

Equitable and sustainable well-being in Italy, an overview¹

1. Introduction

The system of indicators to measure Equitable and Sustainable Well-being (Bes), launched in 2010 by Istat together with Cnel, represents a tool for assessing the progress of society not only from an economic perspective, but also from a social and environmental viewpoint, through an informational-statistical framework structured into 12 domains and 152 indicators. Over the years, the set of indicators has been partly renewed to describe in an increasingly broad and pertinent manner the transformations underway in society. Moreover, the process and product innovations that characterise official statistics allow us to gradually resort to new sources and tools that contribute to a richer knowledge about well-being trends through novel analyses, such as those proposed in the focuses included in the Report, made possible thanks to the integrated reading of a multiplicity of sources and the use of new data and indicators (Table 1).

DOMAIN	FOCUS
Health	Bes mortality measures by educational qualification
Education	Cultural participation in Europe
Work and life balance	Illegal work in Italy
Economic well-being	The loss of purchasing power in the last five years. Income support measures during the pandemic
Social relationships	Social relationships in Europe
Politics and institutions	The sense of democracy and tolerance
Safety	Violence witnessed by the children of women victims of violence Feminicides
Subjective well-being	A Eudaimonia measure
Environment	Beached marine waste Energy consumption and CO2 emission intensity in energy consumption
Quality of services	Assistance to the frail elderly

Table 1. The focuses in the domain chapters

The Report provides citizens and decision-makers with the main results of the analyses of current levels and the evolution over time of well-being conditions, highlighting inequalities as well. The very concept of Equitable and Sustainable Well-being, in fact, clearly identifies the need to measure and analyse territorial, as well as social, imbalances that limit the development of well-being and its fair distribution. The Bes project takes on these challenges from the beginning, in the first place by producing disaggregated indicators by region and also by gender, age, and educational qualification, and in the second place by implementing integrated analyses of the inequalities shown by the indicators. The perspective is similar to that of the 2030 Agenda for sustainable development that acknowledges as its goal the fight against inequalities, according to the principle of "leaving no one behind".

¹ This chapter was edited by Lorenzo Di Biagio, Stefania Taralli and Alessandra Tinto, with contributions from Cinzia Castagnaro and Paola Conigliaro.





The emerging statistical picture highlights the strengths and weaknesses to work on in order to ensure that the improvement in levels of well-being is for everyone, that gaps tend to level out and that future generations are able to enjoy better prospects. This Chapter proposes an integrated analysis of well-being measures that altogether consider levels, trends and inequalities. To render the results in terms of well-being, all analyses take into account the polarity of indicators, which can be positive (as the value increases, so does well-being) or negative (well-being decreases as the value increases).

The comparison with Europe (paragraph 2) is particularly effective when it comes to identifying well-being gaps².

The variation of indicators both in the most recent period and compared to 2019, kept as the reference year of the pre-pandemic situation, offers an overall picture of the trend in the 12 domains, at national level and by geographic area (paragraph 3). Adopting the same methodology, the analysis is deepened down to the individual indicator in Table 1 of each domain-specific Chapter.

The territorial gaps are analysed by enhancing the informational assets offered by regional disaggregation, available for 144 out of the 152 Bes indicators. To obtain an overview and a comparison of interregional gaps, in each of the 12 chapters devoted to well-being domains a representation of the relative deviation of regions from Italy's average is put forward for every indicator at this level of breakdown (Figure 1 of the 12 chapters di domain). Here, the regional analysis is proposed at a more aggregate level with an examination of territorial profiles (paragraph 4), considering the distribution of regional measures by classes of relative well-being and the overall regional heterogeneity.

To get an overall picture of well-being inequalities between social groups, regard is paid to the differences between women and men and by educational qualification (paragraph 5). The reader is referred to the domain specific chapters for in-depth observations on the differences between the various population groups (by gender, age group and educational qualification) and between territories, in terms of changes in recent years as well.

Lastly, this chapter proposes a description of the evolution of the demographic scenario, which is influencing – and will influence even more significantly in the coming years – the trend of all well-being domains (paragraph 6).

2. Italy in the European context

Out of the total of 152 Bes indicators, 38 are comparable at the European level; Figure 1 represents the ratio between the value of the indicator for Italy and the average of the 27 countries of the European Union (EU27) in the latest available year, which takes account of the polarity³ of indicators. The ratio is higher than one if the level of well-being measures denotes an advantage for Italy (right side of the Figure), and is lower than one where there is a disadvantage comparing to the EU27 average (left side).

Most of the indicators considered show a worse situation for Italy. The two indicators showing the widest gap, in relative terms, belong to the Work and life balance domain:

² It should be considered that a number of Bes indicators available at a European level is limited and does not amount to a representative selection of the broader set of indicators used to measure Well-being in Italy.

³ Indicators have a positive polarity if the increase of their value signals an improvement in terms of well-being, negative otherwise.



in 2023, the non participation rate in the labour market, which measures the actual and potential job offer that is not satisfied, is equal to 14.8%, compared to 8.7% for the EU27 average; the percentage of people in involuntary part-time work is 10.2%, against an average for the 27 countries of the Union of 3.6% in 2022. The Italian employment rate is 9.1 percentage points lower than the European average (75.4%), with a particularly heightened gap for women: the female employment rate is 56.5% in Italy, while it exceeds 70% for the EU27 average.

Other indicators for which there is a considerable gap with the European Union average are included in the Education and Training domain: the share of young people aged 15-29 who are not in education, employment, or training (NEETs) is higher in Italy, and even though the gap has shrunk slightly in 2023, the value is equal to 16.1%, compared to the 11.2% average for the 27 countries of the European Union. In the EU27, 43.1% of people aged 25-34 years have achieved a tertiary education level, while in Italy they are still no more than 30.6%; even the percentage of people aged 25-64 who have at least upper secondary education is significantly lower than the European average (65.5% in Italy, -14.3 points compared to 79.8% for EU27 countries). In terms of digital skills in Italy, among people aged 16-74 who have used the Internet in the 3 months prior the interview. 45.9% have at least basic digital skills, whereas in the EU27 average this share exceeds 55%. A disadvantage for Italy, albeit a less exacerbated one, is also discernible for the higher share of young people leaving the education and training system early (about 2 percentage points more in Italy in 2022 than the average European value, equal to 9.6%). Widespread delays compared to Europe are also found in the Innovation, research and creativity domain. The GDP share invested in R&S in Italy (1.43% in 2021) is decidedly lower than the EU27 average (2.27%). The incidence of knowledge workers on total employment shows a gap of -7.6 percentage points compared to the EU27 average (25.4%) in 2022). Notwithstanding the substantial growth in regular Internet use observed also in Italy in the post-pandemic period, our country still lingers behind the average of the 27 countries. Significant steps ahead have been made by Italy also in terms of coverage of new generation Internet connection with very high capacity networks, but even in this case, efforts are still insufficient to bridge the gap with Europe, equal to nearly 20 percentage points in 2021.

Furthermore, Italy's disadvantage in the EU27 context is also noticeable in some economic well-being indicators updated to 2022, including the risk of poverty, or to 2021, such as the disposable income inequality (s80/s20).

Regarding the presence of women in political representation and senior management positions, even in 2023 the indicator relating to women elected in regional councils places our country well below the European Union average, with a gap of over 12 percentage points. Conversely, where rebalancing laws have intervened, such as the obligation of gender quotas in the boards of directors or auditors of companies listed on the stock exchange, Italy ranks more favourably than the average of European countries (with approximately 9 percentage points more).

Among the indicators showing for Italy better well-being levels than the average of the European Union countries, worth noting are the intentional homicide rate, equal to 0.5 for 100 thousand inhabitants, far below the EU27 average (0.8), and, in the Health domain, the avoidable mortality of the population aged 0-74 years, which in Italy, in 2021, is equal to 19.2 every 10 thousand residents, over 10 points below the EU27 average value (29.4 per 10 thousand).





Figure 1. Ratio between well-being indicators available for Italy and for the EU27. Latest available year. Pure numbers (a) (b)

Source: Istat, Bes Indicators; Eurostat

Source: Istat, Bes Indicators; Eurostat (a) The calculation method used by Eurostat for the Life Expectancy at Birth indicator differs from the one used by Istat due to the adoption of a different model for estimating survival in old age (85 years and over); the annual value for the EU27 average of the indicators People with at least upper secondary education level (25-64 years), People having completed tertiary education (30-34 years), Participation in life-long learning, Young people not in education, employment, or training (NEET), Non-participation rate, was calculated as the average of the values for the 4 quarters of 2023; the European indicator on regular Internet users refers to the population aged 16-74. In some cases, to maintain comparability with the EU27 average, the latest available year proposed in this figure is less recent than the latest available year for Italy. For the indicators Women and political representation in national Parliament and Women and political representation at regional level the source used for the European comparison is the European comprisoner for Juvice. Consumer and Gender Envalue.

