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The Demographic Dynamics of Family Structures: A World View

Gérard-François Dumont[1]
Professeur à l'Université de Paris-Sorbonne,
Président des revues *Population & Avenir*[2] et *Les analyses de Population & Avenir*[3]

Abstract

The Demographic Dynamics of Family Structures: A World View

The major changes made in the evolution of populations of the world in the twenty-first century are: demographic transition and fertility decline, very few families in some countries as "demographic winter", urbanization changing the exercise of family solidarity, effect of migrations on families, aging posing the question of solidarity between generations. It is important to explain why the marriage rate decreases in the world as cohabitation increases. Yet the family remains the basic institution for the education of children around the world. We must therefore ask what policies would foster families.

Résumé

Les dynamiques démographiques des structures familiales : une vue mondiale

Les changements majeurs enregistrés dans l'évolution des populations du monde au XXIe siècle sont les suivants : transition démographique et baisse de la fécondité, familles très peu nombreuses dans certains pays en « hiver démographique », urbanisation modifiant l'exercice des solidarités familiales, effet des migrations sur les familles, vieillissement posant la question des solidarités entre les générations. Il importe d'expliquer pourquoi le taux de nuptialité diminue dans le monde alors que la cohabitation augmente. Pourtant, la famille demeure, dans le monde entier, l'institution de base pour l'éducation des enfants. Il faut donc se demander quelles politiques familiales sont souhaitables.

[1] gerard-francois.dumont@wanadoo.fr

[2] www.population-demographie.org

[3] French: https://www.cairn.info/revue-analyses-de-population-et-avenir.htm; English: https://www.cairn-int.info/journal-analyses-de-population-et-avenir.htm; Spanish: https://www.cairn-mundo.info/revista-analyses-de-population-et-avenir.htm

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In the twenty-first century, the great demographic current born of the unprecedented scientific, medical, pharmaceutical and economic development of the last two centuries has swept families around the world along. The countries of the North were the first to see a decrease in mortality and a considerable increase in the survival rate of newborns, children and adolescents; then their families progressively adapted their fertility accordingly, generally starting at the end of the 19th century: less infant mortality, less infant-teenage mortality, and therefore less fertility and a lower birth rate. In the countries of the South, the fight against mortality was or remains later and, therefore, the adaptation by families to the decline in their fertility more recent.

In total, on a global scale, the most striking movement is the reduction in family size, which is well illustrated by the decline in fertility from 5 children per woman in the early 1950s to 2.3 in 2021 (Figure 1), a decline that predates the probable, but limited, downward effects of the Covid-19 pandemic. This comparable decline is the result of a number of factors, including the fact that the number of children per woman has declined since

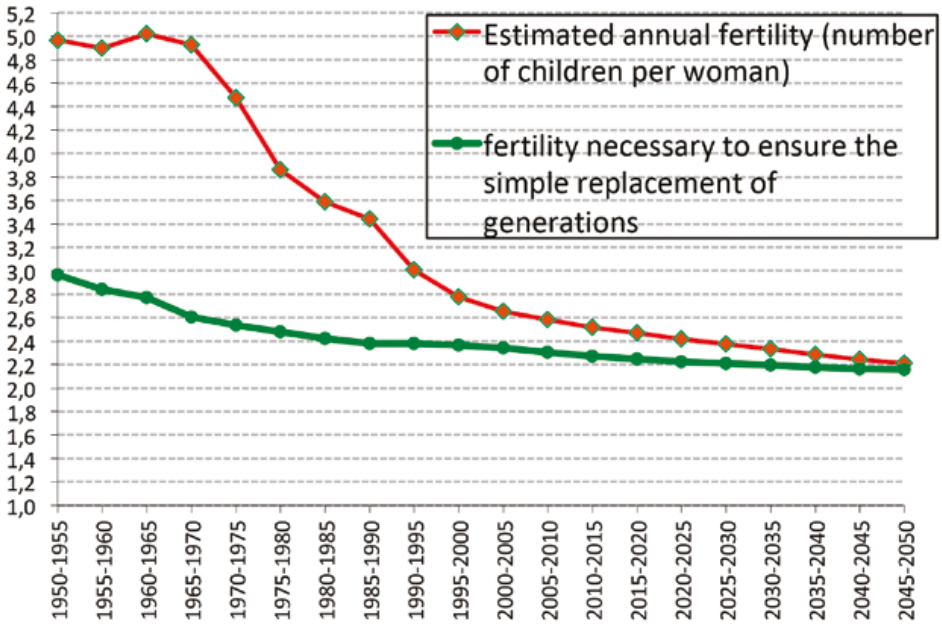


Figure 1. Fertility and population replacement level in the world. © Gérard-François Dumont - Chiffres WPP, 2019, données puis projection moyenne.

the 1950s. This likely decline is the result of two very different processes: the advancement of the demographic transition in the countries of the South; and the entry into the "demographic winter" in many countries of the North.

Reduction in family size as a result of the demographic transition

Demographic transition requires a rigorous definition.[4] It designates a period of variable duration (between 50 and 150 years, depending on the country) and intensity (it multiplies the population by two to more than seven), during which a population passes from a demographic regime of high mortality and birth rate to regime of low mortality and low birth rate.

The demographic transition includes two stages. The first is the period during which economic, health and hygienic progress makes it possible to record a very significant reduction in the mortality of newborns (infant mortality – Figure 2), children and adolescents (infant-teenage mortality) and women in childbirth or as a result of childbirth (maternal mortality). This results in an increase in life expectancy at birth from, for example, 30 years to 60 years. In this case, this means, *ceteris paribus*, at least a doubling of the population since, if each human remains twice as long a tenant on Earth, this multiplies the population by two. During this first stage of the demographic transition, where the decrease in the mortality rate is important, the birth rate remains high, equivalent to that of the period before the demographic transition. As a result, the difference between the death rate and the birth rate increases, which has the mathematical consequence of increasing the natural growth rate of the population. This first stage can therefore be referred to as the increase in the natural growth rate, with the effect of a sharp rise in the number of inhabitants.

The second stage of the demographic transition is different in nature. It also involves a reduction in mortality, but its intensity is much lower than in the first stage. In fact, once progress, particularly in the areas of medicine, hygiene and behavior, has made it possible to reduce infant, child and maternal mortality by two-thirds, it is possible to make further progress. However, their proportion in relation to the initial situation is necessarily lower.

