statistiche report

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BIRTHRATE AND FERTILITY AMONG THE RESIDENT POPULATION | YEAR 2018

Less births, especially among the firstborn children

The number of births continues to decrease: in 2018, 439,747 children were registered in the General Register Office, over 18,000 less than the previous year and almost 140,000 less than 2008.

The persistent decline in the birthrate has an impact above all on the firstborn children, who decreased to 204,883, 79 thousand less than 2008.

The average number of children per woman still drops to 1.29; in 2010, the year of relative maximum of fertility, it was 1.46. The mean age at childbirth reaches 32, the one at the birth of first child reaches 31.2 in 2018, almost a year more than in 2010.

-4.0%

Births registered in the General Register Office compared to 2017.

The decline is mainly due to the decrease in births of both Italian parents (-15,771 units, 85.7% of the drop in births registered in the last year).

32.3%

The percentage of births outside of marriage; it was 8.1% in 1995 and 19.6% in 2008.

22%

The proportion of births with at least one foreign parent (96,578, decreasing from 2012).

65,444 (14.9% of total births) were born to both foreign parents.

Births continue to decline

In 2018, 439,747 children were registered in the General Register Office, over 18,000 less than 2017. A negative trend that shows no signs of inversion: according to the provisional data referring to the period January-June 2019, births are already almost 5 thousand less than the same half of 2018.

Over the past ten years, births have decreased by 136,912 units, almost a quarter (24%) less than in 2008. This decrease is exclusively due to births of both Italian parents (343,169 in 2018, almost 140,000 less in the last decade). This is a significant phenomenon, partly due to the "structural" effects induced by the significant changes in the female population of childbearing potential, conventionally fixed between 15 and 49 years. In this age group, Italian women are fewer and fewer: on the one hand, the so-called baby-boomers (or women born between the second half of the Sixties and the first half of the Seventies) are getting out of the reproductive phase (or are about to finish it); on the other hand, the younger generations are getting smaller and smaller. In fact, they suffer the effect of the so-called baby-bust, which means the phase of sharp decline in fertility in the two decades between 1976 and 1995, which led to the historical minimum of 1.19 children per woman in 1995.

Since the 2000s, the contribution of immigration, with the entry of young people, has partially contained the effects of the baby-bust; however this effect is slowly losing its effectiveness as the age profile of the foreing resident population get older.

On 1 January 2019, the female resident population in Italy between 15 and 29 years is just over half the one between 30 and 49 years. Compared to 2008, women between the ages of 15 and 49 are over one million fewer. Less women of childbearing potential (even in a theoretical hypothesis of constant fertility rates) leads, in the absence of variations in fecundity, to fewer births.

This impact can be estimated by applying the fertility rates for 2008 to the average population of 2018 (expressed by specific fertility rates by age). In this way, more than 485 thousand births would be obtained for 2018; comparing this value with the 576,659 births of 2008, there would be a gap of about 92 thousand births due exclusively to the change in the amount and in the structure by age of the female population of childbearing potential. This factor is responsible for about 67% of the observed difference in births between 2008 and 2018. The remaining share depends on the decrease in fertility from 1.45 children per woman to 1.29.

Births within marriage continue to decline (297,768), almost 19,000 fewer than the last year, 166 thousand fewer than 2008. This is also due to the sharp decline in marriages that lasted until 2014, when just 189,765 weddings were celebrated, then continuing with a fluctuating trend that leads in 2018, when 195,778 marriages were celebrated, a slight increase (+4,500) compared to 2017. [i]

MAIN CHARACTERISTICS AND INDICATORS ON BIRTHS AND FERTILITY
Years 2008, 2010, 2012; 2014-2018

	2008	2010	2012	2014	2015	2016	2017	2018
Live births	576,659	561,944	534,186	502,596	485,780	473,438	458,151	439,747
Births of first order	283,922	274,750	262,836	244,646	230,778	227,412	214,267	204,883
Births to at least one foreign parent	96,442	104,773	107,339	104,056	100,766	100,363	99,211	96,578
Births to foreign couples	72,472	78,082	79,894	75,067	72,096	69,379	67,933	65,444
Births to Italian couples	480,217	457,171	426,847	398,540	385,014	373,075	358,940	343,169
Births outside marriage	112,849	123,420	132,379	138,680	139,611	141,757	141,608	141,979
Births outside marriage (%)	19.6	22.0	24.8	27.6	28.7	29.9	30.9	32.3
Total fertility rates	1.45	1.46	1.42	1.37	1.35	1.34	1.32	1.29
Mean age of women at childbirth	31.1	31.3	31.4	31.5	31.7	31.8	31.9	32.0
Total fertility rates – Italian women	1.34	1.34	1.29	1.29	1.27	1.26	1.24	1.21
Mean age of Italian women at childbirth	31.7	31.9	32.0	32.1	32.3	32.4	32.5	32.5
Total fertility rates – Foreign women	2.65	2.43	2.37	1.97	1.94	1.97	1.98	1.94
Mean age of Foreign women at childbirth	27.5	28.1	28.4	28.6	28.7	28.7	28.9	29,0

The decline in births concerns above all the first children

The decline in the number of births, started with the crisis, has repercussions above all on the firstborn children, which fell by around 28% between 2008 (283,922, or 49.2% of the total number of births) and 2018 (204,883, or 46.6%). Overall, second and higher-order births have decreased of 20% in the same period.

The sharp contraction of the firstborn children affects all areas of the country, with the exception of the autonomous province of Bolzano, (increased by 4.9%). The decrease in the firstborn children compared to 2008 is higher than the one referring to all birth orders in almost all Italian regions, reflecting the difficulty encountered by couples, especially the youngest, in having first born; at the beginning of the millennium the criticality concerned mainly the transition from the first to the second child instead.

The firstborn children were reduced by over 30% in Piemonte (-33.2%), Valle d'Aosta (-33.6%), Liguria (-34.1%), Veneto (-31.5%), Friuli-Venezia Giulia (-32.9%), Emilia-Romagna (-30.2%), Toscana (-31.9%), Umbria (-35.9%) and Marche (-34.4%).