(b) The ratio political representation in national Parliament and Women and political representation at regional level the source used for the European comparison is the European Commissioner for Justice, Consumers and Gender Equality.
(b) The ratio between indicators takes into account polarity in terms of well-being measures; thus, values greater than 1 indicate a better situation for that, less than 1 a better situation for the EU27 average. A scale transformation was applied on the x-axis to make the graph more readable (logarithmic scale).

3. The recent evolution of well-being in Italy

In the national context, observation of the trend of each indicator in the latest available year (2023 for more than half of the measures) compared to the previous year offers a synthetic reading that helps us grasp the overall evolution of well-being (Figure 2). This analysis is conducted separately for each domain in the following Chapters of the Report, to which readers are referred for details about individual indicators.

What emerges altogether is an improvement in slightly more than half of the 129 Bes indicators for which a comparison with the previous year is possible, while 28.7% of indicators is at worse levels and 17.8% unchanged. A similar or greater share of improvement is found in almost all domains except for Environment (4 indicators out of 16) and Safety (2 out of 7). In the Safety domain, 5 of 7 indicators have been worsening in the last year: they are the Equitable and sustainable well-being in Italy, an overview



indicators on predatory crimes and the perception of crime-related risk in the area where one lives. In the Environment domain, almost half of the indicators have worsened in the last year (7 out of 16): they are some indicators of subjective perception as well as measurements on the quality of air and the production of electricity from renewable sources.

Weather and climate indicators, which do not feature in the Figure, deserve a separate treatment, since the reference climatic period for comparison purposes is 1981-2010. In 2023, the effects of climatic changes are increasingly more evident even at a national level. 42 days of intense heat were recorded (+36 days compared to the average for the reference climatic period), with a continued growth in the number of consecutive rainless days, which rises to 29 (+5.5 days compared to the average of the climatic period).

The reading by territorial area shows significant differences. The percentage of indicators that have improved in the last year is almost identical to the national value if we consider the evolution of wellbeing in the North, where 54.5% of the 123 indicators for which comparison is available improves, whereas it drops to 43.9% and 48.8% in the Centre and the South and Islands, respectively.

One-third (33.3%) of indicators are worsening in the Centre, while the share is equal to 31.7% in the South and Islands and drops to 28.5% in the North.

If we consider the individual domains, for the Centre there is no improvement for any Safety indicator, whereas the Work and life balance domain records improvements in a greater share of indicators than in the average for Italy.





Source: Istat, Bes indicators

(a) For each well-being domain in brackets the number of comparable indicators between the latest available year and the previous. In the bars, the green colour indicates the percentage of improved indicators, red worsened and grey stable, taking into account the polarity of the indicator. The indicators have positive polarity if the increase in their value shows an improvement in well-being, negative polarity if the increase in their value shows a deterioration in well-being. For variations within ±1% the indicators are considered stable in the reference period.



In the South and Islands, only 1 of the 7 indicators of the Safety and Politics and institutions domains improves, whereas the variation for all Subjective well-being indicators is positive. In the North, nearly 70% of indicators for Quality of services is on the rise (compared to 56.3% of the average for Italy).

2023

For many well-being measures, an assessment of the trend between 2019 and the last available year⁴ gives us an overview of the recovery achieved (or still to be achieved) compared to the pandemic period. The trend is not always linear and, sometimes, it is even independent of the effects of the pandemic. In some instances, what we are witnessing is a constant and longer-term involution, for example as regards the Warm Spell Duration index and the percentage of general practitioners with a number of patients above the threshold (it was 36.0% in 2019 and reaches 47.7% in 2022).

Figure 3. Trend of Bes indicators between 2019 and the latest available year by domain and geographic area. Percentage out of the total of comparable indicators (a)



(a) For each well-being domain in brackets the number of comparable indicators between the latest available year and the previous. In the bars, the green colour indicates the percentage of improved indicators, red worsened and grey stable, taking into account the polarity of the indicator. The indicators have positive polarity if the increase in their value shows an improvement in well-being, negative polarity if the increase in their value shows a deterioration in well-being. For variations within ±1% the indicators are considered stable in the reference period.

In the latest available year, over half of the indicators (67 of the 131 for which data for comparison is available) are at better levels than in 2019; 30.5% of indicators are instead at a worse level, whereas the remaining 24 indicators are unchanged from pre-pandemic levels (Figure 3). Progress is more widespread in the Work and life balance and Innovation,

⁴ The indicators for which data to draw this comparison is present are 131. Of these, 73 refer to the 2019-2023 period, 34 to 2019-2022, 18 to 2019-2020/21.



research and creativity domains, with at least 70% of indicators on an upward curve compared to 2019. They are followed by Politics and institutions and Quality of services, with 63.6% and 62.5% of indicators at better levels, respectively.

Among domains characterised by a less favourable trend, with a lower number of indicators at better levels than in 2019, we find Landscape and cultural heritage, Subjective well-being and Social relationships. The lowest share of indicators showing improvement is observed in the Landscape and cultural heritage domain (2 out of 9), which, together with the Social relationships domain, also presents a greater percentage of worsening indicators (44.4%). Among Subjective well-being indicators, only satisfaction with life is at better values, whereas the rest of the indicators are at the same level as in 2019. This can nevertheless be viewed as a positive result, one that testifies to the recovery even for those indicators, such as satisfaction with free time, that had suffered a collapse in 2020 following the restrictions aimed at containing infections during the pandemic.

The Education and training and Economic well-being domains are in an intermediate situation, with half of the indicators on better levels than in 2019, but with a consistent share of indicators still on worse levels in both cases (5 out of 14 and 3 out of 8 respectively). 40% of indicators for the Health domain, and 43% for the Environment domain, disclose a progress compared to 2019.

In the South and Islands, for the Politics and institutions domain only one-third of indicators is at better levels than in 2019, compared to more than half in the other areas; by contrast, a greater share of Safety indicators is showing improvement (6 out of 7). In the Centre, 9 out of 15 Health indicators have a positive variation compared to 2019, against 4 and 5 in the North and in the South and Islands respectively. In the North, we discern the lowest share of indicators of Economic well-being on the rise (3 out of 7, compared to 5 out of 7 in the other two areas).

4. Regional differences in well-being

Below we propose two in-depth analyses on regional inequality. The first shows the regional distribution of indicators by relative well-being groups, while the second examines the overall regional convergence. In both instances, the analysis is based on the 132 available regional measures, updated at the latest year available⁵, which cover all Bes domains.

4.1 The regional distribution of Bes indicators

The regional measures of the Bes indicators referred to the latest available year have been classified into five groups of relative well-being (low, medium-low, medium, medium-high and high) through the method of natural breaks⁶. The classification is proposed

⁵ Some indicators are excluded from the analyses. According to NUTS classification the autonomous provinces of Trento and Bolzano are included, while Trentino-Alto Adige is not (see the Methodological Annex). Most of the indicators considered (71 out of 132) are updated to 2023, whereas 52 are updated to 2021 or 2022. Only 2 indicators are updated to 2019 (Voter turnout and Coastal bathing waters). In the Subjective well-being, Social relationships and Safety domains, all or almost all indicators are updated to 2023, whereas in the Economic well-being, Landscape and cultural heritage, Environment and Quality of services domains, most of the indicators are updated to 2022.

⁶ This method, widely used in territorial statistical analysis, is based on the decomposition of the variance of regional indicators. For each available indicator, the regional distribution of values is ordered and the regions are divided into 5 classes, as homogeneous as possible (even if eventually of different sizes), so as to maximize the between-group





taking into account the polarity of indicators (if positive, well-being increases the more the value rises, if negative well-being decreases as the value grows). Regions standing out the most in positive (or in negative) terms compared to the others are classified with a high (or a low) level of well-being. One should bear in mind that, based on this classification method, well-being classes can have different sizes.

In the Subjective well-being and Landscape and cultural heritage domains, for almost half of the indicators a single region stands out significantly compared to the others and thus proves to be the only one classified at a high level of well-being. For example, the autonomous province of Bolzano shows very high values for satisfaction with both life and free time; people who declare themselves satisfied with their free time exceed 80%. In the other regions, this percentage never goes past 72.5%.

In the Politics and institutions and Safety domains, for over two out of five indicators only one region is classified at a low well-being level. For instance, in Lazio the perception of social decay (or incivilities) in the area one lives in is higher, it concerns 12.0% of residents, whereas in the other regions such percentage never exceeds 8.6%, with an average for Italy of 6.8%. In other cases, the indicators are less polarised: in the Education and training, Work and life balance and Social relationships domains, for more than three out of four indicators no single region stands out compared to all the others for their level of relative well-being, whether in a positive or in a negative sense.

