

Supplementary Information:

Harmonized disposable income dataset for Europe at subnational level

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This Supplementary Information document contains additional information to complement the manuscript. We first provide a country-level description of the harmonization procedure with the sources used to create this dataset. We then present a map of the boundaries of the administrative units to let users appreciate the resolution of the dataset. Finally, we present a country-level decomposition of the 6 components of the quality score.

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1. Country-level estimation and adjustment procedures

The table S1 describes the main steps to convert collected income to disposable income for each of the 42 countries in this study. It provides information regarding how disposable income was estimated. If it was estimated through taxation, the column “Tax rates” describes the rate used and the source of the taxation scheme is also provided. In the case where disposable income was estimated using a linear regression, the columns “Number of units” and “R²” inform on the number of NUTS units used in the regression along the coefficient of determination R². It also describes the adjustment methodology used in each country. Steps and links to download input data (income, socioeconomic indicators) can be found in country-level description files and within country Jupyter notebooks contained in the Zenodo repository¹. * highlights countries for which input data was obtained from third-parties.

Table S1: Country-level description of the estimation and adjustment procedures

Country	Income indicator	National Statistical Institute/Third-party source	Name of download income variable and download url	Estimation of disposable income (M2)	Number of units	R ²	Tax rates	Adjusting disposable income (M3)	Source (Tax rates)
Albania	Household consumption expenditure	INSTAT (Institute of Statistics) ²	Total monthly Income	Taxation	-	-	13% on marginal income over 30,000 and below 50,000 Lek	GDP to Income ratio	³
Andorra	Mean income	Estadística Andorra ⁴	Mean Income	-	-	-	-	Country level	-
Austria*	Net income	Organisation for Economic Cooperation and Development (OECD) ⁵	-	Linear regression	9	0.87	-	Eurostat NUTS2	-
Belarus	Gross income	International Cooperation and Statistics Dissemination Department National Statistical Committee Republic of Belarus ⁶	All types of income	Taxation	-	-	Flat tax of 13%	GDP to Income ratio	⁷
Belgium*	Total net taxable income	STATBEL ⁸	Statistique fiscale des revenus par secteur statistique	Linear regression	15	0.98	-	Eurostat NUTS2	-
Bosnia-Herzegovina	Average net and gross earnings	Agency for Statistics of Bosnia and Herzegovina ⁹	Average monthly net and gross earnings of persons in employment	-	-	-	-	GDP to Income ratio	-

Bulgaria	Total gross income per capita	NSI Bulgaria ¹⁰	Total gross income per capita in Lev	-	-	-	-	Eurostat NUTS2	-
Croatia	Net earnings	Croatian Bureau of Statistics ¹¹	Employment and Wages - Review by counties	-	-	-	-	Eurostat NUTS2	-
Cyprus	Net Income	Statistical Service of the Republic of Cyprus ¹²	HOUSEHOLD BUDGET SURVEY - MEAN ANNUAL INCOME, 2015/2016	-	-	-	-	Eurostat NUTS2	-
Czech Republic*	Average disposable income	Czech Statistical Office ¹³	Average disposable income	-	-	-	-	Eurostat NUTS2	-
Denmark*	Equivalized disposable income	The Economic Council of the Labour Movement ¹⁴	-	-	-	-	-	Eurostat NUTS2	-
Deutschland	Tax income	INKAR ¹⁵	Datenbankdownload	Linear regression	401	0.7	-	NUTS3	-
Estonia	Gross earnings	Statistics Estonia ¹⁶	ST004: AVERAGE MONTHLY GROSS INCOME PER EMPLOYEE	Linear regression	22	0.84	-	Eurostat NUTS2	-
Finland	Average disposable income	Statistics Finland ¹⁷	Inhabitants' disposable monetary income	-	-	-	-	Eurostat NUTS2	-
France	Median equivalised disposable income	Institut national de la statistique et des études économiques ¹⁸	Revenus et pauvreté des ménages	Linear regression	15	0.68	-	Eurostat NUTS2	-
Greece	Average disposable income	Eurostat ¹⁹	Disposable income of private households by NUTS 2 regions	-	-	-	-	Eurostat NUTS2	-
Hungary*	Total taxable income	Organisation for Economic Cooperation and Development (OECD) ⁵	-	Linear regression	8	0.85	-	Eurostat NUTS2	-
Iceland	Average disposable income	Statistics Iceland ²⁰	Income by municipalities and sex 1990-2022	-	-	-	-	-	-
Ireland	Median gross income	Central Statistics Office ²¹	Household Median Gross income - IIA01	Linear regression	37	0.97	-	Eurostat NUTS2	-
Italy*	Taxable income	Dipartimento Finanze ²²	Redditi e principali variabili Irpef su base comunale	Linear regression	21	0.99	-	Eurostat NUTS2	-