Among the causes of the decline in the firstborn children there is the prolonged amount of time young people remain under their parents' roof, in its turn due to multiple factors: the lengthy duration of training time, the difficulties encountered by young people when entering the labour market and the widespread of labour instability , difficulties in accessing the housing market, a long-term trend towards low economic growth, as well as other possible cultural factors. The effect of these factors has been amplified in recent years by a strong economic instability and by a persistent uncertainty about the economic prospects of the country, inducing more and more young people to delay the transition to adulthood compared to previous generations.[ii]

FIGURE 1. TOTAL BIRTHS AND BIRTHS OF FIRST ORDER

Years 2008 and 2018, percent variation
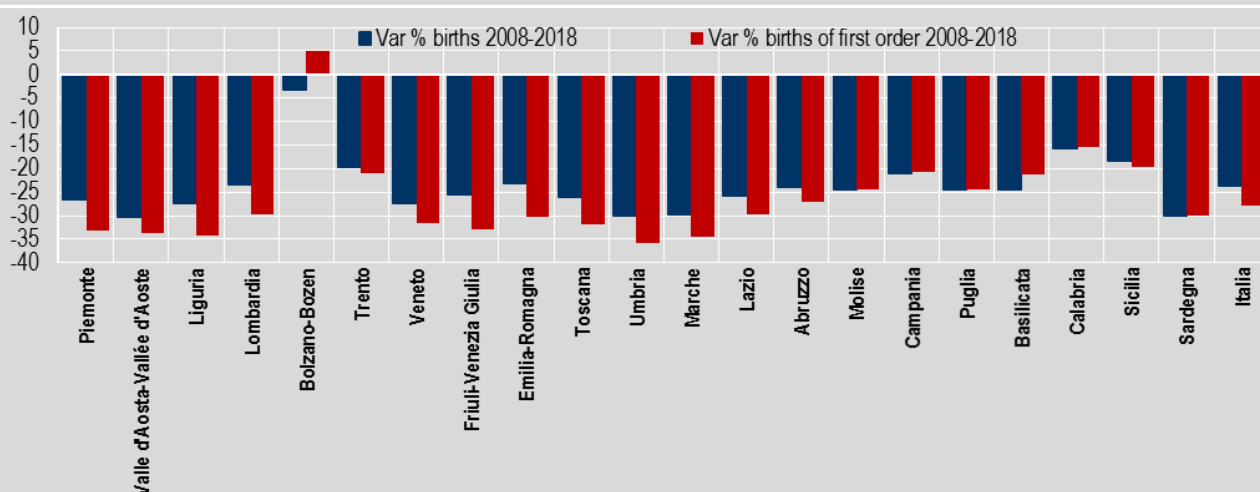
One out of three births has unmarried parents

In a context of decreasing births, those occurring outside marriage increase by over 29 thousand compared to 2008, reaching 141,979 births to unmarried parents in 2018. Their relative weight continues to grow (32.3% in 2018).

The highest proportion of born to unmarried parents is observed in the Centre (38.1%), followed by the North-East (35.5%) and the North-west (34.5%). Among the regions of central Italy , Toscana stands out (40.8%) while among the North-East regions the highest proportion is recorded in Bolzano (46.5%, the highest value at national level). Southern Italy generally has much lower incidences (25.8%), with the lowest percentages in Basilicata (20.7%) and Calabria (21.1%). On the other hand, the value of Sardegna (42.7%) also exceeds the Centre-north average.

Considering only births to both Italian parents, 34.7% have unmarried parents.

The incidence of children born out of wedlock is higher in mixed couples if the father is a foreigner (36.6%) than if the mother is a foreigner (27.2%). Births to both foreign parents have the lowest share compared to other types of couple, about half (16.8%) of the national total.

## The contribution to births of foreign citizens is reduced

From 2012 to 2018, those born to at least one foreign parent (almost 11,000 fewer) also decrease, with 96,578 units, representing 22% of the total number of births and registering a reduction of over 2,600 units only in the last year. This decline is attributable almost exclusively to those born to both foreign parents: for the first time they fell below 70,000 in 2016 (69,379), they are 65,444 in 2018 (14.9% of the total of births), almost 2,500 less than in 2017.

The resident foreign women, which so far have partially filled the "gaps" of the female population in the age structure of the Italian women, are "aging" themselves: the share of women by the age of 35-49 on the total number of foreign women of child-bearing age passes from 42.7% on 1 January 2008 to 52.7% on 1 January 2019.

This transformation is a consequence of the migration dynamics in the last decade. The Regularisations in 2002 gave rise, in the years 2003-2004, to the granting of approximately 650 thousand residence permits, largely translated into a "boom" of registration in the General Register Office from abroad (over 1 million 100 thousand) , doubling the migration balance compared to the previous biennium. The boomers, who made their entry or "emerged" as a result of the Regularisations, carried out in the following ten years a large part of their reproductive projects in our country, contributing significantly to the increase in births and fertility of the period.

FIGURE 2. BIRTHS OUT OF MARRIAGE BY TYPE OF COUPLE
Years 2008-2018, %
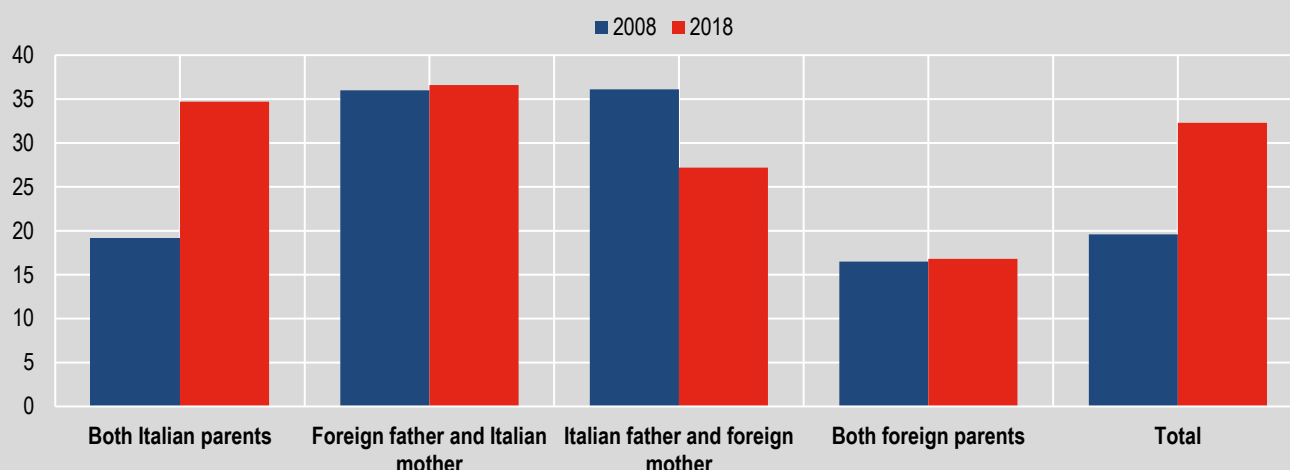
The migration dynamic has diminished with the recent years crisis, while remaining positive as in the last twenty years. In addition, in Italy, foreign communities characterized by a migration project in which women work are increasingly represented and show lower levels of fertility. . Indeed Ukrainian, Moldavian, Filipino, Peruvian and Ecuadorian women, have high employment rates, mainly in family services.   As a consequence, the contribution of foreign women to the birth rate of the resident population is slowly decreasing.