From this first, synthetic representation of regional distributions (Figure 4), it is possible to assess the position of each region compared to all the other Italian regions considering the totality of well-being measures, updated to the last available year. It emerges a conspicuous North-South gradient. If for the North-East regions (excluding Veneto), more than half of indicators fall under the medium-high and high relative well-being classes and no more than one-fifth in the low and medium-low ones, for the Southern and Island regions (excluding Abruzzo, Molise and Sardegna), the situation is inverted, with over 55% of indicators in the low and medium-low classes and only a minority (one-quarter at the most) distributed across the higher positions. In the autonomous provinces of Trento and Bolzano, the high well-being class encompasses more than 40% of indicators, a percentage that abundantly exceeds 60% considering both top classes. Conversely, in Campania and Sicilia approximately 70% of indicators are found in the low and medium-low classes are found in the low and medium-low classes.

Some significant differences are also observed within macro-areas. Compared to the other three regions of the North-West, the indicators of Liguria are more concentrated in the central class (43.2%), and less so in the two extreme classes (high and low). The region of the North-East that less frequently ranks in the two highest classes is Veneto (49.2%); in the other north-eastern regions, the shares vary between the 53.8% of Friuli-Venezia Giulia and the 73.1% of the autonomous province of Trento. The same holds true for Lazio, which presents only 34.1% of indicators in the high and medium-high class, a considerably lower data than that for the other regions of the Centre (between the 42.4% of Toscana and the 49.2% of Marche). As regards the South and Islands, in Abruzzo, Molise and Sardegna the distribution of indicators is less concentrated in the lower well-being class (7.6% for Abruzzo, 19.1% for Molise and 13.6% for Sardegna), compared to

variability and minimize the within-group variability according to the Jenks natural breaks method. For each region, the percentage of indicators that fall into the different classes is considered, from the worst class (with the lowest level of well-being) to the best class (with the highest level of well-being).

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other regions of the same macro area, that instead have at least 25% of measures in the low class (40% for Campania and Calabria).



Figure 4. Bes regional indicators by well-being class. Latest available year. Percentage and absolute values

Source: Istat, Bes indicators

4.2 Regional inequalities in well-being

Bearing in mind the complexities when analysing a system of indicators with different units of measurement, different scale and variability⁷ the coefficient of variation $(cv)^{8}$ of regional values was calculated to compare the territorial variability of Bes indicators, updated to the latest available year.

Figure 5 lists the well-being indicators by domain with the respective percentage values of the cv set out on the y axis. The numbering used refers to the Table A codes, in accordance, for each domain, with the list of indicators recorded at the end of each Chapter. Furthermore, to take account of well-being levels in distributions, the bars are coloured green when the best value of the indicator is in the South and Islands area, orange if is it in the Centre, and blue if is it in the North.

⁷ The assessment of homogeneity or heterogeneity levels proposed here is necessarily the result of interpreting the phenomena studied in this document based on the analysis of data. Cf. National Institute of Statistics - Istat. 2019. "Territorial differences in well-being. A reading at provincial level". *Statistical readings - Territories*. <u>https://www.istat.it/it/archivio/233243</u>.

⁸ The regional coefficient of variation measures the dispersion of the variable of interest around the regional distribution average. For further details, see the Methodological Annex.

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Figure 5. Relative regional inequality (cv) and macro geographic area with the best value of the indicator. Latest available year. Percentage values

Source: Istat, Bes indicators Note: A scale transformation was performed on the ordinate axis to make the graph more readable.

Lower values of the coefficient reflect a degree of regional homogeneity, while higher values correspond to a rise in inequalities. In the latest available year, 38 of the analysed indicators reveal low regional inequality (cv below 15%), 69 have a cv ranging between 15% and



50%, and 25 show high inequality, with cv above 50%, among them 7 indicators exceed the threshold of 100%.

Inequality levels vary across well-being domains. The indicators with very high inequality (cv above 100%) are concentrated in the Environment and Landscape and cultural heritage domains, which, by their nature, present phenomena with a high territorial variability. This is the case, for instance, of urban green available or the density and importance of museums' heritage. Even the percentage of population residing in areas at risk of flood (indicator 10.7), based on the different land morphology, is very high in some regions of the Centre-North (especially in Emilia-Romagna, where it reaches 62.5%) and very low in some regions of the South and Islands (in Molise, Basilicata and Sicilia it does not exceed 3%). The number of agritourism farms per 100 km² (indicator 9.8) is particularly high for some regions of the Centre-North (Bolzano with 46.1, Toscana with 24.5, and Umbria with 15.3) and quite low for certain regions of the South (in Molise and Basilicata, the value does not go beyond 3).

Indicators that are very homogeneous from a regional viewpoint (with cv less than 5%) are concentrated in the Health and Politics and institutions domains. For example, the indicators of institutional trust (Trust in the Italian Parliament - 6.2, Trust in the judicial system - 6.3, Trust in political parties -6.4, and Trust in the Armed Forces and the Fire Brigade - 6.5) show very similar regional values, with discrepancies limited at the most to 0.8 points, and 0.2 on average.

In some instances, the low value of relative inequality is due to small regional differences that nevertheless, based on the characteristics of the phenomenon, have to be considered significant. This is the case of life expectancy at birth (indicator 1.1), ranging between 81.4 years in Campania and 84.6 in Trento: regional differences are very limited compared to the average (relative inequality less than 1%), and yet significant in terms of absolute value; consider that the current value observed in Campania had already been surpassed by the autonomous province of Trento in 2005.

In the Health, Politics and institutions and Subjective well-being domains, half or more of the indicators show low relative inequality (cv below 15%), with none characterised by high variability (cv exceeding 50%).

As for the Economic well-being and Landscape and cultural heritage domains, more than 40% of indicators (six out of nine for Landscape) show high relative inequality.

In the Education and training, Work and life balance, Social relationships, Safety and Quality of services domains, far more than half of indicators disclose intermediate relative inequality values, ranging between 15% and 50%. However, Participation in the school system of children aged 4-5 years (indicator 2.2) and People to rely on (indicator 5.3) indicators stand out for their very low regional inequality. In the first case, the cv is less than 2.2%, given that, apart from Lazio (88.9%), regional values are very similar and higher than 90%. ranging between the 92.1% recorded in Lombardia and the 98.3% for Campania. In the second case the relative inequality is just above 3% for similar reasons: high values ranging between 78.9% for Puglia, 80.4% for Sicilia and 89.7% for Sardegna. On the contrary, the indicators Irregularities in water distribution (indicator 12.4) and Pick-pocketing (indicator 7.3) record a substantial relative inequality. In the first case, the cv reaches almost 100%, given that the national value of the indicator (8.9%) is actually a synthesis of very diverse situations, with the regions of the North (except for Liguria) below 5%, whereas in Sicilia and in Calabria percentages respectively reach 29.5% and 38.7%. In the second case, the cv is equal to 96.0%: the victims of pick-pocketing are less than 1 per 1,000 inhabitants in Valle d'Aosta, Basilicata, Calabria and Sardegna, whereas in Lazio they are 13.6 and in Lombardia and in Toscana 7.2.





In the Innovation, research and creativity domain, only one indicator (Patent propensity -11.2) has a marked regional variability, as Emilia-Romagna is attested on a value (246.2 patent applications per million inhabitants) that is even fifteen times greater than those of some regions of the South and Islands.

The Environment domain shows a differentiated situation, with six indicators characterised by high relative inequality (three of which over 100%), other six indicators with medium levels of relative inequality, and four indicators with low relative inequality: more specifically, concerns for climate change and greenhouse effect (indicator 10.19), concerns for biodiversity loss (10.21) and satisfaction with the environment (10.20) have rather homogeneous regional values, especially regarding concerns for climate change, for which the regional cv is less than 3%.

In general, the subjective perception indicators (judgments, trust, satisfactions) evince a moderate relative inequality. The only partial exceptions are Satisfaction with public transport services (indicator 12.7) and Dissatisfaction with the Landscape of the place of living (indicator 9.10). In the first case, considering the particularly low percentages of regular public transport users who are satisfied in Lazio and Campania, and those above the average for all the northern regions (except for Piemonte), the relative inequality settles at 34.2%. In the latter case, the relative inequality is equal to 41.4%, with lower percentage of dissatisfied in all northern regions and higher levels in Lazio, Campania and Sicilia.

In Figure 5, the North emerges as the area with the best values of the indicators in terms of well-being in 80 cases (60.6%) among the 132 measures considered, the Centre in 29 cases (22.0%) and the South in 21 cases (15.9%). In other two cases (Job satisfaction - 3.12; Trust in police and the fire brigade - 6.5), the North and the Centre are evenly poised, whereas the South and Islands languish at the bottom.