In this second stage of the demographic transition, the essential change comes from the birth rate. The birth rate starts to fall because couples have realized the considerable improvement in survival rates. There is therefore

[4] Dumont, Gérard-François, *Géographie des populations. Concepts, dynamiques, prospectives*, Paris, Armand Colin, 2018. https://doi.org/10.3917/arco.dumon.2018.02

no longer a need for as many births to satisfy the offspring that couples expect, since the chances of survival of newborns and children have increased considerably. This is why couples adjust their fertility downwards, which eventually leads to a more intense decrease in the birth rate than in the death rate. Consequently, the second stage is characterized by a decrease in the natural growth rate, since the gap between the birth rate and the death rate is narrowing. The second stage is thus one of deceleration, with a kind of brake on the rate of natural increase that leads to its continuous reduction.

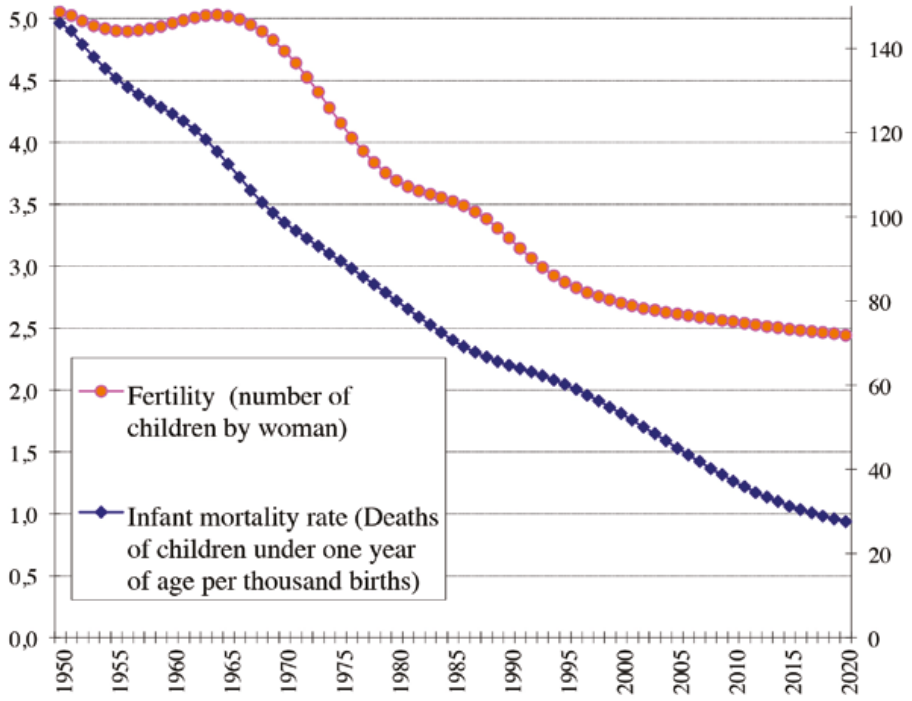


Figure 2. Fertility and infant mortality rate in the world (World). © Gérard-François Dumont - Chiffres WPP, 2019, données puis projection moyenne.

This mechanism of demographic transition is essential because it explains the unprecedented demographic growth in the world over the last two centuries and, for example, the increase from 1.6 billion inhabitants in 1900 to an estimated 7.8 billion by mid-2021.[5] It belies a common be-

[5] Sardon, Jean-Paul, « La population des continents et des pays. Quels effets de la pandémie Covid-19 ? », *Population & Avenir*, n° 755, novembre-décembre 2021, https://doi.org/10.3917/popav.755.0014

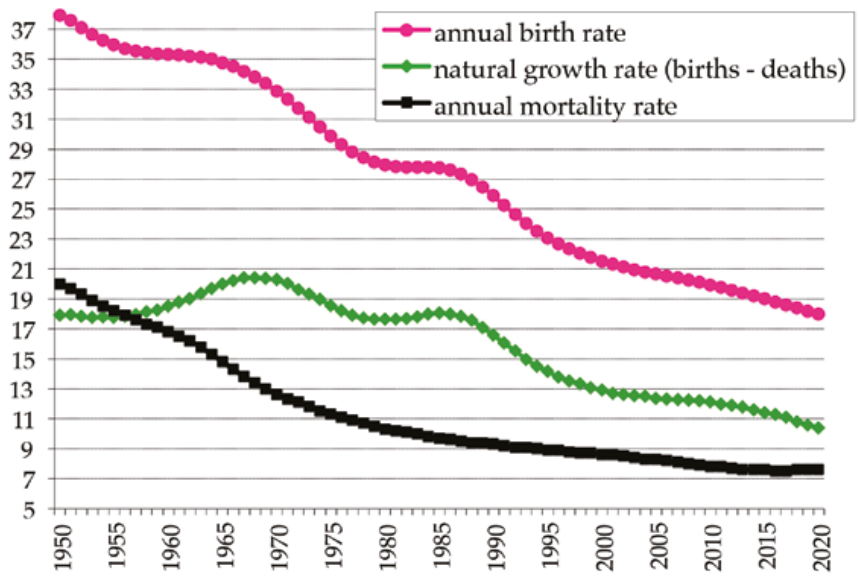


Figure 3. Natural movement in the World. © Gérard-François Dumont - chiffres WPP 2019.

lief that the nearly fivefold increase in the world's population during the 120-year period cited is due to a tendency of couples to have high fertility. In fact, the growth of the world population is not due to a high birth rate, which would have increased for two centuries, but to a mortality rate that has collapsed, considerably widening the gaps between mortality and birth rate that is nevertheless decreasing.

The world's population growth is therefore mainly due to the progress that has allowed mortality to decline, not to an excessive birth rate in absolute terms. Indeed, between 1950 and 2021, the average birth rate in the world, which was 37.9 births in 1950, is estimated to be 18‰ in 2021, a 52% decline in seventy years. Let us examine the difference between the average birth and death rates in the world (Figure 3). This difference shows, again as a world average, that the natural growth rate has been generally upwardly mobile from the beginning of the demographic transition, in the last decades of the eighteenth century,[6] at the end of the 1960s, with a historical maximum of 2.04 additional inhabitants per year per hundred

[6] Period when the demographic transition begins only in a few European countries while the rest of the world is still in what Adolphe Landry called the "primitive" regime, i.e. very high mortality and birth rates. Cf. Landry, Adolphe, *La révolution démographique*, Paris, 1934, réédition Ined, 1982.

inhabitants. Then the world entered the second stage of the transition, that of deceleration: the natural growth rate dropped to 1.04% in 2021, a reduction of half in fifty years.