Two divergent trends are observed between those born to mixed couples and those to both foreign parents. The first ones, passing from 23,970 in 2008 to 31,134 in 2018, show a fluctuating trend since 2010.

Those born to both foreign parents, after a sustained increase up to 2012, have instead decreased by 14,450 units within the space of   6 years. The increasing degree of "maturity" of immigration in our country, also witnessed by the considerable increase in acquisitions of Italian citizenship, makes the measurement of family behaviour of foreign citizens increasingly complex. In fact, a significant number of citizenship acquisitions are obtained by the communities contributing more conspicuously to the birth rate of the resident population.

 On 1 January 2018, about 1 million 345 thousand foreigners residing in Italy have obtained the Italian citizenship. Almost 757 thousand are women (56.3%) and over half of them (about 389 thousand) are between 15 and 49 years. There are 84,000 women of Moroccan origin, over 82,000 of Albanian one and almost 53,000 of Romanian origin. On the whole, these communities represent 29.0% of the total acquisitions of foreign citizens, with percentages of 54.7%, 63.0% and 65.3% respectively, of women of childbearing potential.[iii]

In the North more than one out of five children have both foreign parents

Romanian children (13,530 born in 2018), followed by Moroccans (9,193), Albanians (6,944) and Chinese (3,362), are in the first places among the foreign born registered in the General Register Office. These four communities represent half of the total foreign-born.

The incidence of those born to both foreign parents on the total number of births is notoriously much higher in the regions of the North Italy (20.7% in the North-east and 21.0% in the North-west) where the foreign presence is more steady and entrenched and, on a smaller scale, in those of the central Italy (17.5%); in the South, the incidence is much lower than in the rest of the Country (6.0% in the South and 5.6% in the Islands). In 2018, around one out of four people in Emilia-Romagna (24.3%) are foreign citizens, almost 22% in Lombardia, about one out of five in Veneto, Liguria, Toscana and Piemonte. The percentage of foreign born children is definitely more contained in almost all the regions of the South, with the exception of Abruzzo (10.5%).

FIGURE 3. BIRTHS WITH AT LEAST ONE FOREIGN PARENT FOR FIRST 20 COUNTRIES OF CITIZENSHIP (a)
Year 2018, absolute values and percentages
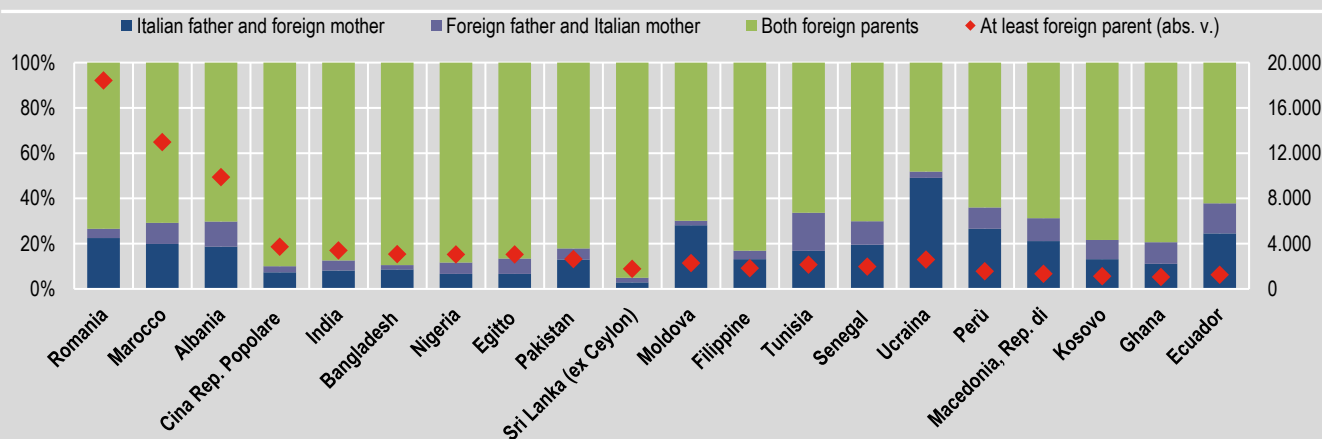
(a) The 20 countries of citizenship refer to countries with the largest number of foreign births in Italy.

The impact of the reproductive behaviours of foreign citizens is more evident extending the analysis to the complex of the births to at least one foreign parent, obtained by adding to the foreign-births the Italian children born in mixed couples.

Geographically data are similar to those about births to both foreign parents but with higher intensities: in 2018, on average, over 30% of those born in the North and 25.4% in the Centre has at least one foreign parent ; in the South and the Islands the percentages fall to 9.5% and 8.9%. The regions of the Centre-North with higher percentages of births to at least one foreign parent are Emilia-Romagna (35.0%), Lombardia (30.9%), Liguria (30.1%), Veneto (29.7%) and Toscana (29.1%).

Considering the mothers'citizenship, the number of births from Romanian women is confirmed first (17,668 born in 2018), followed by those of Moroccan women (11,774) and Albanians (8,791); these citizenships cover 43.1% of births to foreign mothers residing in Italy. In Asian and African communities the propensity to start a family with children among citizens of the same country (homogamy) is high. On the contrary, Polish, Russian and Brazilian women have frequently children with Italian partners.