It should be noted that the advantage of one macro area over the others is not always significant. For twelve indicators (of which three in the Politics and institutions domain), the advantage of the best area over the second is almost irrelevant⁹. Usually, it is the North and the Centre that have values that are similar and significantly higher than in the South and Islands; the exception are two indicators of the Politics and institutions domain (Mean age of members of national Parliament - 6.10; Prison density - 6.12), which instead see the Centre and the South and Islands getting closer and leaving the North behind. In other cases, instead, the advantage is particularly heightened: for eight indicators (concentrated mainly in the Landscape and cultural heritage and Environment domains), the value in the best macroregion is more than double (or less than half, in the event of negative polarity) the value in the other two. For example, illegal building rate (indicator 9.3) remains a marginal phenomenon in the regions of the North (altogether 4.6% of illegal building rate), but retains a significant weight in the rest of the country, above all in the South and Islands (40.2%), particularly in Campania, Basilicata and Calabria, where new unauthorised buildings are more than 50 every 100 authorised ones.

Proceeding with the analysis by domain (Figure 5), we can observe that in the Health, Work and life balance, Economic well-being, Social relationships, Subjective well-being, Landscape and cultural heritage and Quality of services domains, the North is ahead of Centre and South

⁹ Mental Health Index (SF36) (indicator 1.3), Overweight (standardised rates) (1.11), Ratio of employment rate for women aged 25-49 with at least one child aged 0-5 to the employment rate of women 25-49 years without children (3.9), Job satisfaction (3.12), People to rely on (5.3), Trust in police and the fire brigade (6.5), Mean age of members of national Parliament (6.10), Prison density (6.12), Leisure time satisfaction (8.2), Concern for climate change and greenhouse effect (10.19), Satisfaction with the environment (10.20), Availability of at least one computer and Internet connection in the household (11.9). This list excludes (cf. Health, note to Figure 1) the indicators on life expectancy (Life expectancy at birth -1.1, Healthy life expectancy at birth -1.2).



and Islands for at least two-thirds of indicators. In particular, in the Work, Social relationships and Subjective well-being domains, the North always ranks first for all indicators, except one for each domain. The percentage of employed people working from home (indicator 3.15) is very high in Lazio (20.9%), hence the Centre (15.0%) is in the lead compared to both the North (13.2%) and the South and Islands (7.4%). The share of non-profit organisations per 10,000 inhabitants (indicator 5.8) is greater in the Centre (67.8%) compared to North (66.2%) and South and Islands (49.8%), considering that the five regions ranking last are Campania, Sicilia, Puglia, Calabria, but also Lombardia. The percentage of those who believe that their personal situation will worsen (indicator 8.4) is lower in the South and Islands (10.7%) compared to the North (12.7%) and the Centre (13.1%), with the lowest share of pessimists in Campania (8.4%) and the highest in Toscana (16.0%).

In two other domains, Education and training and Innovation, research and creativity, the North is ahead for slightly more than half of the indicators, while the Centre leads in the other domains, save for Participation in the school system of children aged 4-5 years (indicator 2.2, already analysed) and Enterprises with at least 10 employees with web sales to end-customers (indicator 11.11), where the lead is instead taken by the South and Islands (18%, compared to a national average of 14%).

In the Politics and institutions domain, the Centre leads for half of the indicators, in particular Trust in the Italian Parliament (indicator 6.2), Trust in political parties (indicator 6.4) and Trust in the police and fire brigade (indicator 6.5), although the differences compared to other macro areas are very limited (maximum 0.3 points).

In the Safety domain, the South and Islands is ahead in four out of seven indicators, especially as regards all predatory crimes: Home burglaries (indicator 7.2), Pick-pocketing (indicator 7.3) and Robberies (indicator 7.4). In all three instances, the South and Islands differs quite significantly from the two other macro-regions: the victims of home burglaries (per 1,000 families) are 5.1, approximately half compared to North (9.6) and Centre (10.3); the victims of pick-pocketing (per 1,000 inhabitants) are 1,9, compared to 5,6 for the North and 9,3 for the Centre; and the victims of robberies (per 1,000 inhabitants) are 0.8 compared to 1.3 in the North and 1.4 in the Centre. Among crimes, murders are an exception, for it is the Centre that records the lowest values (0.4 per 100,000 inhabitants, half the murder rate in the South and Islands).

Lastly, the Environment domain is more differentiated, with the South and Islands ahead in 7 indicators, the North in 5 and the Centre in 4. The two indicators that measure the sharpest differences between the best macro-region and the other two are Population exposed to the risk of floods (indicator 10.7where the South and Islands leads) and Landfill of waste (10.16), where the North is ahead (10.1%, compared to 28.2% for the Centre and 22.5% for the South and Islands).

5. Differences in well-being by gender and educational qualification

Differences based on gender and educational qualification are analysed using parity indexes which, in respect of each indicator for which the information is available, compare the value this takes in the female population with the value it takes in the male population¹⁰, as well as

¹⁰ In the event of indicators with a negative polarity, for which a higher value means a lower level of well-being, the ratio is inverted. In that case, for example, the numerator has the value referring to the male population and the denominator the one referring to the female population.



the value it takes, respectively, in the population with a lower educational qualification and the population with a higher educational qualification.

For 88 indicators, the data disaggregated by gender is available; for 38 of these measures (over 40% of the total), a female disadvantage is recorded, with a parity index below 1, and for 27 a male disadvantage. The most severe disparity concerns the presence of women in decision-making bodies (parity index 0.27) and women represented in politics at a local level (index 0.30). Female disadvantage is mostly concentrated in the Work and life balance (seven indicators out of 12) and Economic well-being (five indicators out of nine) domains (Figure 6).

Among the most critical indicators in terms of gender parity, involuntary part time ranks third (15.6% for women and 5.1% for men, parity index 0.33) in the Work and life balance domain. This is followed, in the same domain, by non participation in the labour market, which is lower among men (12.3% as opposed to 18.0% of women, index 0.68), the share of low-paid employees (index 0.70), the perception of insecurity of employment (0.79), employed people who perform more than 60 hours of work per week, and the share of over-qualified employed persons (both 0.86). Women have a lower employment rate (56.5% as opposed to 76.0%, index 0.74). There are only three indicators of the domain that signals a prevalence of the phenomenon among women, with a parity index above 1: the share of people employed on fixed-term contracts for at least 5 years (index 1.08), that of employed persons working from home (1.22), and the rate of fatal accidents and permanent disability (index 2.57). Even on the side of economic well-being, the prevalent female disadvantage concerns in the first place a factor associated with participation in the workplace, namely, the indicator of low work intensity, which has a parity index of 0.84. Other indicators that detect a greater vulnerability of women in terms of economic well-being are: the risk of poverty (0.85), the housing cost overload, and severe material and social deprivation (both 0.89); just below the lowest limit is where we find the indicator of average net wealth per capita (0.94).

The indicator of severe housing deprivation is the only one that shows a slight male disadvantage (1.06).

Disparities in levels of well-being, to the detriment of women, are also discernible in the four indicators of the Subjective well-being domain and for two of the five indicators of the Landscape and Environment domains for which this disaggregation is possible: Concern for the deterioration of the Landscape and Concern for the loss of biodiversity.

In the Social relationships and Politics and institutions domains, no indicator shows a better condition for women. In addition to the aforementioned indicators of representation in local politics and decision-making bodies, even the presence of women in Parliament and Boards of Directors of companies listed in the stock exchange does not reach the share of men (indexes of 0.51 and 0.76 respectively). Furthermore, women record lower levels than men for civic and political participation (0.83), generalised trust (0.88), social participation (0.89), satisfaction with friendships (0.92) and electoral participation (0.94).

As regards Safety, men's concern about being the victims of sexual violence is 0.56 times the concern expressed by women, and likewise lower is the fear of being subjected to an imminent crime (0.78)¹¹.

For Quality of services, it is worth noticing that men give up health services less frequently (0.69) and that women use public transport more assiduously (1.17).

¹¹ The update of these indicators refers to 2016.



In the Innovation, research and creativity domain, we can observe among women a greater incidence of cultural and creative employment (1.12) and knowledge workers (index 1.61), but a simultaneously lower share of regular Internet users (0.93).

Well-being indicators for which the condition is seemingly more favourable among women are altogether 27, mostly concentrated in the Health and Education and training domains. In the Health domain, there are eight indicators marking a lower vulnerability for women. They include low risky alcohol consumption (with standardised rates more than twice higher for men) and the mortality rate for road accidents between 15 and 34 years of age, 5.5 times higher for the male population. Men likewise show higher standardised rates of avoidable mortality between 0 and 74 years of age (1.90), overweight, smoking, cancer-related mortality between 20 and 64 years of age, and the infant mortality rate. The standardised rates of adequate nutrition are more favourable for women (1.28). Three indicators record a disadvantage for women: Multi-chronicity and severe limitations in people aged 75 or over (0.75), Sedentariness (standardised rates) and the Mental Health Index (SF36).