Kosovo	Net average wage	Kosovo agency of statistics ²³	Net average monthly wage	-	-	-	-	GDP to Income ratio	-
Latvia	Mean disposable income	Official Statistics of Latvia ²⁴	Households disposable income in regions	-	-	-	-	Eurostat NUTS2	-
Liechtenstein	Median gross wage	Statistics office of Liechtenstein ²⁵	Gross monthly wage by municipality of residence and sex	-	-	-	-	Country level	-
Lithuania	Average disposable income	Statistics Lithuania ²⁶	Average disposable income per month	-	-	-	-	Eurostat NUTS2	-
Luxembourg	Median salary	National institute for statistics and economic studies of Luxembourg ²⁷	Indice socio-économique par commune	-	-	-	-	Eurostat NUTS2	-
Macedonia	Disposable income	State Statistical Office of the Republic of North Macedonia ²⁸	Total disposable household income by types	-	-	-	-	GDP to Income ratio	-
Malta	Disposable income	National Statistics Office ²⁹	Total Disposable Income	-	-	-	-	-	-
Moldova	Disposable income	National Bureau of Statistics of the Republic of Moldova ³⁰	Disposable incomes of population by sources of income and by statistical regions	-	-	-	-	GDP to Income ratio	-
Montenegro	Mean equivalised disposable income	Statistical Office of Montenegro - MONSTAT ³¹	Survey on Income and Living Conditions	-	-	-	-	GDP to Income ratio	-
Netherlands	Average equivalized income	Statistics Netherlands ³²	Inkomen van personen; persoonskenmerken, regio (indeling 2020)	Linear regression	12	0.93	-	Eurostat NUTS2	-
Norway	Median after-tax income	Statistics Norway ³³	06944: Household income, by type of household	-	-	-	-	Eurostat NUTS2	-
Poland	Average gross wages and salaries	Statistics Poland ³⁴	WAGES AND SALARIES AND SOCIAL SECURITY BENEFITS	Linear regression	324	0.81	-	Eurostat NUTS2	-
Portugal	Gross income less income tax	Instituto Nacional de Estatística – Portugal (Statistics Portugal) ³⁵	Indicators of Declared Gross Income	Linear regression	11	0.64	-	Eurostat NUTS2	-

Romania	Average net earnings	The National Institute of Statistics ROMANIA ³⁶	Average monthly nominal net earnings	Linear regression	13	0.86	-	Eurostat NUTS2	-
Serbia	Income in money	The Statistical Office of the Republic of Serbia (SORS) ³⁷	Household income in money and in kind, by statistical territorial units (NSTU)	Taxation	-	-	Flat tax rate between 10 and 15% (depending on the year)	GDP to Income ratio	38
Slovak Republic	Disposable income	Statistical office of the Slovak Republic ³⁹	Equivalised household income - average income by regions [ps3805rr]	-	-	-	-	Eurostat NUTS2	-
Slovenia	Net income	Statistical Office of the Republic of Slovenia ⁴⁰	Net income received by the population, municipalities, Slovenia, annually	-	-	-	-	Eurostat NUTS2	-
Spain	Net Income	Instituto Nacional de Estadística (INE) ⁴¹	Mean and median income indicators	Linear regression	19	0.93	-	Eurostat NUTS2	-
Sweden	Disposable income	Statistics Sweden ⁴²	Disposable income of households (ESA2010) by region (LAU2)	-	-	-	-	Eurostat NUTS2	-
Switzerland	Net income	Swiss federal authorities ⁴³	Répartition des revenus des personnes physiques	Taxation	-	-	Progressive taxation based on religious affiliation, income level, household composition and canton	Country level	44
Ukraine	Disposable income	State Statistics Service of Ukraine ⁴⁵	Household income and expenditure	-	-	-	-	GDP to Income ratio	-
United Kingdom	Gross disposable income	Office for National Statistics ⁴⁶	Regional gross disposable household income: local authorities by NUTS1 region	-	-	-	-	-	-