The demographic transition is characterized by a driving force, the decline in mortality, which leads to a decrease in fertility.[7] This is the first factor in the reduction of family size. But the latter is explained, in the second place, by a very low fertility rate in certain regions of the world.

"Demographic winter" and strong reduction in family size

In fact, for countries that have completed their demographic transition, i.e., are in a post-transitional period, fertility has often fallen significantly and durably below the threshold of simple generation replacement;[8] the number of young people is decreasing in absolute and relative terms. To denote this situation, I proposed, at the end of the 1970s, the expression "demographic winter",[9] condition in which Europe (Figure 4) as a whole finds itself, but also several countries in other regions of the world, such as Japan[10] or South Korea. Several countries whose demographic winter had been limited for a period of time have just experienced a decline in their fertility in the 2010s, including France[11] and the United States: this would be the "end of the American exception".[12]

Fertility is therefore lower, often well below the replacement level. Countries in "demographic winter" are experiencing a sharp decline

[7] Of course, in relation to the world average, fertility can vary greatly from one country to another due to various factors; cf. Sardon, Jean-Paul, Calot, Gérard, « Les incroyables variations historiques de la fécondité dans les pays européens. Des leçons essentielles pour la prospective », *Les analyses de Population & Avenir*, n° 4, décembre 2018. https://doi.org/10.3917/lap.004.0001

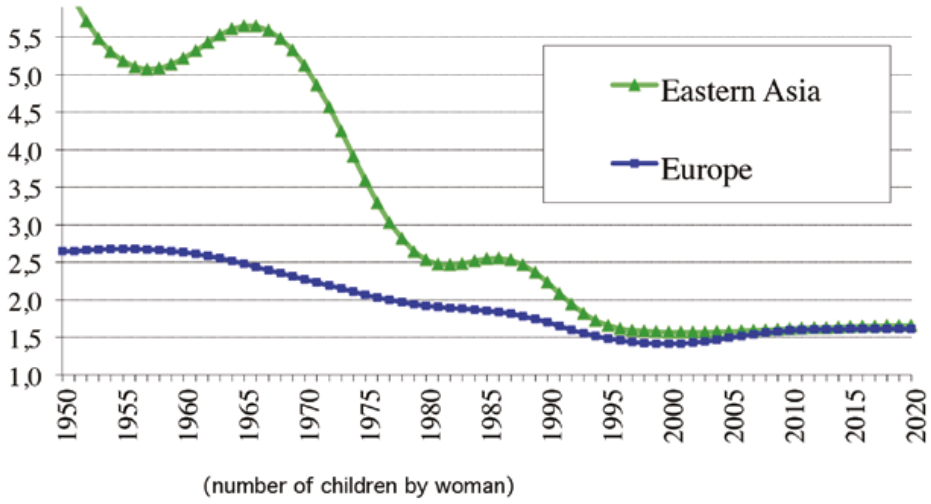
[8] The fertility required for the women of one generation to be replaced number for number in the next generation, i.e., some thirty years later; a population of one hundred women is therefore replaced by a similar population of one hundred women. This threshold is 2.1 children by woman in countries with a high level of health and hygiene.

[9] Formulation then used for example in: Dumont, Gérard-François *et alii*, *La France ridée*, Paris, Hachette, seconde édition, 1986.

[10] Dumont, Gérard-François, « Japon : le dépeuplement et ses conséquences », *Géo-confluences*, ENS Lyon, 18 octobre 2017.

[11] Dumont, Gérard-François, « France : comment expliquer quatre années de baisse de la fécondité ? », *Population & Avenir*, n° 742, mars-avril 2019. https://doi.org/10.3917/popav.742.0017

[12] May, John F., « Géopolitique et évolution des populations aux Etats-Unis », *Population & Avenir*, n° 757, mars-avril 2022. https://doi.org/10.3917/popav.757.0014



Fiugure 4. Fertility in East Asia and Europe: the "demographic winter". © Gérard-François Dumont - Chiffres WPP 2019.

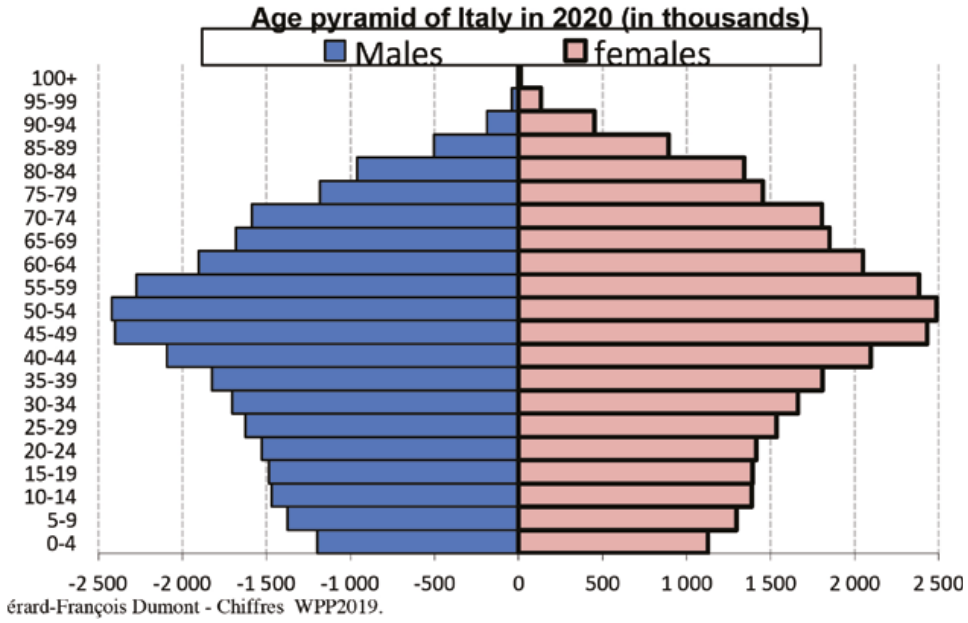


Figure 5. The age pyramid of Italy. © Gérard-François Dumont - Chiffres WPP2019.

in large families (three or more children) and an increased percentage of childless couples or singles, or one-child households. If this situation persists, 100 women in one generation will be replaced in the next generation by only 70 women, which means that there is already an ageing population

"from below" and the risk of depopulation, unless there are considerable migratory inflows.