In the Education domain, women have better values for the indicators of reading books and newspapers (index 1.07) and using libraries (1.31). There is a higher share of women between 25 and 64 years of age with at least a high school diploma (1.08) and between 25 and 34 years of age with a university degree or other tertiary qualification (1.52), as well as the rate of transition to university (1.31). Likewise with a lower percentage than their male colleagues are female students of the III lower secondary school classes with inadequate alphabetic skill (1.27), and girls leaving the education and training system early (1.72). However, women show a lower percentage for tertiary STEM qualifications (index 0.68), for students of the III lower secondary school classes with adequate numerical skill (0.88), and for at least basic digital skills (0.93). Furthermore, young women who neither study nor work (NEETs) show a higher percentage than their male peers (17.8% compared to 14.4%, index 0.81).

Lastly, for 25 indicators no significant differences are noticeable between male and female population. They are, in other words, indicators for which the ratio between values ranges from 0.95 to 1.05. They range from satisfaction with the work performed (0.95) to cultural participation outside the home (1.05).

Analysis of the equity of well-being is supplemented, where possible, by the study of the distribution of indicators by educational level. People's socio-economic conditions, measured through the highest educational qualification obtained, represent one of the most important determinants of well-being¹².

¹² Organization for Economic Co-operation and Development - OECD. 2013. *Education at a Glance 2023: OECD Indicators*. Paris, France: OECD Publishing. <u>https://doi.org/10.1787/e13bef63-en</u>.





Figure 6. Ratio between well-being indicators for females and males. Latest available year. Pure numbers (a)

Source: Istat, Bes indicators

(a) The ratio between indicators takes into account polarity in terms of well-being measures; thus, values greater than 1 indicate a better situation for females, less than 1 a better situation for males. A scale transformation was applied on the x-axis to make the graph more readable (logarithmic scale).



The link between educational qualification and health conditions is known in the literature. In this edition of the Bes Report, in the Health domain chapter, we propose for the first time an analysis of the socio-economic inequalities of mortality indicators, which considers educational qualification jointly with gender and territory¹³.

In this introductory chapter, in order to provide an overview of the components of wellbeing that vary the most by educational qualification, account is taken of 60 Bes indicators¹⁴ disaggregated into three modes: "low" in the case where the highest educational qualification achieved is a lower secondary school diploma, primary school diploma or no qualification at all (Isced 0-2), "medium" in the event that a upper secondary school diploma has been obtained (Isced 3-4), "high" if the person holds a university degree or other tertiary qualifications (Isced 5-8). The exception is represented by three indicators of mortality (Avoidable mortality (0-74 years of age), Cancer-related mortality (20-64 years of age) and Mortality from dementia and nervous system disorders (65 years and over), for which the low educational level is detailed even further by separately considering primary school diploma/ no qualification (Isced 0-1) and lower secondary school diploma (Isced 2)¹⁵. This analysis does not consider the breakdown by age groups, available in the Statistical Annex attached to the Report, which is however useful for an in-depth examination of the relations emerging from the overall picture herein put forward.

Differences are assessed through the ratio between the value an indicator takes in the population with the lowest educational qualification and the one it takes with the highest educational qualification, respectively (Figure 7). The most pronounced gaps are detected in some indicators that also reflect differences in opportunities for access to different types of employment. They include the percentage of employed people working from home, which in 2023 ranges from 2.1% for people holding no more than a lower secondary school diploma to 27.4% for those with the highest level of education (parity index 0.08), and participation in lifelong learning, with 3.2% of population aged 25-64 who attended at least one training course in 2023, compared to 25.2% among graduates (index 0.13).

The highest educational level represents an element of protection vis-à-vis several indicators of economic distress. In 2022, 0.6% of tertiary graduates live in conditions of severe material and social deprivation, while the percentage rises to 7.5% among those with at most a lower secondary school diploma (index 0.08); 1.7% stated that they struggle to arrive at the end of the month, a percentage share more than six times higher among the less educated (10.7%; index 0.16). The incidence of absolute poverty decreases as the educational qualification improves: in 2022, it is equal to 13.6% among those holding no more than a lower secondary school diploma and dips to 2.2% for the population segment that has achieved a tertiary qualification (index 0.16). Moreover, more than one person in four among those with a lower educational qualification is at risk of income-related poverty (25.8% compared to 8.7% for those with a high educational qualification; index 0.34).

¹³ For further details, the reader is referred to the box headed "The Bes mortality measures by educational qualification" in Chapter 1 Health.

¹⁴ Indicators for which breakdown by educational qualification is available in the Statistical Appendix attached to the Bes Report are 65, but some indicators have been disregarded in this analysis due to the lack of a recent update of data. They are five: Employed people (15-64 years of age) working over 60 hours per week of paid and/or household work, Asymmetry in family work, Worries of being victim of a sexual violence, Concrete fear of crime, Over-qualified employed people.

¹⁵ In respect of these three indicators, the parity index is calculated between the population with a primary school diploma at the most (ISCED 0-1) and the population with at least a university degree (Isced 5-8).





Among those with a low level of education, income is evenly distributed across lower levels: the ratio between income possessed by the richer 20% (S80) and the poorer 20% (S20) in 2021 is equal to 4.8 for those with no more than a lower secondary school diploma and rises to 5.7 among those who hold at least a tertiary degree. For this reason, the parity index of income inequality (1.19) is higher than 1, a condition that does not however denote an advantage for the less educated.

Differences are particularly sizeable even in respect of digital skills and use of the Internet: in 2023, 74.1% of people aged 16-74 with tertiary education possess at least basic digital skills, while the share drops to 22.6% among those with at the most a lower secondary school diploma (parity index 0.3); among those with a higher educational qualification, 94.5% are regular Internet users, whereas the figure does not reach two-thirds among those with no more than a lower secondary school diploma (62.0%; index 0.66).

Higher educational levels are associated with better conditions in terms of participation, both social and cultural. In 2023, among tertiary graduates, volunteer activity reaches 13.4% (thrice as much as those with at the most a lower secondary school diploma - index 0.33), social participation is more widespread (44.8%), with a value almost thrice as high as that detected within the less educated population (16.6%; index 0.37), and civic and political participation is almost double (80.5% compared to 47.4%; index 0.59).

In the same year, cultural participation outside the home concerned 3 people with a high educational qualification for each person with a lower educational qualification (respectively 64.6% compared to 22.4%; index 0.35), and the gap is the same for readers of books and/or newspapers. The percentage of people who have read at least four books or read newspapers goes from 23.7% of the less educated category to 61.8% of people with a tertiary qualification (index 0.38).

Having a higher educational qualification facilitates the adoption of healthier behaviours and lifestyles: more than half of those who obtained at the most a lower secondary school diploma is sedentary (50.6% in 2023), whereas the percentage drops to 17.9% among those with at least a tertiary degree (index 0.35). Even the percentage share of overweight people is markedly higher among the less educated (54.8%) than among those with a tertiary qualification (34.3%; index 0.63).

People with high educational qualifications are at an advantage in the labour market. The employment rate (20-64) of tertiary graduates is in fact equal to 81.6%, nearly 28 percentage points more than the same rate calculated among the population segment with no more than a lower secondary school diploma (index 0.66), while the non-participation in the labour market rate is more than thrice as high among the less educated (22.5% compared to 7.2% for tertiary graduates; index 0.32). The educational level remains a discriminating factor when it comes to containing the gap between the employment rates of women with children and without children: the ratio between the two rates reaches 91.1 for women with at least a tertiary degree, dropping to 49.0 among those with at the most a lower secondary school diploma.

Lastly, higher educational levels are reflected in greater trust in others and a more optimistic vision of the future. Over a third of graduates believe that people are worthy of trust (37.0%, compared to 18.7% among the less educated; index 0.51), whereas the percentage of those who believe that their situation will improve in the next 5 years moves from 22.7% for people with low educational qualifications to 40.8% among those with a tertiary qualification (index 0.56).