## Total fertility rate is still decreasing

In 2018 the total fertility rate is 1.29 children per women on average (1.32 in 2017), strengthening the decrease started in 2010, when the relative maximum of 1.46 was observed.

This is a similar level as 15 years ago. However, 1.29 in 2003 was observed in a recovery phase of fertility after the historical minimum recorded in 1995, due largely to the increasing contribution of foreign women. In 2003 the fertility of foreigner women was 2.52 children per woman, while it was 1.94 in the previous year. Italian fertility, already low in 2003, went from 1.24 to 1.21 in 2018.

The North Italy has the highest levels of fertility (1.32 in the North-west and 1.36 in the North-east), especially in the Autonomous Provinces of Bolzano and Trento (1.72 and 1.45 respectively), in Valle d'Aosta (1.38) and Lombardia (1.35). In the Centre and in the South, fertility levels are very close (1.23 and 1.26) but they both show a decline, compared to the previous year. In the South, the value is 1.26 (1.29 in 2017) while in the Centre it fell from 1.27 to 1.23. At a regional level, Sardegna has the lowest fertility level (1.02), still decreasing compared to 2017 (1.06).

FIGURE 4. AGE-SPECIFIC FERTILITY RATES OF WOMEN RESIDENT IN ITALY
Years 1995, 2010 and 2018, values per 1000 women
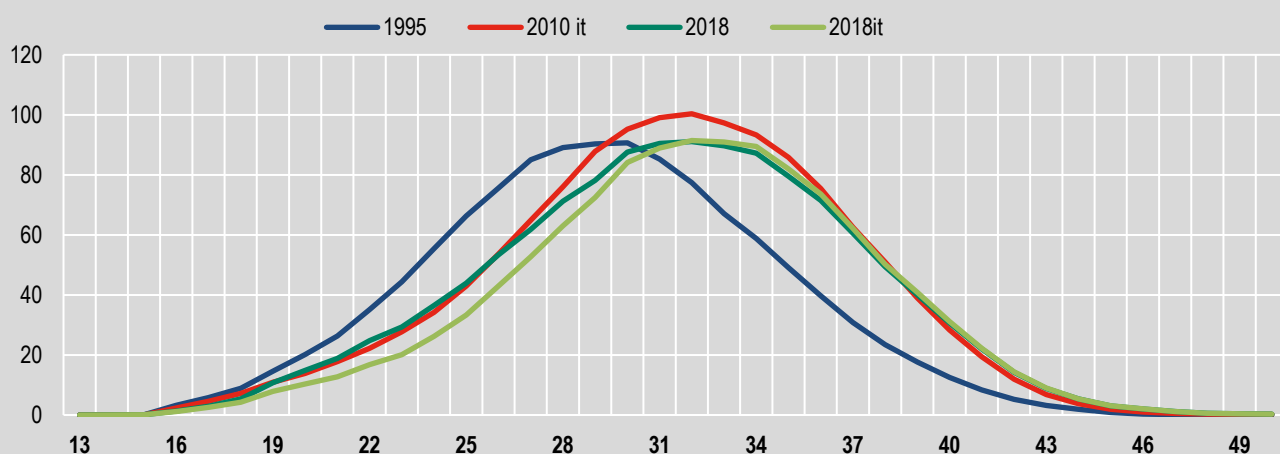
Territorial differences in total fertility rates are explained by the different contribution of foreign women, who have in 2018 1.94 children per women on average (1.98 in 2017) at national level and 2.06 in the North (2.11 in 2017). Fertility levels are equal to 1.72 in the Centre (stable compared to the previous year) and 1.82 in the South (it was 1.91 in 2017).

The mean number of children per Italian woman is 1.21 at national level in 2018, in decrease compared to the previous year (1.24), particularly in the Centre (from 1.20 to 1.15) and in the North (from 1.23 to 1.20) but also in the South (from 1.26 to 1.24). The Autonomous Province of Bolzano (1.64), followed by the province of Trento (1.34) still holds the primacy of Italian fertility. Among the regions in the Centre of Italy, the highest level is observed in Lazio (1.18), while in the South the peak is recorded in Sicilia (1.31); in Sardegna the minimum value is recorded (1.00), still in slightly decrease compared to 1.04 recorded in 2017.

31.2 years the mean age at the first child

The evolution of period fertility is strongly conditioned by variations in birth rate compared to the age of women. The increase in the average number of children per woman recorded between 1995 (when the historical minimum was registered) and 2010, occurred in territories where women of Italian citizenship had previously postponed their maternity and where the foreign presence is more stable and rooted (therefore more foreign births or births to one foreign parent at least). This happened, in particular, in the regions of the North and of the central Italy, while in the South the postponement of births by Italian women continues to cause a decrease in birth rate, not compensated by the modest share of births to one foreign parent at least in this area.
Social effects of the economic crisis had a direct impact on birth rates. Italian women are continuing to postpone maternity towards increasingly older ages; compared to 1995, the mean age at childbearing increases by more than two years, reaching 32.0; a stronger increase is registered in the mean age at first birth standing at 31.2 in 2018 (three years more than in 1995).
The central regions register the highest mean age at first birth, 32.3. Mothers living in Lazio, Basilicata and Sardegna, have a mean age at birth of 32.5.
Comparing the fertility rates by age of 1995, 2010 (only Italian women) and 2018 (Italian and total residents) we observe a costant increase of the mean age at first birth. Compared to 1995, fertility rates have grown in women over age 30 while they continue to decline among younger women. This phenomenon is even more pronounced if considering only Italian women: comparing their fertility in 2018 with that in 2010, the postponement of maternity diminishes only in women over age 40.