2. Resolution of the dataset

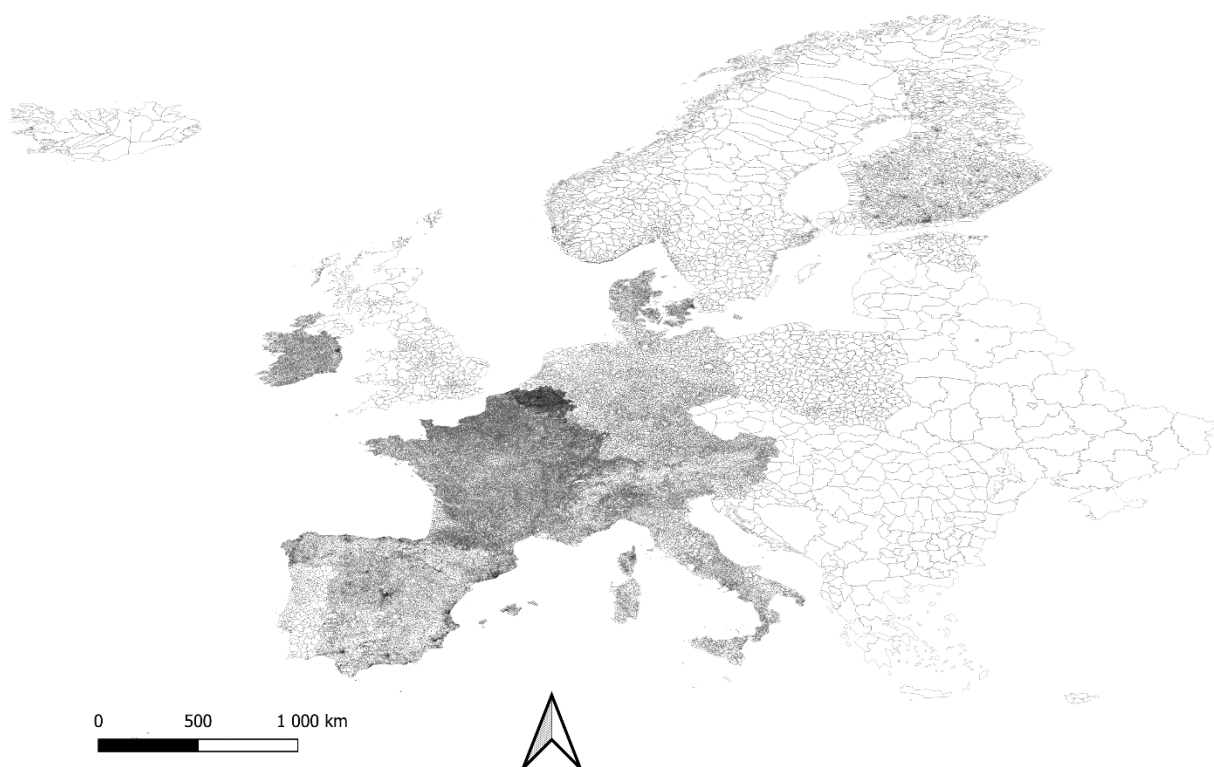
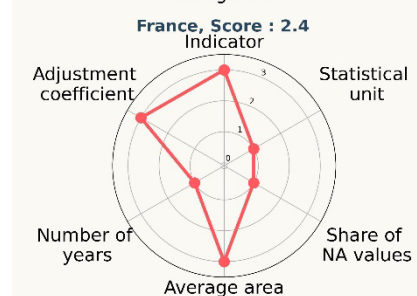
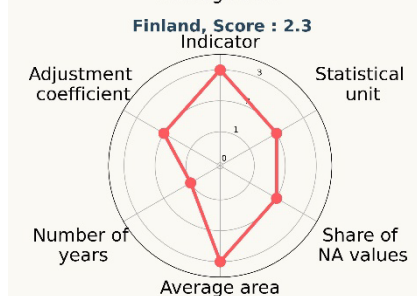
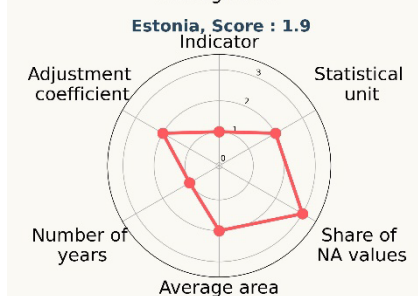