In this context, the economic, social and political consequences can be considerable. Already, we cannot understand certain decisions and attitudes of European populations without considering this demographic contraction of the younger generations. One of the questions raised by this situation concerns the transmission of culture. Let us consider, for example, the age pyramid of Italy (Figure 5). The number of young people is much lower than that of previous generations. How can so many values, skills and knowledge be passed on from one generation to the next when the latter is far fewer in number? If life can be likened to a relay race between generations, when the arrivals are much less numerous than the previous ones, the handover can only be partial.

The contraction of family size is the result of the demographic transition and especially, in post-transitional countries, of the demographic winter. A second major demographic process, urbanization, is changing family structures.

Urban attraction and the distancing of generations from the family

Before the demographic transition, the only determinant of urbanization was migration. Indeed, given the high urban mortality rate, the urban natural balance was negative and the population of cities was maintained only by the arrival of new populations. Since the demographic transition, the growing concentration of the world's population in cities is a global phenomenon. The estimates of urbanization in the world, proposed by the UN Population Division, underline the importance of this process. Indeed, from 1950 to 2020, the UN indicates a world population growth of 207%, from 2,536 to 7,837 million inhabitants. But within this total, the rural population would have increased by only 91%, while the urban population would have grown from 751 to 4,379 million, a progression of 383% (Figure 6). Urbanization is the result of a process that has been driven for two centuries by multiple determinants.

The so-called "proximate" determinants, those that are easily quantifiable, are the most obvious. This is the demographic transition, which also increases the life expectancy of urban populations and thus increases the number of urban dwellers. Thus, when the life expectancy of a city's population doubles, its number of inhabitants, *ceteris paribus*, also doubles. The "proximate" determinant of urbanization is therefore simply the surplus of births over deaths, as in the world population as a whole, within the perimeters of cities, whether old or extended.

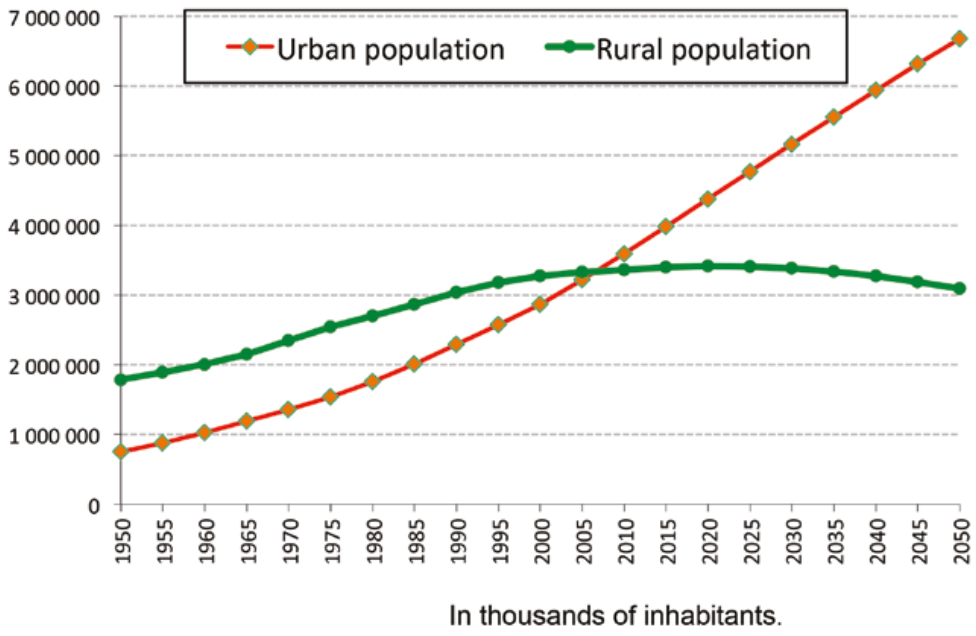


Figure 6. Urban and rural populations in the World (estimates then average projection). © Gérard-François Dumont - Chiffres WUP, 2018.

To understand urbanization, two other demographic factors must be put forward. First, cities have received or are receiving rural emigration of an essentially economic nature, through various mechanisms: departure of rural workers to cities where industrial sites are being developed, departure of rural populations with little hope of agricultural employment given the increase in productivity in the primary sector, economic and fiscal policies that discourage farming and reduce the profitability of agriculture, absence or inadequacy of agrarian reforms that could have given hope of promotion to agricultural workers, development of tertiary employment that is essentially established in cities and especially in large towns, etc. In most cases, this rural emigration distances the generations of young workers, who move to the city, from their ancestors who remain in the rural world. The result is different family structures, a geographical distance that modifies the exercise of family solidarity.

Another factor in urbanization is emigration to cities of a political nature, as a result of military or civil conflicts, which have often had an accentuating effect on the growth of certain large cities.[13] This second factor

[13] Like Athens, Lima, Bogotá, Amman or Algiers.

is also likely to separate the generations within the family, when the older ones do not feel the strength to escape the risks of a conflict.

Behind the quantitative, demographic elements measuring the importance of urbanization, we must not forget the "distant" determinants, i.e. various qualitative, political, geographical or multiple explanatory factors.[14] Let us limit ourselves here to certain political factors.

Here, it is a country that chooses a new capital, as in the past, Japan with Tokyo, Russia with St. Petersburg or the United States with Washington and, more recently, Brazil with Brasilia or Nigeria with Abuja. There, a centralist vision of political power favors the political capital. Elsewhere, it is a political power that changes its land-use policy. Thus, China, after having restricted the growth of its cities under Mao, then applied new regulations to some of its territories, which stimulated rural emigration and, as a result, urban demographic growth[15] and, therefore, the separation of generations within families. In addition, China's *hukou* (residence permit) system, which deprives hundreds of millions of urban immigrants of the right to have their children attend schools in the cities where they live and work (without permission), has led to the tragedy of children being "left behind" in the countryside while their parents work in the city. As a result, this country has a tragedy of "children left behind", i.e. left in the countryside while their parents work in the city. This is why many Chinese children are, for the most part, raised by their grandparents in the countryside, living without their parents by their side or seeing them only rarely, often not even once a year.

The lives of many families are changed by another demographic process, that of international migration.

International migration and family removal

Indeed, the number of international immigrants has increased significantly in recent decades. The UN defines an immigrant as a person living in a country other than the country of his or her birth, for a period of at least one year. According to UN estimates, in 1980 there were 100 million immigrants in the world. Ten years later, in 1990, the figure rose to 155

[14] Dumont, Gérard-François, *Urban demographic transition*, Urban development issues (UDI), scientific quaterly, vol. 56, 2018. DOI: 10.2478/udi-2018-0009

[15] Dumont, Gérard-François, Yiliminuer, Tuerxun, « Les migrations internes accentuent l'inégalité historique du peuplement de la Chine », *Informations sociales*, n° 185, septembre-octobre 2014.

