



*Research article*

## Demography, geopolitics and great power: A lesson from the past

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**Abstract:** Demography is one of the factors determining and influencing the geopolitical balance of power in international relations. Politicians are the main actors in international relations, but powerful human dynamics are at work behind them. The study of geopolitics describes these dynamics, linked to human and physical geography. In the evolution of great power competition, economic, military and technological factors are taken into account, but the importance of demographic trends, which will play a key role in the struggle for world power, is often underestimated as a political and geopolitical factor. Demography works over long periods of time, i.e., over generations. The aim of this paper is to illustrate the importance of the above theory by looking at the demographic shock that France experienced in the 19<sup>th</sup> century and the geopolitical resulting consequences. As a result of this demographic shock, France lost its supremacy as the most populous country in Europe and was definitively overtaken by Germany. It is a scenario that can be useful for understanding the evolution of demographic competition in the 21<sup>st</sup> century, such as that of China versus India. In 2023, China will lose its supremacy as the world's most populous country to India. This will be the first time that China has lost its primacy since the United Nations began tracking global demographic trends in 1950. China, like France in the past, is in danger of never catching up with its demographic disadvantage. History suggests that once a country crosses the threshold of negative population growth, regardless of the differences in national experiences, there is little that its government can do to reverse it.

**Keywords:** Demography; geopolitics of population; great power; population ageing; overpopulation

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## 1. Introduction, methodology and research objectives

As the Anglo-German demographer Paul Morland pointed out [1], demography is underestimated but is still a decisive factor in the geopolitical balance of international relations [2], despite the extraordinary technological and digital revolutions taking place in today's world. In the international competition for world power, the size and structure of the population is a decisive element [3]. All the more so as reversing demographic trends in a given country is a difficult challenge, the results of which will only become apparent in the long term. This is a more complex problem than the one Robert Malthus posed in the late 18<sup>th</sup> century. He was the first scientist to create a model of how demography works at the societal level. His main argument was that humans naturally reproduce very rapidly, doubling each generation at least, while food resources grow slower. Population growth would, therefore, have made it necessary to extend cultivated land, even the less fertile ones, progressively leading to a shortage of food supplies and, thus, to a stalemate in economic development [4]. History has instead shown that, thanks to technologies, economic development and the modernization of production systems, global economic output has increased [5]. These technological advances have led to demography being underestimated today as a factor of power and to forget that any demographic policy only has long-term effects. These are the two lines of analysis of this paper.

Politicians are the main actors in international relations, but powerful human dynamics are at work behind them. The study of geopolitics describes these dynamics, linked to human and physical geography. In the evolution of great power competition, economic, military and technological factors are taken into account, but the importance of demographic trends is often underestimated, even though they will play a key role in the struggle for world power [6]. Demography is the essential component of human capital. It is estimated that each additional year of life expectancy corresponds to an increase in average per capita income of around 4%. Just as each additional year of schooling corresponds to 10 percentage points more GDP [7]. Population growth or decline defines the growth or decline of a great power, its relative weight compared to other powers and its policies. Power was, and it still is, a direct function of population [8]. Napoleonic France was the most populous country in Europe. Germany, in the 19<sup>th</sup> century, also experienced population growth, which helped explain its expansionism between 1848 and 1945. During the first two decades of the Cold War, the United States and the Soviet Union were demographic champions [9]; in addition to their population size, they had a strong capacity to develop their human capital [10].

Today, however, the demographic factor is often underestimated [11]. This can be explained by the extraordinary technological revolutions of recent years, which have led [12,13] to the underestimating of traditional factors such as population when analyzing the relationship between man and nature and the geopolitical consequences of the evolution of this relationship. Moreover, demography operates over long periods of time, i.e., over generations. This leads policymakers not to adopt population policies that may be unpopular, knowing that demographic problems will emerge when they are no longer in power. It is a short-sighted policy that does not take into account the fact that in the long run demography is inexorable [14]. These policies can be described as short-lived because they leave future generations with unsolvable demographic problems. Piero Angela, Italy's most famous scientific broadcaster, gave the example of the escalator [15], i.e., the few or the many

who are now on it can no longer go up or down. They are already moving up the various steps and represent the structure of future society, which can no longer be changed [16].