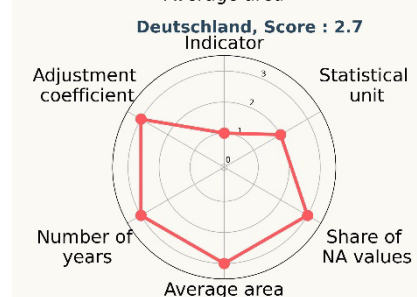
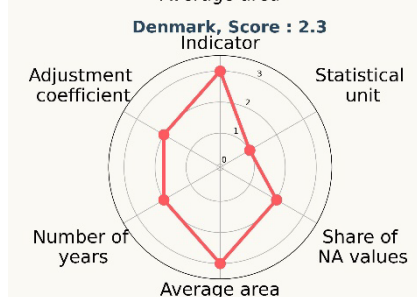
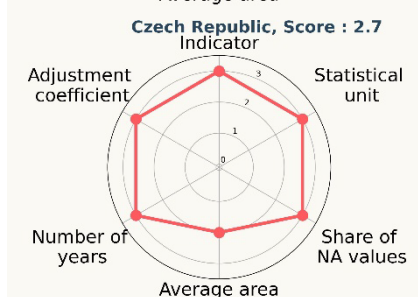
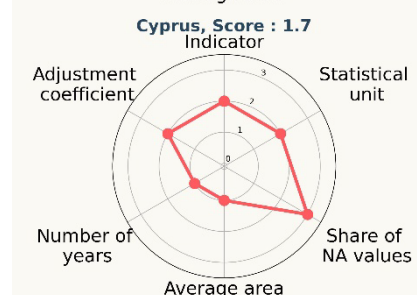
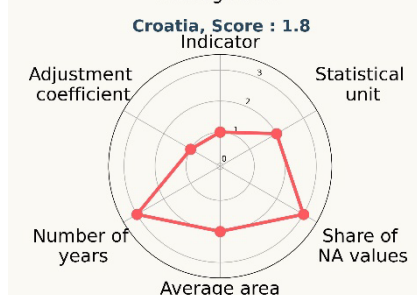