FIGURE 5. FIRST ORDER AGE-SPECIFIC FERTILITY RATES OF WOMEN RESIDENT IN ITALY BY CITIZENSHIP
Years 2010 and 2018, values per 1000 women
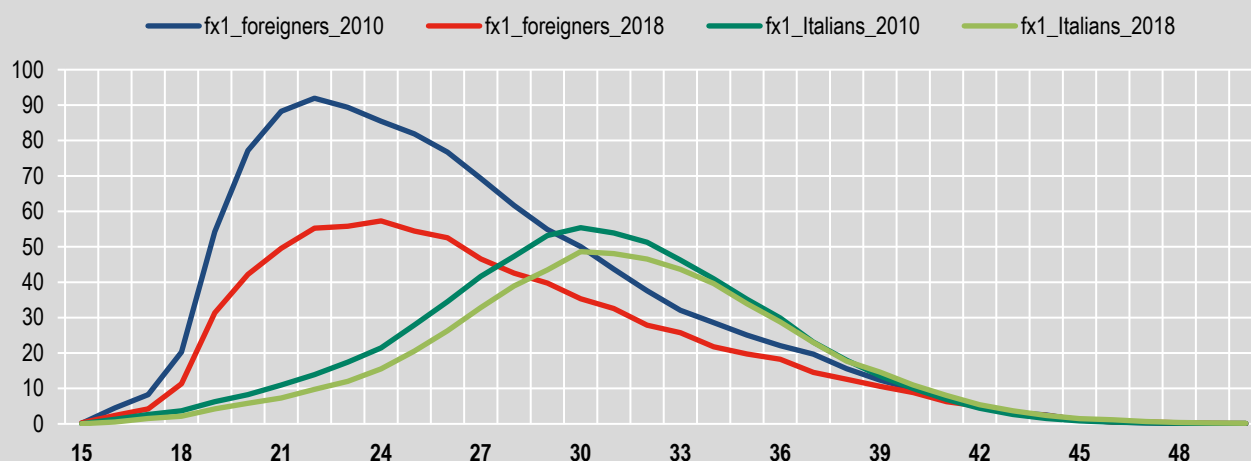
Less first children per woman for both Italian and foreign women

In a context of low fertility as the Italian one, the average number of first birth per woman represents 47.3% of the total fertility rate: 0.61 first birth compared to 1.29 total births in 2018 (respectively 0.73 and 1.46 in 2010). The value of this indicator fell much more for women under age 30 - from 0.35 in 2010 to 0.25 in 2018, (-27%) - compared to the value referred to all ages (-16.7%) and has an impact of almost 80% of the overall decrease in fertility of the first order.

Between 2010 and 2018 the decrease in the average number of children per woman referred to the Italian women is 66% (-129 births per 1,000 women) while the one referred to foreign women is 79% (-488 births per 1,000 women).. The reduction in fertility of the first order of foreigners is evident observing the fertility curves by age.

Compared to 2010, fertility of the first order is much lower for all ages. In addition to the decrease in fertility rates, the slight shift of the curve to the right highlights the effect of the postponement of the reproductive experience in Italy for foreign women too.

Childless women increase passing from one cohort to another

The period measures related to reproductive behaviour are affected, as mentioned above, by changes taking place in the periodicity of births. When a pronounced postponement is in progress, as in the current phase, the average number of children per woman in the period rapidly decreased.

The evolution of fertility by cohort, unlike fertility by period, does not show significant discontinuities related to the conjuncture and allows the analysis of the underlying trends of reproductive behaviour.

FIGURE 6. TOTAL FERTILITY RATE BY BIRTH ORDER AND COHORT
Women born between 1933 and 1978 (a), percentages
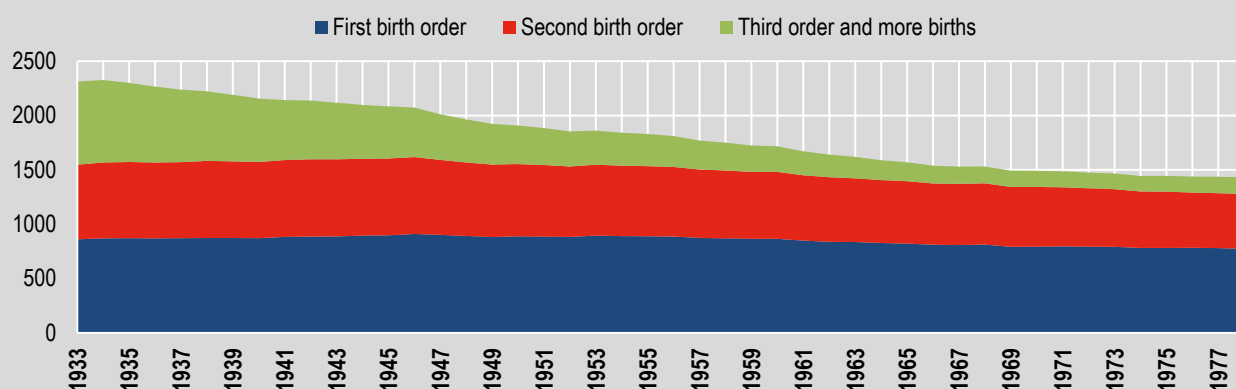
(a) The cohorts of those born from 1968 to 1977 have not yet completed their reproductive history and the values for the final ages have been estimated.

In the Centre-North one woman out of four is childless among those born in 1978

The average number of children per woman by cohort continues to decrease in our country seamlessly. It ranges from 2.5 children referred to women born in the early Twenties (immediately after the Great War) to 2 children referred to woman born in the immediate post-Second World War years (1945-49), reaching the level of 1.43 children referred to women of the 1978 generation, estimated at the end of the reproductive history. A so marked decrease in fertility necessarily involves deep modifications on the composition of the final descent by order of birth.

The fertility rates referred to births of the first order had a relatively contained variation up to the generations of women of the mid-Sixties: they range from 0.89 first births referred to women in 1950 to 0.87 referred to women in 1960. The estimate referring to the 1978 cohort is instead decidedly lower (0.77)   probably indicating a significant increase in the proportion of women without children among the youngest cohorts.

The evolution of fertility rates of the second order presents a similar trend to the one of the first order: an increase up to the generations of women born in 1946 and a slightly more marked reduction for the following ones. The total number of births went from 0.69 for women born in 1933 to 0.50 for those born in 1978. For the same generations, fertility rates of the third and higher orders, on the contrary, reduced dramatically, going from 0.77 of the 1933 generation to 0.15 of the 1978 generation. Therefore, the decrease in fertility in Italy is due in large part, to the reduction of children of higher order than the second.

Moreover, taking four cohorts (1950, 1960, 1968 and 1978) as benchmark,   it can be observed how fertility models have changed. At national level the share of childless women is constantly increasing from one cohort to another; for those born in 1978, at the end of their reproductive history, it is estimated to double (22.5%) compared to the one of women born in 1950 (11.1%). The increase in the number of childless women among the youngest generations raises significant questions about its interpretation and the future evolution of fertility.

