

#### TABELLINI 2010

Tabellini (2010) in his empirical paper that investigates whether culture have a causal effect on economic development using data on European regions. The regional level, cross-sectional dataset constructed for this paper contains variables like per capita GVA, education (enrolment in primary and secondary schools in percent of the population of the relevant age group), historical urbanization (city size is measured in 1850), historical data on literacy, and culture measured by indicators of individual values and beliefs, such as trust and respect for others, and confidence in individual self-determination. The sample consists of 69 regions in 8 European countries: France, Germany (except East Germany and Berlin), the UK, Italy, the Netherlands, Belgium, Spain and Portugal.

The dataset is not directly downloadable, however Tabellini includes some variables in the Appendix and provides detailed references for reproduction. The culture-related data are available in Table 2 of the paper (trust, obedience, respect, etc). The source of these data is the World Values Survey (Inglehart et al. 2000) and the measures are calculated by taking regional averages. The source of historical urbanization rates is the work of Bairoch, Batou and Chèvre (1988). The historical literacy data came from different national sources (see Appendix A2 of Tabellini).

### EU DIRECTORATE-GENERAL FOR REGIONAL POLICY

EU Directorate-General for Regional Policy published a dataset on regional Human Development Index (HDI) and Human Poverty Index (HPI) in Fifth Cohesion Report (EC 2010) to gain a better perspective of regional disparities within the EU, since despite the very high national level HDI scores in Europe, there is significant variation between EU countries and regions in terms of human development and poverty (see EC 2010). The indices are analyzed and the data are available from the 2011 edition of Regional Focus (EC 2011) in xls format (through a link in the pdf report), containing also regional level data of the component indicators. The source of the regional data is Eurostat.

The indices are calculated for the EU27 countries at NUTS 2 levels. The indices are composed of 4 indicators measured in a cross section of 2007: HDI: Population aged 25-64 with low educational attainment (% of population aged 25-64), Population aged 25-64 with high educational attainment (% of population aged 25-64), Net adjusted disposable income per capita - Index EU27, Healthy life expectancy – Years; HPI: Share of population aged 25-64 with a low educational attainment, Long term unemployed as share of the labour force, Probability of not living at 65 at birth, % population with an at-risk-of-poverty income relative to the national median.

### MITTON, 2013

Mitton (2013) in his paper *The Wealth of Subnations: Geography, Institutions, and Within-Country Development*, analyzes the fundamental determinants of economic development, focusing on within-country effects of geography and institutions. For the paper he constructed a new cross-sectional dataset covering 1,867 subnational regions from 101 countries.

Mitton's dataset is organized round the topics economic variables (GDP per capita, Cost of living), first geography (Latitude, Ocean access, Storm risk, Earthquake risk etc), climate variables (Temperature, Humidity, Wind speed etc), Natural resource variables (Oil and gas, Precious metals, Water, etc), institutions variables (Property rights, Corruption control, Regulatory efficiency, etc) other variables (Autonomy (subnational), Municipal elections, Ethnic fractionalization, etc).

The dataset is not directly downloadable, however the data appendix provides a very detailed description of the sources (eg. Climatic Research Unit, University of East Anglia; USGS and Petroconsultants International Data; World Language Mapping System). For further information on the availability of the data contact the author: todd.mitton@byu.edu.

### WEIDMANN ET AL. (2010): GREG DATABASE

The GREG project ('Geo-referencing of Ethnic Groups') of ETH Zürich attempts to disaggregate ethnicity spatially by geo-referencing ethnic groups around the world. The dataset provides information on the location of 1276 ethnic groups around the world. The GREG dataset is freely downloadable in shapefile format on the website of the project together with a user guide written for the R statistical package.

The paper 'Representing ethnic groups in space: A new dataset' of Weidmann et al. (2010) introduces the structure of the GREG dataset and gives an example for its application by examining the impact of group concentration on conflict. The paper also shows that groups with a single territorial cluster according to GREG have a significantly higher risk of conflict. The authors also provide a replication code for the use of the dataset written in R.

### GENNAIOLI ET AL 2013

Gennaioli et al. (2013) in their paper 'Human Capital and Regional Development' investigate the determinants of regional development using a newly constructed cross-sectional database of 1,569 subnational regions from 110 countries covering 74% of the world's surface and 97% of its GDP.