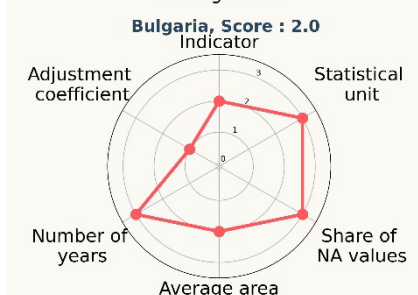
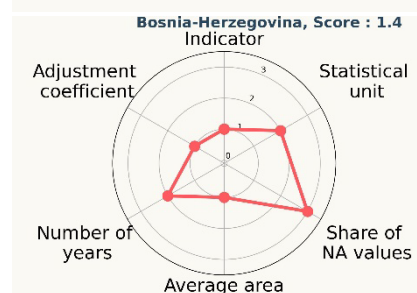
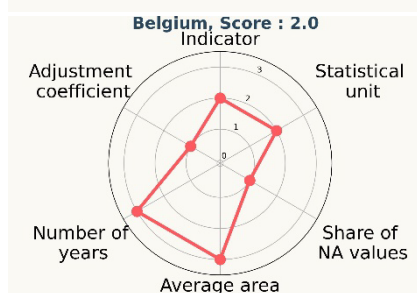
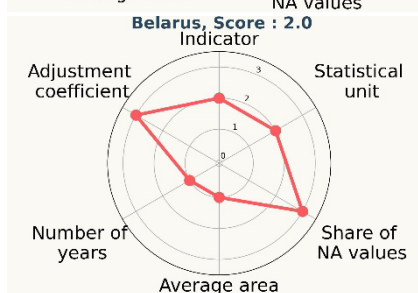
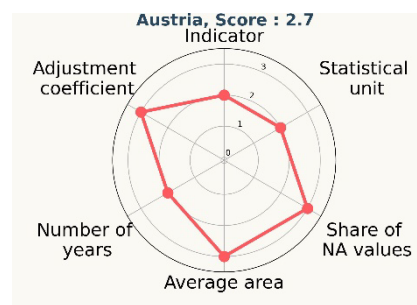