Traditional geographical differences in reproductive models are attenuated. In the Centre-North, for a long time under the substitution level of about 2 children per woman, is registered an important share of childless women (almost 1 out of 4 in the North for the 1978 generation) and a high frequency of women with only one child (in particular in the Centre where the relative maximum is reached: 30.6%). In the South instead, the proportion of childless women is rising (now in line with the level of central Italy) though the model with at least 2 children is still the most common (55.1% for the generation born in 1978, compared to the national average of 50.3%). As for other previously observed features, the Islands differ from the Southern Italy, placed in an intermediate position between the Centre-North and the South of the Country.

FIGURE 7. WOMEN BY NUMBER OF CHILDREN, GEOGRAPHICAL AREA AND COHORT
Women born in 1950, 1960, 1968 and 1978 (a), percentages
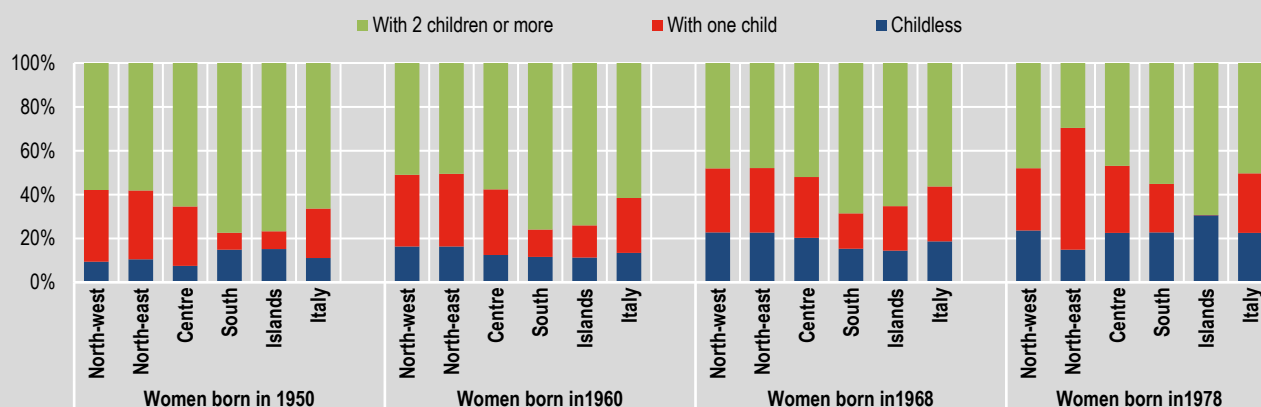
(a)   The cohort of women born in 1978 have not yet completed their reproductive history and the values for the final ages have been estimated.

For women born in the most recent generations (1978) residing in the South, the share of childless ones is also higher than the proportion of women with one child (22.7% vs 22.1%); for those born ten years earlier instead the first proportion is lower than the latter (15.3% vs 16.2%). As mentioned above, the percentage of women with at least two children remains above the national average in the South for both those born in 1978 and those born in 1968 (68.6% compared to 56.3%). Therefore, despitea convergence between the various divisions, the geography of reproductive behaviour still preserves some specificities.

The different territorial models are also characterized by a different timing of reproductive behaviour. The median age at first birth, grown considerably through generations in the whole country, is 29 for the 1978 generation, nearly 30 in the Centre-North, while in the South it is less than 28.

Leonardo and Sofia the favourite names of new parents

On the basis of the information contained in the General Register Office of births referred to the resident population, Istat elaborates the distribution of the most frequent male and female names in 2018. At national level, the name Francesco loses its historic record (it was the most chosen name since 2001). In 2018, moving to second place, Francesco is "deposed" by the name Leonardo. Alessandro remains still in third position.

As the last year, the ranking of the first three female names remains unchanged: Sofia, Giulia and Aurora. Although there are almost 29,000 different names for males and over 27,000 for females (including both simple and compound names), the frequency distribution based on the name of children reveals a high concentration around the first 30 names, covering almost 45% of all children names and over 38% of girls'ones.

FIGURE 8. BIRTHS BY REGION OF RESIDENCE AND MOST FREQUENT MALE NAME
Year 2018, percentages
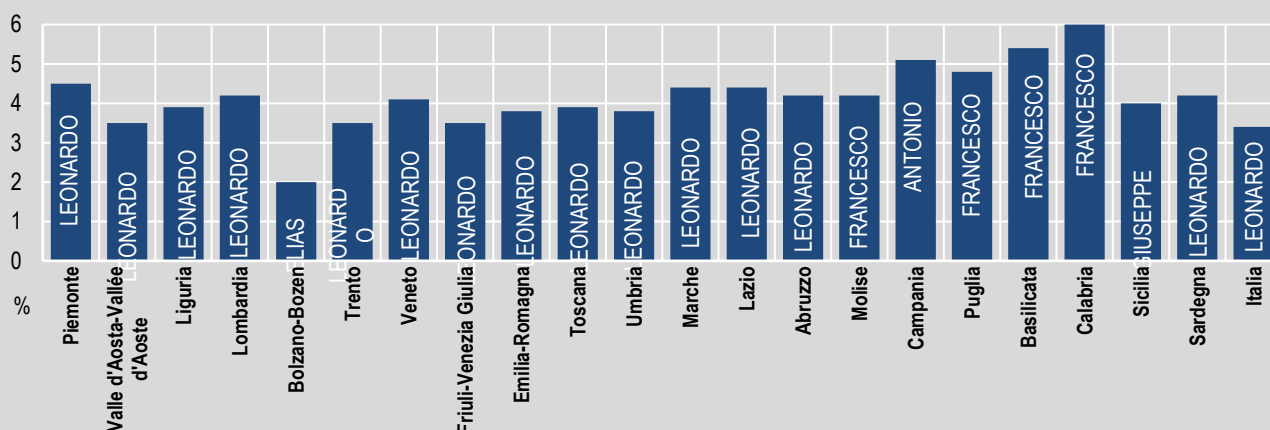
Although the choice of name is partly linked to culture, religion (names of saints, patrons.) and traditions rooted in different territories, the concentration of names is still very strong.