The dataset mostly covers the broader topics of income (GDP per capita, population, employment, and human capital), geography (Climate, geography, and natural resources), institutions (Informal payments, Tax days, Access to finance, Government predictability), infrastructure (Power line density, Travel time), and culture (Trust, number of ethnic groups). The sources of the variables are different national databases, international organizations (World Bank's Enterprise Surveys, PRS Group's International Country Risk Guide, etc), or other empirical papers (Weidmann et al. (2010), Inglehart et al. (2000)).

The database is not publicly available, however the authors provide a detailed description of variables and sources in Appendix B of the paper. More information about the dataset is presented in the online appendix, for the availability of the data contact [nicola.gennaioli@unibocconi.it](mailto:nicola.gennaioli@unibocconi.it).

### LESSMANN 2014

Lessmann (2014) in his paper 'Spatial inequality and development – Is there an inverted-U relationship?' analyzes the hypothesis of an inverted-U-shaped relationship between spatial inequality and economic development. To test this hypothesis, Lessmann constructed a unique panel dataset of spatial inequalities in 56 countries (mostly at NUTS2 equivalent level) at different stages of economic development, covering the period 1980–2009 (countries and periods covered are presented in Table A2 of the paper).



The dataset contains regional level measures of variables like Population-weighted coefficient of variation of regional GDP per capita, Gini coefficient of regional GDP per capita, Ethnic fractionalization, Urbanization or Democracy. The main source of the dataset is the World Development Indicators of the World Bank (2010).

The dataset is not publicly available, for replication the definitions of the variables and sources are presented in Table A4 of the paper. To access the database, contact christian.lessmann@fau.de.

### EUROGEOGRAPHICS

Eurogeographics is an international organization that represents the European National Mapping, Cadastral and Land Registry Authorities. The main goal of Eurogeographics is to underpin the European Spatial Data Infrastructure with the definitive reference data collected, maintained and provided by the national member authorities.

Eurogeographics provides multiple European geographic datasets. EuroGlobalMap is a 1:1 million scale topographic dataset that covers 45 countries in the topics of administrative boundaries, water networks, transport networks, settlements, and elevation. The dataset is freely downloadable from the website of Eurogeographics after registration, in Geodatabase or Shapefile formats.

EuroRegionalMap is a 1:250 000 scale topographic dataset that covers 33 European countries. The dataset covers the topics of administrative boundaries, water networks, transport networks, settlements, and vegetation and soil. The miscellaneous theme holds various topographic elements like power lines, landmarks, and buildings. EuroBoundaryMap is a 1:100 000 scale administrative and statistical regions dataset covering 41 countries. These are not open data, for access contact sallie.white@eurogeographics.org.

### INTEGRATED PUBLIC USE MICRODATA SERIES (IPUMS), INTERNATIONAL

IPUMS-International is a project dedicated to collecting and distributing census microdata from around the world. Subscription is needed to access the data.

### EUROPEAN CLUSTER OBSERVATORY

European Cluster Observatory is the main data source of European clusters. It is an online, free platform managed by the Stockholm School of Economics (Sweden) in collaboration with Orkestra (Basque Institute of Competitiveness, Basque Country, Spain) that provides access to data and analysis of clusters, cluster organizations and regional microeconomic framework conditions in Europe.

There are two useful data tools provided on the website: The regional mapping tool shows statistics for regions (37 countries) and sectors. It shows data that is associated with both a region and a sector (such as a region's number of employees in the automotive sector), or associated with only a region (such as the region's size or unemployment rate). The dataset measures cluster-level indicators such as the number of employees, the number of enterprises, average wage, cluster size, specialization and focus, however country-level indicators can be also obtained: Economic indicators (GDP per capita, Employment, Number of enterprises), Competitiveness drivers: Firms behavior (Number of new foreign firms, R&D share), Competitiveness drivers: Specialization (Knowledge intensive services employment, Employment in industries with high energy purchases), Competitiveness drivers: Business environment (Students in tertiary programs with academic orientation, Population aged 15-34, Trust in people), Others (Area, Population density, Degree of urbanization, Regional Innovation Scoreboard) . The dataset covers the period 1991-2011. Statistics are presented on a map, in a table, on graphs and they can also be downloaded in csv or xml formats.

The organizational mapping dataset shows the location of individual organizations, but firm level statistics are not available. The types of organizations (Business Incubator, Science Park, University, Venture Capital Firm, etc.) are listed by regions and by sectors. The name of the cluster and its website are also presented in the dataset.