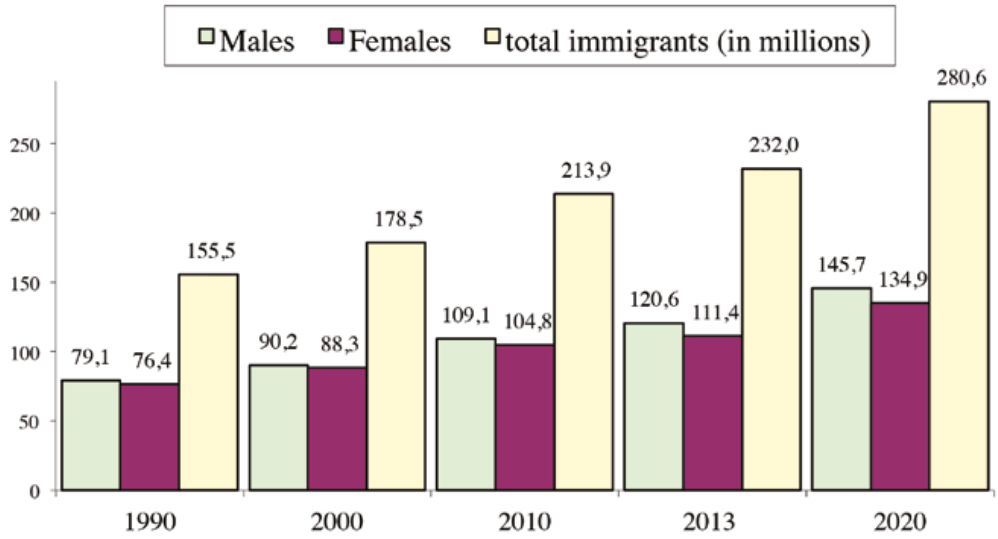


Figure 7. The number of immigrants in the World. © Gérard-François Dumont - Chiffres ONU 2019.

million, then to 178 million in 2000, 214 million in 2010, 232 million in 2013 and 280 million in 2020 (Figure 7). This increase can be explained both by a combination of traditional migration factors, essentially political or economic in nature, and by the context of globalization, which is helping to stimulate international migration.

Insofar as migration is concentrated in the age group of young workers, 18 to 34, who often migrate alone,[16] migration inevitably results in a geographical distance between the generations of a family in this age group and the ascendants, or even the descendants, when the children of migrants remain in the territory of origin of their parent(s) who migrated. This distance is more or less important according to the distance separating the place of origin from the place of residence of the immigrant, the importance of the transport networks and the greater or lesser ease of crossing borders. The northern Italian who has migrated to Bavaria, to Munich, can quite easily join his family on a regular basis, benefiting both from a satisfactory transport network and from Italy's, Switzerland's and Germany's membership of the Schengen area. Although the United Kingdom

[16] This is less the case for exoduses due to war or civil conflict, which are more often accompanied by family migration, as has unfortunately been observed in Syria and Iraq in recent years.

is not part of the Schengen area,[17] the migration of a Frenchman to London represents a limited distance due to the existence of a fast train, the Eurostar, which uses the Channel Tunnel, which has been available since 1994. In West Africa, the possibility for migrants to return periodically to their place of residence, where the rest of their family lives, is easier in the regional grouping formed by the Economic Community of West African States (ECOWAS), which has introduced a common passport.

On the other hand, family separation is generally more important in the case of intercontinental migration, for example of Chinese to the United States or Europe, Africans to North America, or Filipinos to the United States. In the second half of the twentieth century and even more so in the twenty-first, the effects of family estrangement due to migration are obviously of a different nature[18] than in previous centuries, when slower transportation and non-existent communication technologies often made intercontinental migration a definitive break with the rest of the family back home. In the 21st century, the Web, e-mail, mobile telephony or Skype are likely to be able to preserve, albeit at a distance, family ties and, therefore, to reduce the effects of geographical distance. However, in addition to geographical distance, we must not forget the other concrete dimension of a migrant's life: time and, more specifically, the effects of time difference, which impose constraints on exchanges with family members living in the country of origin.

However, for the life of the families, two types of situations may arise depending on the country of residence of the immigrant. In some countries, such as those of the Arabian Peninsula (Saudi Arabia, Bahrain, United Arab Emirates, Kuwait, Oman, Qatar), family migration is impossible for almost all immigrants. These countries admit as immigrants essentially only single persons, therefore unaccompanied by their families, male or female, depending on the tasks to be performed. Thus, the countries of the Arabian Peninsula have about 18 million immigrants who live far from their families in their countries of origin (India, Pakistan, Bangladesh, Ethiopia...). Only a minority of immigrants (from North America or Europe), belonging to the upper social categories and working in highly skilled jobs, can bring their families over.

[17] Dumont, Gérard-François, Verluise, Pierre, *Géopolitique de l'Europe : de l'Atlantique à l'Oural*, Paris, PUF, 2015.

[18] Dumont, Gérard-François, « Immigration : la question de l'intégration dans un contexte fondamentalement nouveau", *Les analyses de Population & Avenir*, n° 21, février 2020. https://doi.org/10.3917/lap.021.0001

On the other hand, some countries give legal immigrants the right to bring their families. This is the case, for example, of European countries that have ratified the Convention for the Protection of Human Rights and Fundamental Freedoms, better known as the European Convention on Human Rights, which was opened for signature in Rome on November 4, 1950 and came into force in 1953. It was the first instrument to concretize and make binding some of the rights set forth in the Universal Declaration of Human Rights. Among these rights, its article 8 states a "Right to respect for private and family life", specified in § 1 as follows: "Everyone has the right to respect for his private and family life, his home and his correspondence". In application of this recognized right, the signatory countries of the European Convention on Human Rights implement it and accept the migration of the members of the immigrant's family. This right has important effects since, for example in France, the main immigration flow of the last decades has been the arrival of families, often of new spouses, coming to join one of their members already residing on the French territory. This right must be considered as being really exercised insofar as it is controlled by a court of justice, the European Court of Human Rights, which can be seized directly of individual and state applications alleging violations of the civil and political rights set forth in the Convention.

Thus, with regard to family life, migration presents two types. First, it disrupts family life because it leads to separation for long periods. On the other hand, in countries where family reunification is practiced, the effect of family separation due to migration is much less marked.