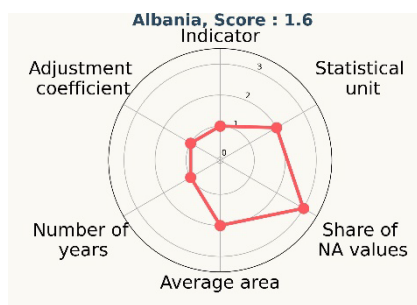
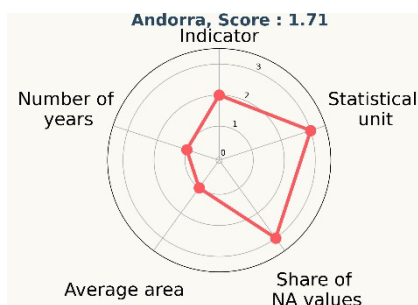
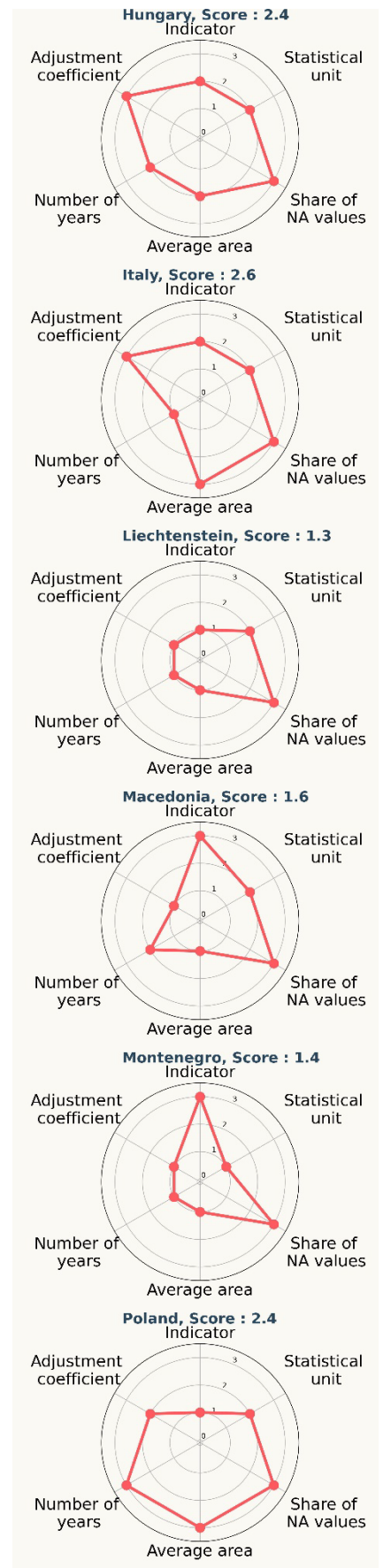
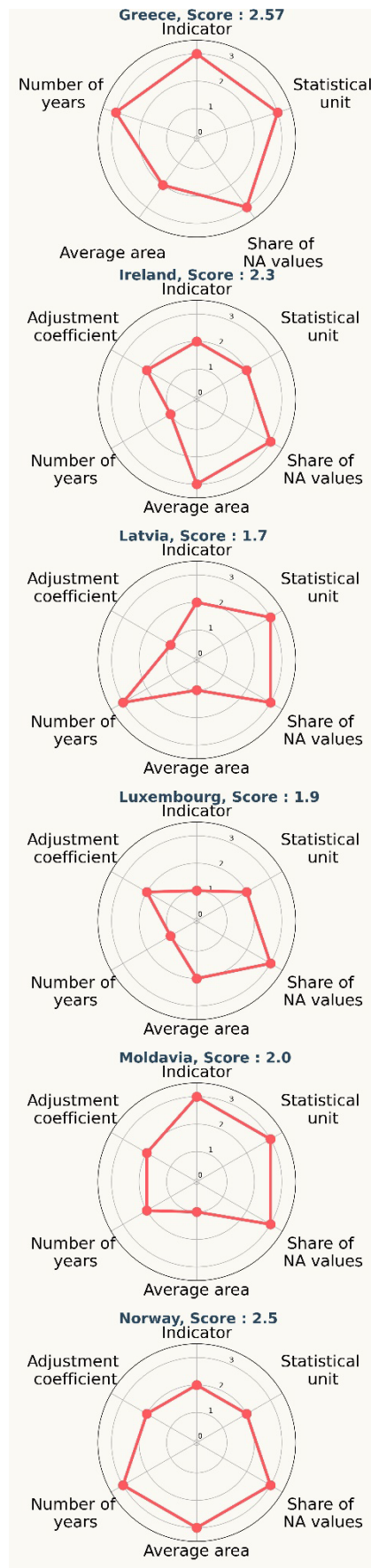
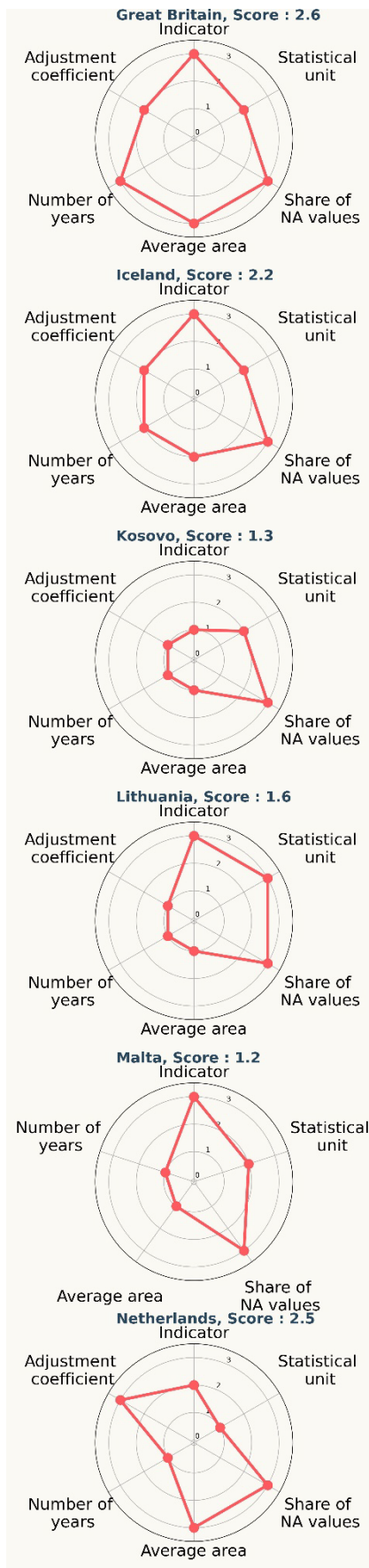