### The Main Sources of European Regional Data

| Dataset                    | Topics/Variables  | Aggregation level     | Countries  | Years     |
|----------------------------|---|-----------------------|--|-----------|
| Eurostat Regional Database | Agriculture, Demographics, Economic Accounts, Education, Science and Technology, Structural business statistics, Regional business demography, Transport, Labour market, Labour costs | NUTS2/NUTS3           | EU28   | 1990-2013 |
| OECD Regional Database     | Demographics, Innovation, Education, Labor Market, Regional accounts  | NUTS2/NUTS3 (TS2/TS3) | AT, BE, CZ, DK, EE, FI, FR, DE, GR, HU, IE, IT, LU, NL, NO, PL, PT, SK, SI, ES, SE, UK, CH | 1990-2012 |

|   |  |                                 |                                |           |
|---|--|---------------------------------|--------------------------------|-----------|
| Cambridge Econometrics  | GDP, GVA, Employment, Population, Active population, Compensation of employees, Gross fixed capital formation, Capital stocks                        | NUTS2/NUTS3                     | EU28                           | 1980-2011 |
| ESPON   | Geography, Demographics, Economic indicators, Agriculture, Infrastructure, Environment   | micro (NUTS5, LAU2)             | EU                             | various   |
| The Quality of Government Institute (UoG)                     | Quality of government, Per capita number of small firms, Autonomy, Language  | NUTS1/NUTS2                     | EU27                           | 2010      |
| Tabellini (2010)  | Trust, Per capita GVA, Education, Historical urbanization, Historical literacy   | NUTS2                           | BE, FR, IT, NL, PT, ES, UK, DE |           |
| DG for Regional Policy  | Human development index (HDI), Human poverty index (HPI)   | NUTS2                           | EU27                           | 2010      |
| Mitton (2013)   | Economic accounts, First geography, Climate, Natural resources, institutions, Autonomy, Municipal elections, Ethnic fractionalization                |                                 | 101 countries                  |           |
| Weidmann et al. (2010)  | Ethnicity data in shapefile format   | micro                           | world                          |           |
| Gennaioli et al. (2013)                                       | Income, Geography, Institutions, Infrastructure, Culture   |                                 | 110 countries                  |           |
| Lessmann (2014)   | Variation of regional GDP per capita, Gini coefficient of regional GDP per capita, Ethnic fractionalization, Urbanization, Democracy                 | NUTS2                           | 56 countries                   | 1980-2009 |
| Eurogeographics   | Administrative boundaries, water network, Transport network, Settlements, Elevation  | micro                           | EU27                           |           |
| Integrated Public Use Microdata Series (IPUMS), International | Census microdata   | micro                           | world                          | various   |
| European Cluster Observatory                                  | Cluster indicators (number of employees, the number of enterprises, average wage, cluster size, specialization and focus), Country level indicators, | sector-country/<br>organization | 37 countries                   | 1991-2011 |

|  |                                |  |  |  |
|--|--------------------------------|--|--|--|
|  | Organization name and websites |  |  |  |
|--|--------------------------------|--|--|--|

Sources: OECD Regional Database [http://stats.oecd.org/Index.aspx?datasetcode=REG\\_DEMO\\_TL2#](http://stats.oecd.org/Index.aspx?datasetcode=REG_DEMO_TL2#) The Quality of Government Institute, University of Gothenburg <http://www.qog.pol.gu.se/data/datadownloads/qogeuregionaldata/>, Eurostat Regional Database [http://epp.eurostat.ec.europa.eu/portal/page/portal/region\\_cities/regional\\_statistics/data/database](http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/regional_statistics/data/database) Cambridge Econometrics <http://www.camecon.com/SubNational/SubNationalEurope/RegionalDatabase.aspx>, EC Regional Focus (2011)The European regional Human Development and Human Poverty Indices [http://ec.europa.eu/regional\\_policy/sources/docgener/focus/2011\\_02\\_hdev\\_hpov\\_indices.pdf](http://ec.europa.eu/regional_policy/sources/docgener/focus/2011_02_hdev_hpov_indices.pdf), ESPON Database Portal: <http://database.espon.eu/db2/resource?idCat=42>, Eurogeographics <http://www.eurogeographics.org/products-and-services/euroregionalmap> <http://www.eurogeographics.org/products-and-services/euroglobalmap> , European Cluster Observatory <http://www.clusterobservatory.eu/index.html#!view=regionalmapping;i=C20300,C22300;y=2011;r=CR10-CE;rsl=0;rp=CR10-CE;sp=CC20-STND;p=table>

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