The aim of this paper is to illustrate, from a geopolitical point of view and through the analysis of official data from national statistical offices and from the United Nations studies, the importance of the above theory by taking the demographic shock experienced by France in the 19<sup>th</sup> century and the resulting consequences as an example from the past. As a result of this demographic shock, France lost its supremacy as the most populous country in Europe and was definitively overtaken by Germany. It is a scenario that can be useful for understanding the evolution of demographic competition in the 21<sup>st</sup> century, such as that of China. In 2023, China will lose its supremacy as the world's most populous country to India. This will be the first time that China has lost its primacy since the United Nations began tracking global demographic trends in 1950. China, like France in the past, is in danger of never catching up with its demographic disadvantage [17]. History suggests that once a country crosses the threshold of negative population growth, regardless of the differences in national experiences, there is little that its government can do to reverse it.

## 2. Materials

### 2.1. *The French demographic crisis: a lesson from the past*

At the end of the 18<sup>th</sup> century, France was the most populous country in Europe, with around 20 million inhabitants. In 1914, with 40 million inhabitants (including Alsace and Lorraine), France occupied fifth place [18]. The demographic crisis can be best understood and measured by a comparison with Germany. The two countries had the same population in 1870 (40 million inhabitants), but France had an unchanged number of inhabitants in 1914, while Germany grew to 65 million. However, a comparison with other European countries shows that the French demographic deficit was not due to higher death rates but to a very low birth rate.

Between 1790 and 1914, the fertility rate in France fell by 50%, while in other European countries it continued to rise, at least until the beginning of the 20<sup>th</sup> century. The main reason for this is that the industrial revolution of those years did not manifest itself in France as a clean break with the rural world, as it did in England, for example. It was not until 1950 that the French agricultural labor force was reduced to the level reached in England almost a century earlier [19]. To this must be added the decline in the birth rate among the working classes in France following the spread of political ideas in 1789, the weakening of religious sentiment, public education and universal suffrage. Above all, however, the attitude of the social class of small landowners, who voluntarily began to have fewer children as a form of self-preservation in the face of the new industrial reality. Smallholders, in particular, adopted this attitude in order to circumvent the provisions of the Napoleonic Civil Code, which provided for the equal distribution of inheritance among children. Consequently, having a limited number of descendants meant avoiding the dispersion of the estate. This *grève des ventres* (belly strikes), as French historians call it, lasted from 1880 until the Second World War [20]. It was only after 1945 that France managed to catch up with its neighbors in the transition from a rural to an industrial economy. In the space of thirty years, the share of small landowners in the total working population fell from 30% to less than 10% in 1975. Moreover, the smallholders who decided to stay

in the countryside radically changed their attitudes from those of the past. In fact, as part of the economic boom of those years, a process of modernization also took place in rural France and the cultural divide between urban and rural populations disappeared. This put an end to the 19<sup>th</sup> century opposition that had been a major brake on France's demographic and economic development [21].

This demographic shock explains why France, more than any other European country, considers demographic issues to be a fundamental pillar of the national interest. This was due both to the demographic decline of the 19<sup>th</sup> century and to the growing competition with Germany in terms of the quantity and quality of human resources. It was during these years that the French state turned to a birth policy [22] and an immigration policy to attract workers from abroad [23] that gradually led to the development of an organic family support policy [24].

In 1917, French women were entitled to paid maternity leave. During these years, large industrial companies such as Michelin offered free accommodation to workers with more than four children. As early as 1920, there was public financial support for families with four or more children; in 1926, Mother's Day was celebrated; first-born children were exempted from military service and rail fare reductions and grants were introduced. It is also important to note the fiscal measures in favor of large families, such as the surcharge for singles and childless couples and, in 1930, the Family Code formalized the importance of the family unit as an instrument of social cohesion at national level. This is a set of pro-birth policies that have been updated and supported from 1917 to the present day by both center-right and center-left French governments.

In the 1970s, for example, the institution of divorce by mutual consent and the Simone Veil law on abortion granted women rights that had previously been denied to them. At the same time, they were given the opportunity to find a job without giving up their desire for motherhood, benefiting not only from financial support but also from services such as crèches at work.