Equitable and sustainable well-being in Italy, an overview





					1 1		
Social decay 2023 -							
Income inequality 2021 -						-	
Landscape unsatisf. 2023 -						-	
Environment satisf. 2023 -						•	
Trust in pol. parties 2023 -						•	
Alcohol 2023 -						•	
Trust in police 2023 -					-)	
Leisure time satisf. 2023 -							
Mental health 2023 -						Greater well-b	being
Trust in parliament 2023 -						for people with	lower
Transport satisf. 2022 -					•	education	
Trust in judicial system 2023 -					•		
Unmet need med. exam. 2023 -					•		
Smoking 2023 -					•		
People to rely on 2023 -					-		
Users of public transp. 2023 -					-		4
Transition to standard empl. 2020 -					•		
Satisf. family relations 2023 =					•		
Climate change concern 2023 -					-		
Life satisfaction 2023 -					-		4
Perc. of safety in the dark 2023 -					-		
Dementia 2020 -					-		
Landscape concerns 2023 =							
Satisf, friends relations 2023 =							
Biodiversity loss concern 2023 =							
Job satisfaction 2023 =							
Employed on a temp, basis 2023 =							
Adequate nutrition 2023 =							
Employment insecurity 2023 =							
Employment rate 2023 =							
Regular internet users 2023 =							
Negative judgement future 2023 =							
Overweight 2023 =							
Cancer 2020 =							
Civic and polit particip 2023 =							
Housing deprivation 2022 =							
Positive judgement future 2023 =							
Employment mothers/non-mothers 2023 =							
Housing overburden rate 2022 =							
Avoidable mortality 2020 =							
Generalized trust 2023 =							
Involuntary part time 2023 =							
Libraries 2023 =							
Booding 2023							
Social particip 2023 -							
Low work intensity 2022 -							
Sedentariness 2022 -							
Cultural particip 2023 -							
Diak of powerty 2023 =							
Kisk of poverty 2022 =							
Volunteening 2023 =							
Non-participation 2023 =							
At least basic digital skills 2023 =	Greater well-beir	ng					
Employees with low pay 2020 =	for people with hi	grier					
Association funding 2023 =	education						
Cultural employment 2023 -							
Absolute poverty 2022 -		•					
Diff. making ends meet 2022 -							
Life-long learning 2023 -		-					
Material and social deprivation 2022 -	•						
Working from home 2023 -	•						
	0.1	10	0.20 0.25	0.50 0.	.80 1.	00 1.25 2	2.00
			Ratio betv	veen indicators			

Source: Istat, Bes indicators (a) The ratio between indicators takes into account polarity in terms of well-being measures; thus, values greater than 1 indicate a better situation for people with lower educational qualification, less than 1 a better situation for people with higher educational qualification. A scale transformation was applied on the x-axis to make the graph more readable (logarithmic scale).



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6. Evolution of the demographic scenario

The demographic evolution in our country is characterised by a persistently low birth rate and by an increasingly longer life. The changes we are witnessing are rooted in the profound demographic and social transformations of the last century: already since the end of the 1970s, the average number of children per woman (Total Fertility Rate), which measures the reproductive capacity of a population, has conclusively fallen below the threshold of two children. The generations of younger people, therefore, are always less numerous than those of their parents. At the same time, the extraordinary gains in terms of average life expectancy produce an unstoppable growth in population at older ages.

The resident population in Italy has long lost its capacity for growth stemming from the natural dynamics, i.e. the one due to the "replacement" of those who die with those who are born: in the 2001 Census, the amount of residents in Italy (57 million) was slightly higher than that of twenty years earlier (56.5 million in 1981). It was only thanks to the positive contribution of immigrations that, starting from the end of the last century, this tendency towards stability has been temporarily inverted. Over the last decade, in fact, the population has again started to increase significantly. In the 2001 Census, residents are almost 60 million (+2.4 million compared to 2001, almost all foreigners) and, as at 1 January 2014, the resident population reached a peak of 60.3 million (Figure 8).



Figure 8. Evolution of resident population by citizenship and of the incidence of foreign population. Censuses of 1981-2011 and 1 January 2014, 2020 and 2024. Values in millions and percentage values

After the peak in 2014, the resident population decreased for the first time in the last ninety years and the phase of demographic decline kicked in. As at 1 January 2024, it is estimated that the population amounts to 58 million, 990 thousand residents, a drop of 7 thousand units compared to the previous year (-0,1 per thousand).



The population with Italian citizenship drops to 53 million, 682 thousand units less (-3.2 per thousand compared to the previous year), whereas resident foreign citizens are 5 million 308 thousand, representing 9% of the resident population. Foreign incidence shows a fair deal of territorial variability, with markedly higher levels in the Centre-North compared to the South: Emilia Romagna (12.7%) and Lombardia (12.1%) the regions with the highest incidence, while Sardegna (3.4%) and Puglia (3.8%) are those with the lowest resident foreign presence.

The migratory balance with foreign countries – equal to 274 thousand units in 2023 (provisional data) – shows a recovery in the last two years, after a prolonged phase of contraction in the aftermath of the great crisis of 2008 that reached its bottom in 2020 (Figure 9), as a result of the restrictions to mobility aimed at containing the pandemic.

The migratory balance with foreign countries is driven by immigrations (especially of foreign citizens), which disclose a marked recovery in the last two years (416 thousand units in 2023), after the collapse recorded in 2020 (248 thousand units); despite the growth, levels are still far from the exceptional rise in entries recorded in 2007 and 2008, due to Romania's entry in the EU. Emigrations, following two years essentially of stalemate, recorded a drop in 2023 (142 thousand units), with all that these values are in any event almost thrice as high as the 2004-2008 average.





Regions that show the highest migratory balances with foreign countries, proportionately to the average population, are in general those of the North and Centre (respectively 5.4 and 5.1 per thousand), whereas decidedly lower values are recorded in the South (3.4 per thousand), given the greater migratory nature that characterizes the regions making up that area.



Compared to 2007, a year with the maximum difference between immigrations and emigrations, the migratory balance with foreign countries has thus decreased by more than 200 thousand units, while remaining markedly positive and decisive in limiting the effects of the demographic shrinkage due to the natural negative balance estimated at -281 thousand in 2023: in fact, 379 thousand children (estimate) have been registered in official documents, while those removed therefrom because of death were 661 thousand (Figure 10).



Figure 10. Births, deaths and natural balance. Years 2004-2023. Values in thousands

In the timeframe considered, with the exception of 2004 and a slight positivity in 2006, the balance resulting from the natural movement of the population has an increasingly marked negative trend, which sped up starting from 2015; it is the year of the beginning of the demographic decline in which the gap between births and deaths increases in a noticeable manner, eventually reaching the widest gap in 2020 with the pandemic (natural balance equal to -335 thousand units). The regions with the most negative natural balance are those of the Centre (-5.5 per thousand in 2023) and the North-West (-5.0 per thousand), with the peak reached in Liguria (-8.7 per thousand); in general, the regions of the South disclose a natural balance with more moderate negative values (-4.0 per thousand) compared to the rest of Italy. Campania is the region with the highest natural balance value (-2.6 per thousand), albeit a negative one as the rest of the national territory. The natural balance curve is determined by the increase in deaths, especially since 2015 (with over 740 thousand deaths in 2020), and the constant drop in births starting from 2008, the year in which the number of live births recorded the highest value since the early 2000s (almost 577 thousand births). Since then, the newborn resident in Italy have systematically decreased: over 197 thousand units, more than one-third of births less, in just 15 years.

This reduction is partly due to the "structural" effects induced by the significant changes undergone by the female population of childbearing age, conventionally set between 15 and 49 years. Women residing in Italy from this age group, in fact, are increasingly fewer: on the one hand, the so-called baby boomers (i.e. the very numerous ones born between

the second half of the 1960s and the first half of the 1970s) have exited the reproductive phase (or are about to conclude it); on the other hand, the younger generations are less numerous, as they are suffering from the effect of the so-called baby bust, namely, the phase of sharp decline in fertility during the 1976-1995 twenty-year period, which has led to the historical minimum of 1.19 children per woman in 1995 (526 thousand births). Women are much fewer and have a 'more aged' structure in terms of age; less women of childbearing age inevitably entail fewer children. The range of women between 15 and 49 years of age has decreased by 2.2 million units compared to 2008. As at 1 January 2024, women

residing in Italy between 30 and 49 years of age are almost twice as those aged 15 to 29. We can estimate the effect of the ageing of the population of reproductive age by applying to the average population of 2022 the fertility levels relating to 2008 (expressed through age-specific fertility rates). The different structure of the population of childbearing age explains two-thirds of declining births, whereas the remaining share depends on the decrease in fertility (from 1.44 children per woman in 2008 to 1.20 in 2023).

The contribution of foreign citizens to the birth rate and fertility of the resident population, which played a decisive role in the recovery of the average number of children per woman until 2010. is also decreasing slowly. Children born to parents where at least one of the two partners is a foreigner kept on shrinking in 2022, settling at 82.216 units and representing 20.9% of total births. Since 2012, the last year in which we discerned an increase over the previous year, these births have decreased by 25.789 units. Children born to parents who are both foreigners are 53.079 (26.815 less than 2012) and represent 13.5% of total births. With the driving force of immigrations having receded, the increasingly lower and belated fertility once again becomes the distinctive feature of the new phase of demographic crisis. Today's fertility, with an average number of children per woman estimated at 1.20, is characterised by values shrinking with each year that goes by, and shows a marked increase over the age of 30 and a continuous decrease among the youngest, reflecting a progressive deferment of maternity that appears to get worse over time. Notwithstanding a greater convergence in fertility levels across the territory compared to the past, the average number of children per woman is higher in the Centre-North than in the South, showing a contrary trend to what used to be recorded in the past. This depends on the fact that the rise in the average number of children per woman that had been discerned between the historical minimum of 1995 and the relative maximum of 2008-2010 (1.44) had occurred precisely where the foreign presence was generally more stable and entrenched, hence in the regions of the North, which have since maintained higher levels than the rest of Italy.