Leonardo reaches the record in 14 regions: all those in the Centre-North (except for the autonomous province of Bolzano where the name Elias stands out) as well as in Abruzzo and Sardegna. At a regional level, the name Francesco ranks first in only 4 Italian regions, all in the South (Molise, Puglia, Basilicata and Calabria). Alessandro instead ranks third at a national level and is not the first in any region. Giuseppe continues to rank first in Sicilia and Antonio in Campania.

For girls, with the exception of the Autonomous Province of Bolzano, where the name Emma stands out, the same first three names at national level are found in all the local realities. Sofia is confirmed in first place in ten regions of the Centre-North, in Basilicata (in the same position of Giulia) and in Calabria. Aurora, stable in third place in the rank compared to last year, stands out in Marche and in four regions of the South (Abruzzo, Molise, Campania and Sardegna). The name Giulia, also stable in second place, returns to the top of the list in Lazio, Puglia and Sicilia.

Romanians and Chinese often choose Italian names

Foreign children born to parents living in our country are mainly called Adam, Amir and Rayan but also Matteo, Leonardo, Mattia and Alessandro. Even for foreign girls, Sofia ranks first, followed by Sara, Emma and Aurora. The variability in the name ranking of foreign-born children is higher compared to the general one: the first thirty male and female names cover about 14% of the total number of foreign-born names.

The preferences of foreign parents differ according to nationality. The tendency to choose a name for their children common in the host country is more pronounced in the Romanian and Chinese communities. Thus often Romanian children are called Luca, Matteo or Leonardo, but also David and Gabriel; the names of Romanian girls are Sofia, Sofia Maria, Emma, Giulia and Maria. Chinese children are mainly called Leonardo, Matteo, Leo and Andrea, but also Kevin; the names of Chinese girls are Emma, Emily, Sofia, Gioia and Angela. The Albanian children are more frequently called Aron, Noel and Liam, but also Mattia and Matteo; the most common name among girls is Aurora, followed by Amelia, Emily, Emma and Noemi. An opposite behaviour is observed for Moroccan parents, who prefer names linked to the traditions of their country of origin for their children: especially Amir, Adam, Rayan, Youssef and Imran for boys and Amira, Sara, Jannat, Nour and Malak for girls.

FIGURE 9. BIRTHS BY REGION OF RESIDENCE AND MOST FREQUENT FEMALE NAME
Year 2018, percentages
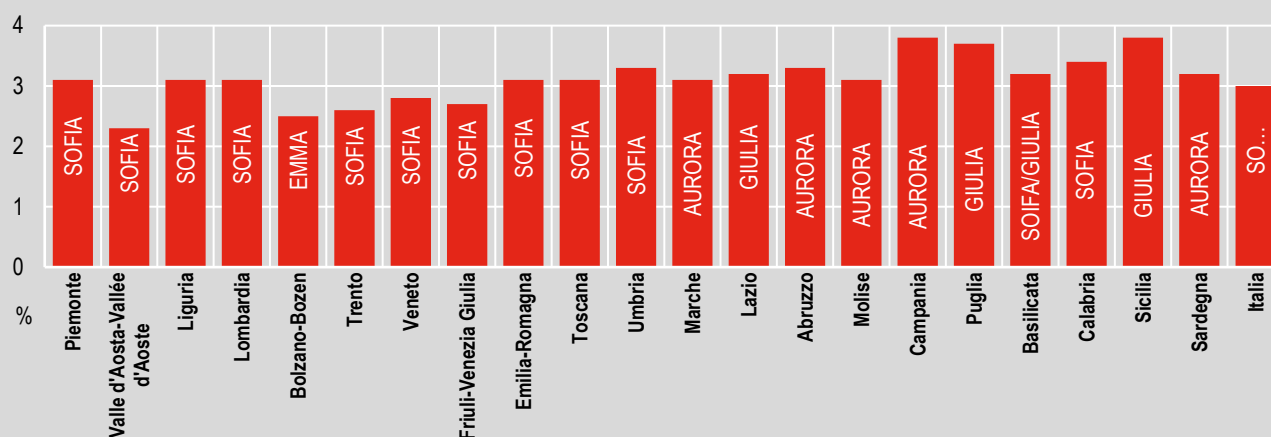
Glossary

Absolute change: Difference between the total of a phenomenon at the end of the period considered and the one at the beginning.

Average annual percentage change (or average annual rate of change): Obtained by dividing the percentage change, with reference to a multi-year time period, by the number of years in the period.

Average number of children per woman (or total fertility rate – TFR)**:** It is given by summing the single-year age-specific rates. The latter are computed by dividing the number of live births to women in a particular age during a period of time by the same age female mid-year population during the same period of time. Total fertility rate is calculated also by birth order and citizenship.

Births outside marriage: It is an estimate obtained by subtracting the total number of live births from married couples from the total number of live births. The number of births out of wedlock is computed considering only live births from parents whose marital status is known.

Births to at least one foreign parent: Number of births with at least one foreign parent.

Births to mixed couples: Births with an Italian and a foreign parent.

Citizenship: The status of being a citizen of a particular Country.

Foreign births: Births with foreign parents.

Marital status: Condition of every citizen towards the State as regards marriage or civil union. A male or female citizen who has never contracted marriage or a civil union is defined as unmarried; married to a married citizen who has not obtained the dissolution or cessation of the civil effects of the marriage; divorced the married citizen who has obtained the dissolution or cessation of the civil effects of the marriage; widower / a citizen whose marriage has ceased due to the death of the spouse; civilly united the united citizen who has not obtained the dissolution of the civil union; already united (due to the dissolution of the union) the united citizen who obtained the dissolution of the civil union; already civilized (due to the death of the partner) the citizen whose union ceased due to the death of the partner.

Mean age at childbearing: Is the mean age of mothers at the birth of their children. It is calculated by birth order and citizenship.

Percentage change: The ratio between absolute change and initial amount. It is then multiplied by 100.

Population register: Is the register of residing persons in a municipality. It is updated continuously by adding live births to resident parents, deleting death of residents and adding/subtracting persons due to change of residence to/from another municipality or to/from a foreign country.

Resident foreign citizen: A person with foreign citizenship or a stateless person recorded in the population register.

Resident population: The number of persons who are resident in the Country. Includes those people who are temporarily absent.