In the 1990s, French legislation formally recognized the single-parent family and the institution of the Pacs, the civil solidarity pact, gave not only homosexual but also heterosexual couples access to a range of civil rights. These measures were a precise response to the demands of society. The French State's support for families has direct and indirect initiatives, such as family allowances, with particular attention paid to large families; allowances for the single parent; special education allowances for the parent of a child who has been ill since birth or has had an accident (is obliged to reduce his or her working hours); study grants; organization of leisure initiatives; economic rewards at the birth of a child; economic support for the parent who reduces his or her working hours in order to devote himself or herself to the family; the possibility of requesting a municipal babysitter to take care of the newborn child if both parents cannot reduce their working hours; the possibility of requesting paternity leave; an increase in the pension for those who have had at least three children; personalized help in finding accommodation or improving the home in which one lives; etc. [25]. There is also a specific, long-standing tax policy based on the so-called family quotient. Tax rates are applied to the total income of the family divided by the family quotient, which is weighted more heavily as the family burden increases. France is one of the EU's biggest spenders on families and children; around 2.2% of GDP, compared with a European average of 1.7% and an Italian figure of 1%.

### 3. Results and discussion

#### 3.1. *Demography as a geopolitical factor in the international arena*

In France, the demographic shock of the 19<sup>th</sup> century had domestic and international geopolitical consequences [26]. With regard to domestic geopolitics, the population collapse in the 19<sup>th</sup> century radically changed the approach of the French state and politics to demography. From that moment on, demography became, and still is, a state affair and a pillar of national interest. This means that, in France, demography is not a politically divisive issue but a cross-party one. This is important news, especially in the European context, where countries like Italy lack a common approach to population policy, because demography is often associated with the birth-rate policies promoted by the Fascist regime [27]. The result of the French approach to demographic issues can be measured through the official population statistics in Europe, concerning the fertility rate, which reflects the number of live births per woman. In 2021, France had the highest fertility rate among the EU member states with 1.84 live births per woman according to Eurostat, the statistical office of the EU [28]. However, France's European record remains below the so-called replacement level fertility that is the level of fertility at which a population exactly replaces itself from one generation to the next. In developed countries, replacement level fertility can be taken as requiring an average of 2.1 children per woman. A figure that confirms how difficult it is to change a nation's demographic behavior, especially when the average fertility rate falls below the generational replacement rate.

France's demographic shock in the 19<sup>th</sup> century also had international geopolitical consequences. After the demographic crisis of the 19<sup>th</sup> century, France lost its supremacy as the most populous country in Europe to Germany, a supremacy that had been one of the geopolitical strengths of the Napoleonic era. The two countries had the same population in 1870, i.e., 40 million inhabitants, but in 1914 France had an unchanged number of inhabitants, while Germany grew to 65 million. Even the demographic crisis that hit Germany in the 1930s [29] did not allow France to regain its demographic lead. Today, France has a population of about 65.5 million compared to about 85 million in Germany, which has become the political and economic leader of a united Europe. This German primacy is mainly a legacy of the advantage gained as a result of France's historical demographic trauma described above. Although France now has a higher birth rate than Germany, this has not been enough to make up the difference caused by the demographic crisis of the late 19<sup>th</sup> and early 20<sup>th</sup> centuries.

France's demographic experience in the 19<sup>th</sup> century confirms that prevention is better than cure when it comes to population policy. The French case shows that demographic trends have consequences that only become apparent in the long term, when it becomes very difficult to adopt measures that can reverse the demographic behavior of a given population. This explains why, although France responded to the demographic crisis of the 19<sup>th</sup> century with a complex and modern fertility policy, it has never been able to regain its position as the most populous country in the European Union. The fact that prevention is possible in demography is demonstrated, for example, by Emmanuel Todd's analysis of demographic trends in 1976, which predicted 15 years in advance that the Soviet Union [30] would implode due to high and rising mortality rates [31].

These are useful clues to decipher the evolution of demographic competition on today's international relations [32]. Let us take the case of China as an example. For China, demography is a

potential and ominous handicap. Declining population combined with increasing ageing could deprive it of the labor force that has enabled it to become the great power we all know it to be [33]. To the surprise of many observers, it has one of the fastest ageing populations in the world [34].