Then, a fourth process, population ageing, is unfolding worldwide in the twenty-first century, a process unprecedented in human history. In previous centuries, humanity has never recorded such high absolute and relative numbers of elderly people. In order to understand this process, it is first necessary to specify its nature.

Aging of the population, "geronto-growth"...

Under the term aging,[19] two different elements must be distinguished, each of which is new. The first is the result of a structural effect, i.e., a change

[19] Concerning young people, cf. Dumont, Gérard-François, « Les évolutions démographiques de la jeunesse dans le monde », dans : The Pontifical Academy of Social Sciences, *Vanishing Youth? Solidarity with children and young people in an age of turbulence*, Acta 12, Vatican City, 2006.

in the age composition of a population: this is aging in the strict sense, i.e., the increase in the proportion of elderly people in the total population. The second element being a flow, I have proposed a neologism to distinguish it because its intensity can, according to the territories and according to the periods, be similar or opposite to the aging itself. Thus, the term "geronto-growth"[20] refers to an increase in the number of elderly people.

The fact that the world's population is aging is indisputable. In 1950, the percentage of people aged 65 or more in the world was 5%. It began to rise in the 1970s and by 2015 the proportion had risen to 8.2%. According to the average projection,[21] this increase is expected to become more pronounced as the 21st century progresses, with 10% being reached before 2025 and the year 2035 reaching 12.8%. Aging has specific causes that result, on a global scale, from the combination of three factors.

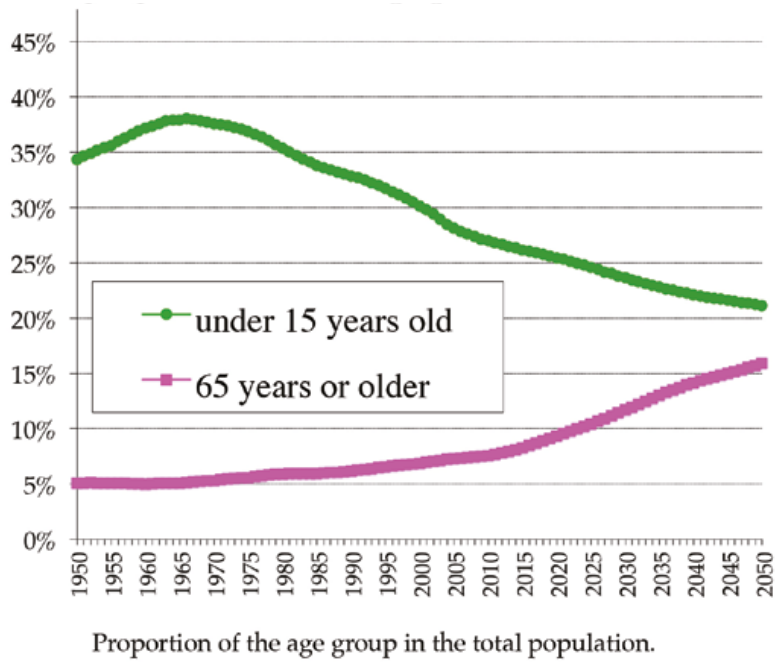


Figure 8. Aging of the World's population. © Gérard-François Dumont - chiffres WPP 2019 évalués puis projection moyenne.

[20] "Geronto-growth" and "geronto-degrowth" are words formed from the Greek *gerôn* or *gerontos*. They have entered the *Dictionnaire de Géographie*, Paris, Ellipses, 2005. Cf. également Dumont, Gérard-François et *alii, Les territoires face au vieillissement en France et en Europe*, Paris, Ellipses, 2006.

[21] WPP, The 2019 Revision.

The first is the lower fertility, explained above, which results in what is called "ageing from below". Indeed, as a result of the decline in fertility worldwide, and despite the decline in infant and child mortality, the number of young people in the world is lower than it would be if fertility had not declined. Correlatively, this increases the proportion of older people.

The second factor in the aging of the population is the decline in age-specific mortality rates of the elderly, which has led to an increase in their life expectancy, resulting in what is known as "top-down" aging. The latter can be explained first of all by the fact that gains in mortality, but also in morbidity, at young ages are also translated into gains at later ages for the same generations, by a somewhat mechanical effect. But the essential reason is elsewhere. Aging "from above" only really became intense, essentially in the countries of the North, in the 1970s, when health policies, having achieved remarkable results in reducing infant, child and maternal mortality, focused more on improving the survival rates of the elderly.

The legacy of past developments, i.e., the effects of the demographic history of the last few decades, is the third explanatory factor for ageing, a factor that will play a major role in the future. Indeed, the generations of older people reaching the age of 65 or more in the 2030s will be the result of the number of births that occurred 65 years earlier. Since the number of births worldwide increased from the 1950s to the 1980s and then remained in the range of 130 to 140 million depending on the year, the increase from the 1950s to the 1980s will be reflected in the number of older persons in the 2020s and 2050s, especially as survival rates before age 65 have improved.[22]

In addition to ageing in the strict sense of the term, it is important to consider the flow of elderly people, which is reflected on a global scale by "geronto-growth". The latter has been high over the last few decades. In 1950, there were 128 million people aged 65 or more in the world. A first doubling occurred in 35 years, from 1950 to 1985, and then a second

[22] A fourth factor affects the intensity of aging. It is not operational on a global scale but only on the various scales of the different territories of the planet: this is migratory exchanges and, more precisely, the age composition of immigration and emigration specific to each territory. Territories that attract young populations and see older populations emigrate slow down or even reverse their ageing process, which is often the case for inner cities. On the other hand, areas that see young people leave and/or receive older people accentuate their own aging.

doubling between 1985 and 2010, when the number of people aged 65 or more reached 477 million, the result of a quadrupling in 60 years. According to the medium projection, the number could exceed 1 billion between 2030 and 2035, reaching 1.1 billion in 2035.

This considerable change is due to two of the factors mentioned above: on the one hand, the increase in life expectancy of the elderly; on the other hand, the arrival at age 65 of more numerous generations, due to the double effect of more births 65 years earlier and the improvement in the survival rate of these generations. In contrast, fertility has no effect on geronto-growth, or only for a period longer than six decades.

Population aging, in the two forms analyzed above, is thus a global process. However, its intensity varies greatly from country to country and from territory to territory.

... and intergenerational family solidarity

In some countries, mainly in sub-Saharan Africa, the elderly are still a phenomenon of scarcity because the high mortality that affected their generations when they were young and the relatively low life expectancy of the elderly. As "what is rare is expensive", this scarcity can contribute to a better respect and listening to the elderly, well highlighted by this African saying: "an old man who disappears, is a library that burns". This saying means that the elderly are the equivalent of libraries because they have their own experience, an experience of life that younger people do not necessarily have and that the elderly can transmit orally while they are still alive.