Simple index number: An index number is a number that expresses the change in intensity of a given phenomenon in different circumstances. A simple index number is the ratio between two numbers. The number placed as the denominator is called the index base.

Methodological note

Regulatory framework

The national regulatory framework comprises:
Law no.1228 of 24 December 1954: "Ordering of the population registers";
Presidential Decree no.223 of 30 May 1989: "Approval of the new master regulation of the resident population";
Law no.470 of 27 October 1988: "Registry and census of Italians abroad";
Presidential Decree no.323 of 6 September 1989: "Approval of the regulation for the execution of the law of 27 October 1988, no. 470, on the Registry and the census of Italians abroad";
The European regulatory framework comprises:

European Regulation (EU) no.1260 of the European Parliament and of the Council of 20 November 2013 ("European demographic statistics");
Commission Implementing Regulation (EU) no.205 of 4 March 2014: "Laying down uniformed conditions for the implementation of Regulation (EU) no. 1260/2013 of the European Parliament and the Council on European demographic statistics, as regards breakdowns of data, deadlines and data revisions".
The survey belongs to the informative heritage of the Italian official statistics and it is included in the National Statistical Program.

Description of data sources

"Live births registered in the resident population register" (Istat Model P4) is the main data source on natality and fertility of the resident population in Italy.
Complementary data sources for the construction of fertility indicators include:
"Migration and calculation of yearly resident population", which detects the total number of live births in the resident population (Model Istat P2);
"Migration and calculation of foreign resident population and structure by citizenship", which detects the total number of live births with foreign citizenship in the resident population (Istat Model P3);
"Resident municipal population by age, sex and marital status (Istat Model POSAS);
"Municipal resident foreign population by sex and year of birth (Istat STRASA Model).

Survey design, population, unit of analysis and observation

The survey "Live births registered in the resident population register" is conducted every year on the full set of live births registered to the resident population in a calendar year. The reference year of the survey is the year in which the live birth entered in the population register. Consequently, for a small number of cases (i.e. those born at the end of the year n and registered at the beginning of the year n+1) the year of registration can differ from the year of birth.

The observation units are the Registry Offices of the Italian Municipalities where live births are registered as residents. The units of analysis are the live births (born in Italy or abroad) entered in the Population Register.

Data collection

Data collection is carried out by Istat through the P4 Model. Information that are included in the model concerns:
- The household (or cohabitation): full name of the head of the household, complete residential address, census section, total number of household members and number of household members under the age of 18.
- The born: full name, place and date of birth, sex, citizenship, date of registration in the Population Register.
- The parents of the born child: full name, date of birth, marital status, citizenship and fiscal code.
The Istat P4 Model was established in 1999. Since then, some changes have occurred both in contents and in data collection method. Currently data are recorded electronically only. If the Municipality is part of the ANPR (National Register of the Resident Population), data are transmitted directly to that national register. If the municipality is not migrated yet onto the ANPR register, data are transmitted online to Istat on a monthly basis using GINO++.

Classifications and auxiliary information

Territorial classifications applied for analytic purposes:

- Classification of municipal codes (6-digit code made of the concatenation of the 3-digit provincial code and the 3-digit municipal code): https://www.istat.it/it/archivio/6789;
- The country of citizenship classification is derived from the classification of foreign countries (3-digit code): https://www.istat.it/it/archivio/6747.

Data processing techniques and tools

The total number of live births recorded using the individual Istat P4 model is slightly lower than the number of live births recorded in the summary sources "Migration and calculation of yearly resident population" (Istat P2 Model) and "Migration and calculation of foreign resident population and structure by citizenship" (Istat Model P3). Consequently, the number of live births (essential when computing fertility indicators) is adjusted to the annual summary sources available. Lastly, birth order, that can no longer be measured directly, is estimated by exploiting the information "number of household members under the age of 18" that is recorded in the survey.

Output

Demographic determinants of live births: the estimates (based on individual data) are computed and published consistently with the official totals provided by the summary sources available. Estimates on live births are published by age and year of birth of the mother, age and citizenship of the mother, by birth order and citizenship of the child, and by family type.

Demographic determinants of fertility: the following indicators are provided:

-   Total fertility rate (TFR) which measures the intensity of fertility; it is calculated by summing the single-year age-specific rates (fx) at a given year. Age-specific fertility rates measures the number of births to women of a specified age. Age-specific rates and total fertility rate are also calculated by birth order and citizenship of the mother of the born.

-   Mean age at childbearing which measures the timetable of parenthood; it is calculated as the sum of age-specific fertility rates weighted by the mid-point of each age, divided by the sum of the age-specific rates. The average age at birth is also calculated by birth order and citizenship of the mother.

-   Age-specific fertility rates and mean age at childbearing are calculated also with reference to the male population, without distinguishing either birth order or father's citizenship.

In order to compute live briths and fertility indicators we use Resident population data, derived from the Istat sources Istat Model POSAS and Istat STRASA Model.

The Istat P4 model provides data that make it possible to study the main socio-demographic characteristics of the parents of the born. Live births are therefore classified with respect to the different socio-demographic variables of the parents such as age and marital status.

The published indicators and estimates are based on final data. However, on a regular bases, they are revised following the publication of census data and the intercensal population by sex and age.

Confidentiality

In compliance with the legislation on statistical secrecy and on the protection of personal data, the elementary data collected during the investigation can be made available to users who specifically request it, and released anonymously.

Data dissemination and timeliness

Final figures are yearly published in the "Births and fertility of the resident population" report.
The main results are available online by visiting the I.Stat data warehouse at http://dati.istat.it/ and the Demo thematic system, at http://demo.istat.it/.
Selected data are also available on the Eurostat website in accordance with the European Regulation 1260/2013 on demographic statistics.
The main figures are published also in "Italian Statistical Yearbook" and in "Noi Italia" books (http://noi-italia.istat.it/).
For the different distribution channels, the time elapsed between the reference year of the survey and the time of dissemination of the results is about eleven months.

Territorial detail

Data are collected at municipal. Statistics are available at national, macro geographical area, regional and provincial detail. Selected statistics are published for the capital of the provinces.

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[i] Istat, Statistiche report, Matrimoni e unioni civili - Anno 2018
[ii] Istat, Rapporto annuale 2019 – La situazione del Paese
[iii] Cfr. nota ii