In 2022, China's population fell to 1.4 billion, a net loss of 850,000 people compared with the previous year. An event that has never been recorded in the past, except for the demographic consequences of the Great Leap Forward policy desired and imposed by Mao Zedong in 1961. According to the latest demographic projections by the UN in the World Population Prospects 2022, the Chinese population will halve by the end of the century, falling from 1.425 billion to just over 771.301 million [35]. China's total fertility rate has been below the replacement level of 2.1 children per woman since at least the early 1990s. According to the UN Population Division, China's total fertility rate now stands at 1.6, but some analysts, such as Cai Fang, a Chinese demographer and member of the Standing Committee of the National People's Congress, believe it may be as low as 1.4. Between 2015 and 2040, the number of Chinese over the age of 65 is projected to rise from about 135 million to 325 million or more. By 2040, China could have twice as many elderly people as children under the age of 15 and the median age of China's population could rise to 48, up from 37 in 2015 and less than 25 in 1990 [36].

The demographic trap, i.e. too many old people and too few young people of working age, into which China risks falling is not the result of chance, but of decades of family policies [37] that have encouraged declining birth rates in the belief that this would increase the productivity of the human resources involved in China's economic boom [38]. Consider, for example, the "later, longer, fewer campaign" launched in the early 1970s to persuade young people to marry later, have fewer children and take as long as possible between pregnancies, which was replaced by the "one-child campaign" from 1980 to 2016. The latter explains why China now has fewer women of childbearing age than would be expected. Restricted to one child since 1980, many couples have chosen to have a boy, raising the sex ratio from 106 boys per 100 girls—like the rest of the world—to 120–130 boys per 100 girls [39].

The Chinese government has recently tried to reverse this demographic trend with massive incentives and policies to increase the birth rate. However, for the reasons outlined in this paper, it may be too late. Many countries around the world—from Japan to Australia to Sweden—have confronted the same demographic challenge, and their attempt to incentivize new babies with subsidies and other tactics have had a limited impact. Especially considering that many young Chinese adults, who themselves were born during China's one-child policy, are pushing back on the government's inducements to have babies. The measure has been met with a wave of public skepticism, ridicule and debate, highlighting the challenges China faces as it seeks to stave off a shrinking work force that could imperil economic growth [40].

This demographic winter could cause China not only internal – i.e., problems with the sustainability of the welfare system, the health system, the shortage of labor force, etc.– but also international geopolitical problems. There are at least two reasons for this.

The first reason is that according to the United Nations, India is set to overtake China this year as the world's most populous country. In 2023, India's population will reach 1428.6 million, surpassing China's 1425.7, which will see its population decline for the first time in more than six decades. According to the projection, India will have 2.9 million more people than China [41]. It is true that India's fertility rate has also fallen below the generational replacement level, but this decline began

more recently than in China. This means that over the next few years India should be able to maintain and consolidate its new record as the world's most populous country, as was the case in Europe in the 20<sup>th</sup> century when Germany gained this supremacy at the expense of France.

In 1971, China and India had nearly identical levels of total fertility, with just under six births per woman over a lifetime. Fertility in China fell sharply to fewer than three births per woman by the end of the 1970s. By contrast, the fertility decline in India has been more gradual; it took three and a half decades for India to experience the same fertility reduction that occurred in China over just seven years in the 1970s. In 2022, at 1.2 births per woman, China had one of the world's lowest fertility rates; India's fertility rate, at 2.0 births per woman, was just below the replacement threshold of 2.1. According to the United Nations' latest projections, India's population is expected to reach its peak size around 2064 and then decline gradually. India also enacted policies to discourage the formation of large families and to slow population growth, including its national family welfare program beginning in the 1950s. However, under India's federal structure, state governments were able to set their own policy priorities, resulting in varied impacts across different parts of the country. In Kerala and Tamil Nadu, where state governments emphasized socio-economic development and women's empowerment, fertility declined earlier and at a more rapid pace, falling below the replacement level two decades before the country as a whole. Those states that invested less in human capital, especially for girls and women, experienced slower reductions in fertility [42]. India's lower human capital investment and slower economic growth during the 1970s and 1980s, contributed to a more gradual fertility decline compared to China and, consequently, to more rapid and persistent population growth. For China, the loss of its historical primacy as the world's most populous country is a geopolitical shock, especially given that India is its main regional competitor. It is a shock comparable to that experienced by France when it lost its demographic supremacy to Germany. France's and China's demographic traumas have different causes but the geopolitical consequences are the same. China, like France in the past, risks losing geopolitical power for demographic reasons to its main regional competitor. A trauma complicated by what history and the laws of demography have shown, i.e., once a country crosses the threshold of negative population growth, regardless of the differences in national experiences, there is little that its government can do to reverse it.