Conversely, in other countries, the high percentage and number of elderly people do not make them rare. In some regions, such as China, rapid ageing even represents a challenge for states that must set up systems of intergenerational solidarity that are still largely insufficient.

In countries in the North, where generalized pension and health insurance systems already exist, they require relatively high contributions from the working population to finance them. There is a risk that this situation will lead to a lesser consideration for the elderly. This may result[23] in less pension payments, limitations on health insurance, withholding treatment for certain illnesses when the person reaches a high age, or even legislating euthanasia, as has already been done in some countries. While the legalization of euthanasia may appear to be the result of compassionate attitudes,

[23] Parant, Alain, « La protection sociale face au vieillissement », *Population & Avenir*, n° 700, novembre-décembre 2010.

in reality it is more a reflection of society's refusal to fund palliative care or medical research that could improve gerontological medicine.

On the contrary, the presence of many elderly people calls for a new organization of society that knows how to value this age group in social and family life, for example by allowing it to play a very useful role in everything that concerns the common good or for the family, particularly by contributing to education.

This dynamic of ageing "from above" is changing the composition of families with, essentially in the countries of the North, the coexistence of four generations; this can result in sometimes delicate choices, when the generation of grandparents has to balance its solidarity with that of great-grandparents and with that of their adult children and grandchildren. Family solidarity must indeed be exercised towards the oldest as well as the youngest.

This family solidarity may be facilitated when the homes of the different generations are close together, but it may be more difficult in the opposite case: there may then be a risk of family jealousy between those who live close to the previous generation and consequently benefit from fairly frequent emotional ties or, for example, regular investment by the grandparents in looking after the grandchildren, educating them and helping them with their homework, whereas the grandchildren who are geographically further away may have less frequent ties.

Among the demographic dynamics affecting the family, the fifth category is countries where the sex ratio is abnormally high.

Masculinity rate and family life

First example: in China,[24] official population policy has had perverse effects, with particularly high sex ratios at birth of up to 122 for births of rank two,[25] and significant excess mortality of girls before the age of five.

Indeed, the Chinese adage *yang'er fang lao*, "raising a son to prepare for old age" is explained by the fact that there is hardly any retirement for peasants, the custom being that the daughter goes to her husband's family. If it is necessary to reduce one's descendants, one tries to have fewer daughters. In the whole world, about 105 boys are born for every 100

[24] Dumont, Gérard-François, « Le déficit des filles en Chine : vers un nouvel enlèvement des Sabines ? », *Monde chinois*, n° 15, automne 2008.

[25] That is, the births corresponding to the second children of the same mothers.

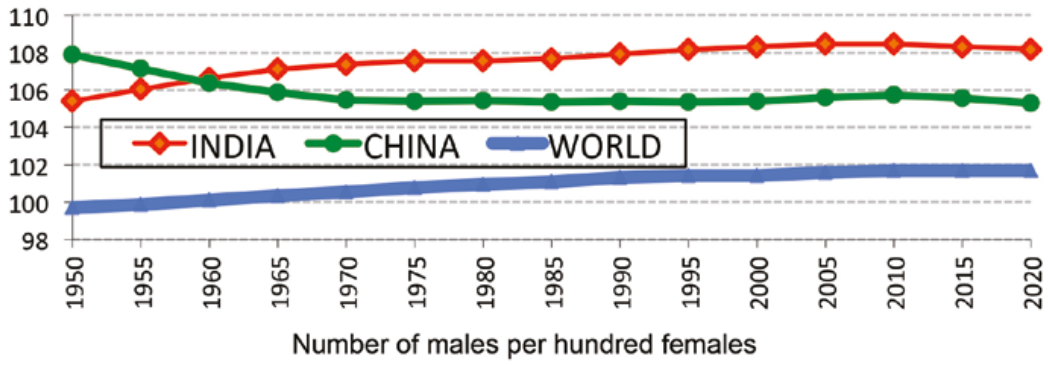


Figure 9. The rate of masculinity in the World, China and India. © Gérard-François Dumont - Chiffres WPP, 2018.

girls,[26] and this same sex ratio at birth was found in China in the 1960s and 1970s. But in the 1980s, it rose to 113.8 and reached 115.6 in 1995. In the 2000s and 2010s, it is mainly due to selective abortions following ultrasound scans or amniotic fluid analyses, which were prohibited by law in 1991. It reaches 132 boys for every 100 girls for births of rank 3 – last attempts to have a son. Infanticide, which is severely punished, appears to be rare. However, the mortality rate of young female children is worryingly high, while worldwide there is still an excess of male infant mortality. All in all, China's age and gender composition is particularly clashed with many families without gender diversity in the younger generation, with the only child being a boy. Admittedly, since 2016, China has ended the one-child policy and even allowed for a third child. But, to date, this has not had any effect on the birth rate. and economic problems are usually cited as the reason. This overlooks the negative effects on family formation of the shortage of women and the high level of urbanization, in a country where a male cannot marry unless he has acquired home ownership.

Another example: in India,[27] women feel obliged to have a son, therefore to get rid of the girls. If female infanticide has not disappeared, especially in the North, it is in sharp decline, supplanted by selective abortion after research into the sex of the fetus. Most castes and regions use trans-

[26] Amazed by the regularities he noticed in his demographic studies, Johann Peter Süssmilch published a demographic study in Prussia in 1741, which he entitled *L'ordre divin*, réédition Paris, Ined, 1984.

[27] Brigitte Dumortier, Philippe Cadene (direction), *Inde : une géographie*, Paris, Armand Colin, 2015.

vaginal ultrasound or amniotic fluid analysis in specialized clinics, which are expanding rapidly despite government efforts to ban them (in 1978 and again in 1983). In 1992 in Bombay, a forum of doctors and women could strongly criticize the government for not yet having implemented its policy against sexual pre-selection. Yet, gender equality is enshrined in the Indian Constitution and many laws prohibit discrimination on the basis of sex and try to help the advancement of women in all fields. But the girl child is unwelcome in families; she is said to be *nakusha* (unwanted) in Rajasthan, *chevalu* (expenditure) in Tamil Nadu and *vangal* (bad) in Marathi language. "Raising a daughter is like watering a plant in the neighbor's garden". Brides are wished "to have a hundred sons!"