Foreign women had on average 1.86 children in 2022 (2.53 in 2008); 1.95 in the North (2.64 in 2008) and decidedly lower values in the Centre and the South, respectively 1.61 and 1.86 children per woman (they were 2.43 and 2.22 in 2008). The average number of children per Italian woman is significantly lower (1.18 in 2022) and is drastically on the decline compared to 2008 (1.33), especially in the regions of the Centre (from 1.32 in 2008 to 1.10 in 2022) and the North (from 1.30 to 1.15).

The social and economic transformations produced in the 1970s and 1980s triggered off deep changes in habits and ways of life, investment in human capital and participation in the labour market by the generations that have gradually entered adult life, particularly for women. These changes have led to the postponement of the reproductive experience to increasingly more advanced ages. Women become mothers at 31.6 years of age (2022), almost 2 years older than in 2008. The effects of postponement translate into a drop in the average number of children per woman, which has a significant impact already on first-borns. In a context of



The deferment of maternity prolonged over time often translates into the definitive renunciation of childbearing.

Shifting life phases forward generally concerns all ages, including the transition to old age. Being young, adult or elderly no longer responds to biological and official age factors, as there is rather a progressively widening gap between official age, its social representation and the way individuals perceive it. The timeframes and manner in which one shifts from youth to adulthood depend, on the one hand, on economic conditions and lifestyles and more generally on the human capital of individuals, and, on the other hand, on the institutional and social context in which the members of each generation reinterpret their life itineraries. In 2023, men can count on an average lifespan of 81.1 years, women of 85.2 years. Survival gains are significantly greater for men than for women; since 2004, the time horizon on which a man can count has increased by 3.2 years on average, whereas for women it is 1.6 years.

The combined effect of a high life expectancy and the persistence of a low birth rate and fertility regime contribute to the progressive inter-generational imbalance: as at 1 January 2024, the old age index is 199.8 over 64s every one hundred youngsters under 15 (it was 135.6% as of 1 January 2004). In general, the regions of the Centre-North (respectively 211.8 and 204.8%) have an older age structure than the South (186.5%), even though what emerges is a greater convergence compared to 2004, where the territorial gradient was substantially wider (Table 1). As at 1 January 2024, the regions with the highest number of elderly people every one hundred youngsters are Liguria (276.7%) and Sardegna (265.9%),



Figure 11. Age pyramid as at 1 January 2004 and 2024

Source: Istat, Intercensal estimates on resident population (2004); Resident population by sex, age and marital status at 1st January (2024 data are estimates)

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whereas those disclosing the youngest age structure are Campania (154.8%) and Trentino-Alto Adige (156,2%), which features as the exception in the North-East (202,1%). Over time, the increase in average life expectancy determines the increase in the population of so-called elderly people. As at 1 January 2024, there is an estimated number of over 4.5 million individuals aged 80 or more, nearly two million more than 2004; there are approximately 850 thousand individuals aged 90 and over, twice as many as 2004, and more than 22.5 thousand centenarians, thrice as many as twenty years ago.

Table 1. 2004 and 2023 demographic indicators

	Popul 1st of	Population at 1st of January		Foreign population (%)		Natural growth (per thousand)		International migratory rate (per thousand)		Ageing index (population 65 and over / population 0-14 per hundred)		Total fertility rate	
	2004	2024	2004	2024	2004	2023	2004	2023	2004	2023	2004	2023	
REGIONS													
Piemonte	4,260,654	4,252,581	4.1	10.2	-2.1	-6.7	7.3	5.2	178.3	232.0	1.26	1.17	
Valle d'Aosta	121,692	123,018	3.2	7.0	-0.3	-5.3	6.5	4.1	149.4	214.5	1.33	1.16	
Liguria	1,572,910	1,508,847	3.2	10.3	-5.4	-8.7	8.5	7.5	241.6	276.7	1.18	1.16	
Lombardia	9,173,501	10,020,528	4.9	12.1	1.1	-3.8	11.6	6.2	140.6	188.2	1.36	1.21	
Trentino-Alto Adige	958,462	1,082,116	4.4	8.6	2.8	-1.1	7.3	3.7	107.3	156.2	1.55	1.42	
Bolzano	470,363	536,933	4.0	9.5	3.6	0.3	6.1	3.4	94.4	136.1	1.56	1.56	
Trento	488,099	545,183	4.7	10.3	2.0	-2.5	8.4	3.9	121.3	179.1	1.55	1.28	
Veneto	4,622,493	4,851,972	5.0	10.4	1.1	-4.2	9.6	3.4	136.7	202.9	1.36	1.21	
Friuli-Venezia Giulia	1,196,333	1,195,792	4.3	10.2	-3.2	-6.3	6.4	5.4	185.5	243.7	1.21	1.21	
Emilia-Romagna	4,080,856	4,455,188	4.9	12.7	-1.7	-5.0	9.4	5.6	187.2	203.9	1.33	1.22	
Toscana	3,543,673	3,664,798	4.3	11.7	-2.1	-6.3	8.5	5.8	191.8	233.7	1.28	1.12	
Umbria	841,789	854,378	4.9	10.5	-1.7	-7.0	9.6	4.9	187.6	237.9	1.31	1.10	
Marche	1,481,118	1,484,427	4.7	9.0	-1.3	-5.9	7.4	5.3	170.1	226.2	1.27	1.17	
Lazio	5,186,338	5,720,272	3.6	11.3	0.5	-4.7	8.9	4.5	134.5	191.7	1.30	1.11	
Abruzzo	1,278,658	1,269,963	2.5	6.9	-1.5	-6.3	6.3	4.4	152.4	219.7	1.20	1.13	
Molise	320,359	289,413	1.1	4.8	-2.8	-7.7	3.3	8.3	156.2	251.0	1.14	1.10	
Campania	5,731,441	5,590,076	1.1	4.7	3.3	-2.6	5.3	2.9	81.5	154.8	1.49	1.29	
Puglia	4,034,841	3,890,250	0.9	3.8	2.4	-4.5	2.3	2.6	102.3	201.1	1.34	1.20	
Basilicata	594,505	533,636	0.9	4.9	-0.4	-6.5	2.5	5.3	128.1	229.2	1.23	1.08	
Calabria	2,000,597	1,838,150	1.4	5.6	0.8	-4.5	2.3	5.3	110.9	189.0	1.27	1.28	
Sicilia	4,977,097	4,794,512	1.2	4.2	1.4	-4.1	2.3	3.4	104.2	177.7	1.44	1.32	
Sardegna	1,634,673	1,569,832	0.8	3.4	-0.2	-7.2	2.1	2.3	125.5	265.9	1.04	0.91	
GEOGRAPHIC AREAS	6												
North	25,986,901	27,490,042	4.6	11.3	-0.4	-4.8	9.6	5.4	158.1	204.8	1.33	1.21	
North-West	15,128,757	15,904,974	4.5	11.4	-0.5	-5.0	10.1	6.0	159.7	206.8	1.32	1.20	
North-East	10,858,144	11,585,068	4.9	11.2	-0.3	-4.5	8.9	4.5	155.9	202.1	1.35	1.23	
Centre	11,052,918	11,723,875	4.1	11.1	-0.7	-5.5	8.6	5.1	160.0	211.8	1.29	1.12	
South and Islands	20,572,171	19,775,832	1.2	4.5	1.6	-4.3	3.4	3.4	102.7	186.5	1.36	1.24	
South	13,960,401	13,411,488	1.2	4.8	1.9	-4.0	3.9	3.5	100.0	182.3	1.37	1.24	
Islands	6,611,770	6,364,344	1.1	4.0	1.0	-4.9	2.2	3.1	108.7	195.5	1.34	1.23	
Italy	57,611,990	58,989,749	3.3	9.0	0.3	-4.8	7.2	4.6	135.6	199.8	1.34	1.20	

Source: Istat, Demographic balance and resident foreign population at 31st December (2023 data are provisional); Nowcast system for demographic indicators (2023 data are estimates)



METHODOLOGICAL ANNEX

1. Regional inequalities

To calculate the 5 classes of relative well-being levels and the coefficient of variation (cv), some conventions are applied:

- in case of missing values for the autonomous provinces of Trento or Bolzano (e.g., Great difficulty in making ends meet, Illegal building rate), the data for the Trentino-Alto Adige region are considered (if available);
- in case of missing values for some (but not all) regions (e.g., Severe housing deprivation, Coastal bathing waters), the groups and the relative inequality are nevertheless calculated using only the available regional data.

Some indicators are excluded from the calculation, in particular:

- all indicators that do not have a regional breakdown (e.g., Absolute Poverty, Women in decision-making bodies);
- indicators for which no updates are currently available after 2018 (e.g., Physical violence on Women, Erosion of farmland from urban sprawl);
- indicators that measure a variation (e.g., Brain circulation);
- indicators with absolute values that are not comparable between regions, since they depend on specific characteristics (demographic, climatic, etc.) of the region (e.g., Domestic material consumption, Consecutive dry days).