Figure S1: Boundaries of administrative units

3. Country quality score by subcomponent





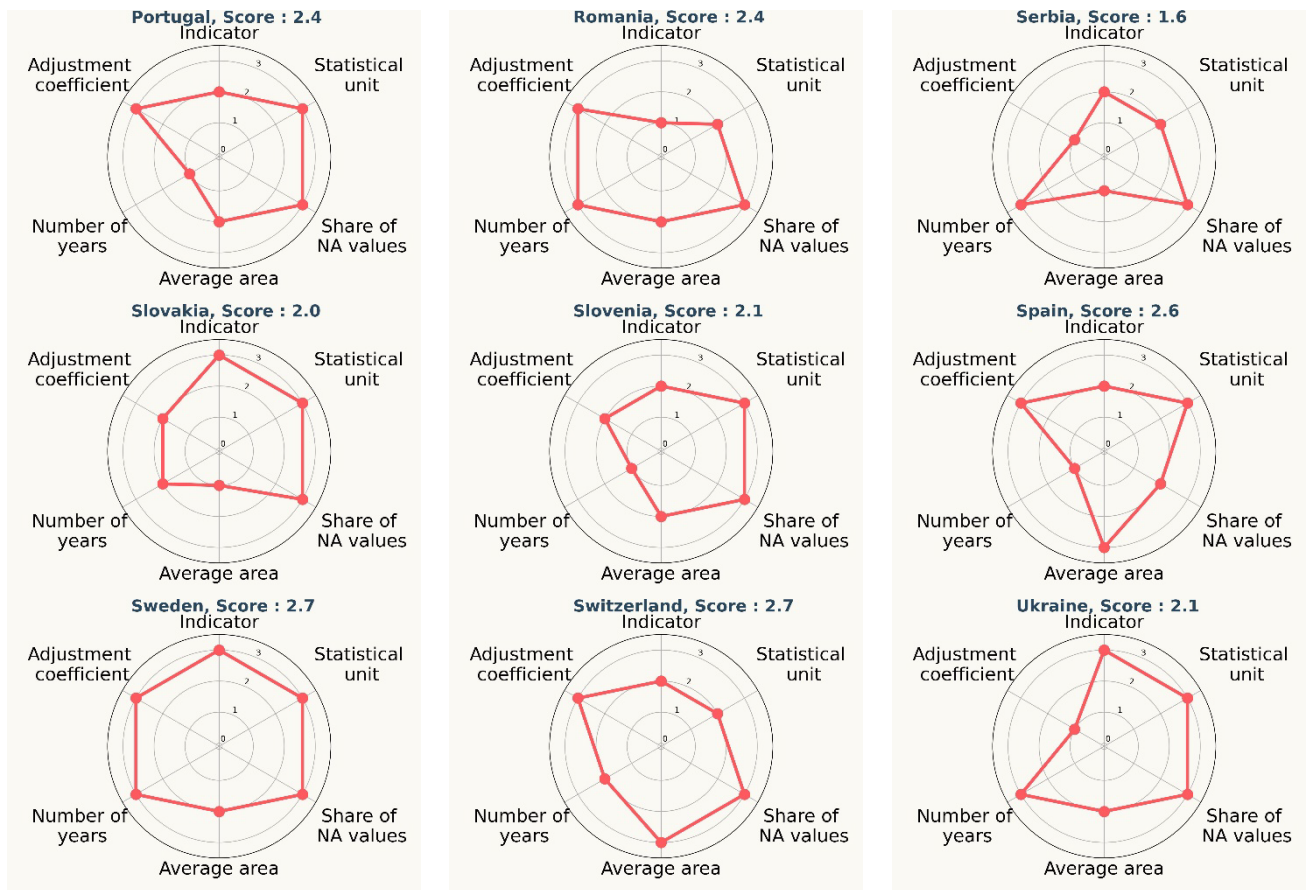


Figure S2: Country-level data quality score

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