The result of these attitudes and behaviors is that in the whole of the Indian Union, for the period 2010-2015, there are 111 boys for every 100 girls at birth, compared to 106 in the 1960s. This gap is even greater in Haryana, where a sort of shortage of wives is emerging, which may make them more valuable. Having sons is a crucial issue for Indian families, who are expected to have sons who will last and prosper, while daughters who leave for their in-laws must be endowed.

The necessary adaptation of family policies

It would therefore seem logical that family policies in each region of the world should adapt their resources to demographic changes and, above all, anticipate future problems (which is what population science allows) by doing everything possible to mitigate the foreseeable negative consequences of certain demographic changes, in particular through education and the promotion of women, while better ensuring the future of elderly parents. In some parts of the world, families, strongly shaped by tradition, remain strong and cohesive, still fulfilling, on a small scale, various social functions that have been theirs since time immemorial – feeding, caring for, and educating children, and caring for elderly parents until they die – duties for which women carry out the largest share. But demographic dynamics threaten this system. They are leading some countries to adopt welfare state policies, but at the risk of breaking down family solidarity, a precious asset.

Elsewhere, these solidarities have often been broken and policies must, as far as possible, seek to make up for the shortcomings observed in incomplete or broken families. In areas that are or have been under communist influence, even if the distribution of rights and duties between families and the state has fluctuated considerably, this care has left deep traces and families, now left in the uncertainty of competition, are often in great distress.

In many Western democracies, the socialization of risks (illness, old age and unemployment) and the generalization of the education of children and young people by the community have caused the family to lose its ancient role of all-risk insurance. It remains, however, the place of shared affectivity, necessary for the development of children – provided, however, that it remains united. However, since the last third of the twentieth century, these same democracies have experienced the push of an unprecedented individualistic mentality that has largely affected families, with everyone demanding sexual freedom, freedom of conception, autonomy, equality between the sexes and equality between generations. This individualistic mentality now advocates gender "freedom", which is already legally established in countries such as Switzerland. Policies have taken into account these demands, although sometimes essentially expressed by minorities, and the ruptures they have provoked.

Let us recall the original definition of the family, even though, especially since the beginning of the 21st century, many countries, such as France in April 2013 or the United States in June 2015 (Constitutional Court decision), have given homosexual couples a status identical to that of heterosexual couples: any family is a specific structure linking beings of different sexes and different generations. The family is the place where life is transmitted, and it is a mesh of natural ties that unite the beings that make it up: sexual ties between a man and a woman who become the father and mother of one or more children; filiation ties between the father and the child and between the mother and the child; sibling ties between children born of the same parents; generational ties between ascendants and descendants; and ties of kinship by marriage. In all societies, roles are assigned to these ties, roles of education, transmission and solidarity, often prescribed as duties.

Family policies should respect the private life choices of couples, seek to support established families, and especially large families, which are often discriminated against, while continuing to mitigate, through various compensations, certain inequalities of income or situation.

Moreover, in developed countries, more and more children have to live through the separation of their parents and then adapt to a single-parent or reconstituted home. A relatively large number of children feel the effects of this for a long time. Their health, their balance, their schooling and their socialization are affected.

This observation should be taken into account. Family law and family policy should take into account the suffering and difficulties experienced

by the children of broken couples and seek to alleviate them as much as possible. The relationship of the children with their parents and the quality of life and education of the children should become a political priority.

Glossary[28]

Age pyramid: representation of a population classified by sex and age at a given time.

Aging of a population: modification of the age composition of a population giving a smaller proportion to the young ages and, correlatively, a higher proportion to the elderly. A distinction is made between aging "from below", resulting from a fertility rate that reduces the number of new generations, and aging "from above", resulting solely from an increase in the number of elderly people.

Birth rate: the ratio of the number of live births in a period (usually the year) to the average population of the period (considered the midpoint population); usually expressed per thousand population.

Demographic transition: a period of variable duration (between 50 and 150 years, depending on the case) and intensity (it multiplies the population by two to more than seven), during which a population moves from a demographic regime of high mortality and high birth rate to one of low mortality and low birth rate.

Family: a setting that can accommodate one or more children. It is made up of at least two people, including at least one adult. When it refers to two adult parents and their minor children, it is called a "nuclear" family. But its appellation can extend to a set including in addition ascendants, even to a set of persons belonging to the same initial filiation.

Family policy: all measures taken by the public authorities that have an impact on the composition and life of families.

Generation replacement: the level of fertility that allows the average number of generations of fertile age to be replaced one-for-one by the newborn generation; this level varies according to the mortality conditions of the populations; it is lowered to 2.1 children by woman in the most advanced countries, with 0.1 corresponding to the higher rate of masculinity of births and the mortality rate of women up to the average age of childbearing

[28] Definitions taken from publications by Gérard-François Dumont.

Geronto-growth: neologism meaning an upward change in the number of elderly people, knowing that words relating to old age are formed from the Greek *gérôn* or *gérontos*.

Household: a group of persons, regardless of their relationship to each other, occupying the same dwelling as their principal residence (definition used in France). The number of persons in a household may be reduced to the unit (household composed of a student, a single person, a widow or widower).

Infant-Adolescent Mortality: mortality of children or adolescents between the age of 1 year and early adulthood.

Infant mortality rate: the number of children who died during a given period, usually the year, before reaching the age of one year, expressed as a ratio of one thousand live births during the same period.

Life expectancy at birth: the average length of life of a generation, expressed in years, that would be subject to the mortality rates of that same year since the year of its birth. A distinction is generally made between male and female life expectancy.

Male-to-female birth ratio: The ratio of male to female newborns in a population.

Maternal mortality ratio: number of women who die as a result of pregnancy, childbirth or its aftermath, per 100,000 live births in a given year.

Natural change: the difference between births and deaths during a given period, usually the year; this increase may be positive, in which case there is an excess of births over deaths, or negative, in the opposite case.

Population growth rate: the sum of the natural growth rate and the migratory growth rate for a given period, usually the year, usually expressed as a percentage of the population; it may be positive or negative.

Rate of natural increase: the difference between the number of births and the number of deaths in a given year, expressed as a percentage of the average population; it is generally expressed as a percentage of the average population to distinguish it from birth and death rates; it can be positive or negative. It can be measured as the difference between the birth and death rates.

Survival rate: the proportion of a generation that is still alive at the end of the period considered.

Total fertility (children by woman): the sum of the age-specific fertility rates for a given year; it indicates the average number of children that would be born during a woman's fertile life if her age-specific rates were the same as those observed in the year in question.