2. Coefficient of variation

For each indicator available at regional level, the relative inequality between regions can be measured through the coefficient of variation CV_{t} , which is calculated as the product of 100 and the ratio between the standard deviation and the absolute value of the mean of regional values:

$$CV_t = 100 \cdot \frac{\sigma_t}{|\mu_t|} = 100 \cdot \frac{\sqrt{\frac{1}{\#Reg} \sum_{i \in Reg} (x_{i,t} - \mu_t)^2}}{|\mu_t|},$$

where $x_{i,t}$ is the value of the indicator for the *i* region at time *t*, μ_t is the mean on *i* of the $x_{i,t}$ and

$$\sigma_t = \sqrt{\frac{1}{\#Reg} \sum_{i \in Reg} (x_{i,t} - \mu_t)^2}$$
 is the standard deviation at time *t* of the $x_{i,t}$.

The set of regions *Reg* also includes the autonomous provinces of Trento and Bolzano, but not Trentino-Alto Adige.

For the use of the coefficient of variation to analyse regional inequalities, see Chelli, F.M., B. Ermini, M. Gallegati, and A. Gentili. 2023. "Investigating Regional Disparities in Italy's Well-Being Since Unification (1871–2011)". *Italian Economic Journal*. Volume 9, No. 2: 697-722; Ferrara, A.R., and R. Nisticò. 2013. "Well-Being Indicators and Convergence Across Italian Regions". *Applied Research in Quality of Life*. Volume 8, N.1: 15-44.

3. Parity indexes

To measure the imbalances between Italy and EU27, women and men, or people with lower or higher educational qualification, the parity index was calculated as a ratio between the two values of the same indicator. If the indicator has a negative polarity, the inverse ratio was calculated. In the graphs, these ratios are represented on a logarithmic scale, so that a ratio



and its inverse are visually symmetrical compared to the parity line (Ratio=1). Accordingly, different ratios can be compared correctly in terms of well-being. For example, if for an indicator A with a positive polarity the value for females is twice that for males, whereas for an indicator B with a positive polarity the value for males is twice that for females, then the point that represents the females/males ratio for the indicator A will be found to the right of the parity line, the point that represents the females the females/males ratio for the indicator B will be found to the left of the parity line, but the distances from the parity line will be identical.

4. Regional dispersion

To provide a detailed picture of the distribution of well-being between Italian regions at the level of individual domain, in Figure 1 of each Chapter an analysis was conducted on regional dispersion around the national value.

To this end, relative difference measures were used, calculating, starting from regional values updated to the latest available year, the percentage variations compared to the Italy value. In this manner, for the regions with values equal to the national data the percentage variation will be equal to 0, whereas, as the difference between the regional and national values increases, we will get growing (or decreasing) values expressed as percentage of the reference value. In the calculation, regard has been paid to the polarity of the indicator, ensuring that values greater than zero correspond to a better well-being condition than the Italian average and values less than zero always indicate a worse well-being condition.

Net of the different units of measurement and magnitude of the indicators, this representation allows us to offer an overview of the indicators of each domain and to grasp territorial inequalities in relative terms.

In order to take into account the geographical distribution of differences in well-being, in the graphic representation the regions are classified with the relevant territorial divisions: in this way, therefore, it is possible to identify the cases in which the territorial gradient is distinct from those in which it is less clearly segmented, seeing how the regions of the same geographical division tend to position themselves on values that are close to each other and – at the same time – distinguish themselves from the regions of the other geographical divisions.



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	Table A. List of 132 Bes	indicators analy	vsed in para	graph 4, with	code and	relative domain
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CODE	DOMAIN	INDICATOR	CODE	DOMAIN	INDICATOR
1.1	Health	Life exp. birth	6.6	Politics	Women and pol. repr. in parliament
1.2	Health	Healthy life exp.	6.7	Politics	Women and pol. repr. at regional lev
1.3	Health	Mental health	6.10	Politics	Mean age MPS
1.4	Health	Avoidable mortality	6.11	Politics	Length civil proc.
1.5	Health	Infant mortality	6.12	Politics	Prison density
1.6	Health	Road accidents	7.1	Safety	Homicide rate
1.7	Health	Cancer	7.2	Safety	Burglarv
1.8	Health	Dementia	7.3	Safety	Pick-pocketing
1.9	Health	Multimorbidity and severe lim.	7.4	Safety	Robberv
1.10	Health	Life exp. without limitations	7.9	Safety	Perc. of safety in the dark
1.11	Health	Overweight	7 11	Safety	Social decay
1.12	Health	Smoking	7 12	Safety	Crime risk
1.13	Health	Alcohol	8.1	Subjective well-being	Life satisfaction
1.14	Health	Sedentariness	82	Subjective well-being	Leisure time satisf
1.15	Health	Adequate nutrition	8.3	Subjective well-being	Positive judgement future
2.1	Education	Children 0-2 in nurserv	8.4	Subjective well-being	Negative judgement future
2.2	Education	Preschool (age 4-5)	9.1	Landscape	Expenditure for culture
2.3	Education	Upper secondary degree	0.1	Landscape	
2.4	Education	Tertiary degree	9.3	Landscape	Illegal building
2.5	Education	Entry rate to university	9.6	Landscape	Mining activities
2.6	Education	Early leavers education	9.7	Landscape	Forest fires
2.7	Education	NEFT	9.7	Landscape	Rural tourism
2.8	Education	Life-long learning	0.0	Landscape	Density of historic groop
2.9	Education	Literacy skills	9.9	Landscape	Landscape unsatisf
2 10	Education	Numerical skills	9.10	Landscape	
2 11	Education	At least basic digital skills	9.11	Landscape	Landscape concerns
2 12	Education	STEM graduates	10.1	Environment	
2.12	Education	STEW graduates	10.3	Environment	Viarm Spell duration
2.10	Education	Cultural particip.	10.0	Environment	Risk of flood
2.14	Education	Librariaa	10.7	Environment	Risk of flood
3.1	Work	Libraries	10.8	Environment	vvater losses
3.2	Work	Employment rate	10.10	Environment	Protected areas
3.2	Work		10.11	Environment	Bathing shores
3.0	Work	Fransition to standard empi.	10.12	Environment	Urban green
3.4 2.5	Work	Employed on a temp. basis	10.13	Environment	Soil sealing
3.5	Work	Employees with low pay	10.15	Environment	Municipal waste
3.0	Work	Over-qualified employees	10.16	Environment	Landfill of waste
3.7	VVOIK Work	Injury rate	10.17	Environment	Contaminated sites
3.0	VVOIK	Not in regular occupation	10.18	Environment	Renewable sources
3.9	VVOIK Work	Employment mothers/non-mothers	10.19	Environment	Climate change concern
3.12	VVOIK	Job satisfaction	10.20	Environment	Environment satisf.
3.13	VVOFK	Employment insecurity	10.21	Environment	Biodiversity loss concern
3.14	VVOFK	Involuntary part time	11.1	Innovation	R&D intensity
3.15	VVork	Working from home	11.2	Innovation	Patent propensity
4.1	Economic well-being	Disp. income per capita	11.4	Innovation	Innovation of productive syst.
4.2	Economic well-being	Income inequality	11.5	Innovation	Knowledge workers
4.3	Economic well-being	Risk of poverty	11.6	Innovation	Cultural employment
4.6	Economic well-being	Material and social deprivation	11.8	Innovation	Regular internet users
4.7	Economic well-being	Housing deprivation	11.9	Innovation	Computer availability
4.8	Economic well-being	Diff. making ends meet	11.10	Innovation	Municipalities with online serv.
4.9	Economic well-being	Low work intensity	11.11	Innovation	Enterprises with web sales
4.10	Economic well-being	Housing overburden rate	12.1	Services	Beds in welfare-healthcare fac.
4.11	Economic well-being	Economic situation	12.2	Services	Integr. home assistance
5.1	Social relationships	Satisf. family relations	12.3	Services	Difficulty accessing serv.
5.2	Social relationships	Satisf. friends relations	12.4	Services	Irregular water supply
5.3	Social relationships	People to rely on	12.5	Services	Irregular electricity
5.4	Social relationships	Social particip.	12.6	Services	Seat-Km transport network
5.5	Social relationships	Civic and polit. particip.	12.7	Services	Transport satisf.
5.6	Social relationships	Volunteering	12.8	Services	Users of public transp.
5.7	Social relationships	Association funding	12.9	Services	VHCN coverage
5.8	Social relationships	Nonprofit	12.10	Services	Recycling waste
5.9	Social relationships	Generalized trust	12.11	Services	Beds in high-care
6.1	Politics	Voter turnout	12.12	Services	Hospital emigration
6.2	Politics	Trust in parliament	12.13	Services	Unmet need med. exam.
6.3	Politics	Trust in judicial system	12.14	Services	GPs with excess of patients
6.4	Politics	Trust in pol. parties	12.15	Services	Physicians
6.5	Politics	Trust in police	12.16	Services	Nurses and midwives