China's demographic trauma has geopolitical significance not only because India is now the world's most populous country but also because its main international competitor, the United States, is experiencing a rising birth rate. It is true that, in absolute terms, the United States has a much smaller population than China, but it is a fact that underlines China's weakness on this front. According to the United Nations, by the end of the century, America's population will grow from 336.495 million today to 393.993 million. An increase that was recently made even more significant by the fact that, according to a study by Schwandt et al., the 2021 birth rate for U.S. mothers increased by 6.2% relative to the 2025–2019 trend rate and that the pandemic [43] led to a net increase in births for U.S.-born mothers of around 46000 children [44]. Between 2020 and 2022, the US population continued to grow despite an ageing population, with a net increase of around 431,000 people. This positive trend is reinforced by a cultural trait that still leads 41 percent of Americans to believe that the ideal number of children is three. Not to mention that the United States, unlike China, can continue to rely on immigration to maintain a positive demographic balance, as noted by the United Nations [45].

#### 4. Conclusions

Demography is still one of the factors determining and influencing the geopolitical balance of power in international relations. Politicians are the main actors in international relations but powerful human dynamics are at work behind them. The French and Chinese cases show that demography was and is still a factor of geopolitical power that is difficult to manage because it is based on laws and dynamics that only become apparent in the long term [46]. Demographic policies always have a geopolitical significance, which can be positive or negative, depending on how far-sighted they are [47].

All states aspire to demographic strength but few are able to anticipate and prevent demographic shocks such as those described above. Demography operates over long periods of time, leading policymakers not to adopt population policies that may be unpopular, knowing that demographic problems will emerge when they are no longer in power. It is a short-sighted policy that does not take into account the fact that in the long run demography is inexorable [48]. This leaves future generations with problems that risk becoming unsolvable because they were tackled too late. As the Italian demographer Antonio Golini has pointed out, even the most robust and effective demographic policies have long-term effects. This is because demographic trends are the result of collective facts, the complex effect of the behavior of individuals who are unable to assess them independently and individually. They are long-term phenomena that can be overlooked in the perspective of political behavior, which is mostly calibrated to the present or the near future [49]. The reason for this can be explained by the example of the escalator given in the introduction to this paper, i.e., the few or the many who are now on it can no longer go up or down. They are already moving up the various steps and represent the structure of future society, which can no longer be changed.

This is even more important in the scenario of the current world population geography, where there are states with very low birth rates and others with very high birth rates. In both cases, the fact that demography is a relevant geopolitical factor with long-term dynamics is fundamental both to the internal geopolitical balance of each country and to the competition for global power.

On an international scale, complex demographic trends are emerging, far from the determinism of the then very popular theories put forward by Robert Thomas Malthus in 1798 [50] on the catastrophic consequences that the growth of the world population would have had on the future of the planet. According to Robert Thomas Malthus, population growth is geometric and subsistence growth arithmetic [51]. Malthus's theories were also widely supported in numerous scientific books, such as Paul Ehrlich's *The Population Bomb*, that predicted severe famine in the late 1970s because world food production would not be able to keep up with exponential population growth [52]. As the American political scientist Jack Goldstone has argued, history has instead shown that thanks to technology and the modernization of production systems, global economic output has increased and the fertility rate has fallen dramatically, especially in developing countries [53,54].

By the end of this century, for the first time since the Black Death of 1300, the world's population could be shrinking rather than growing. The cause will not be the number of deaths, but the decline in births: from baby boom to baby bust [55]. Between 1970 and 2010, world population rose roughly from 3.7 billion to nearly 6.9 billion. Medium variant projections for 2010–2050 envision a rise from less than 7 billion to more than 9 billion. In both relative and absolute terms, global population growth



has been decelerating. At the same time, we still face worldwide challenges from more localized demographic cluster bombs [56], for example, such as in sub-Saharan Africa [57,58].

The problems of modern demography concern the distribution and composition of the population in global space [59]. The next four decades will see increasing demographic differentiation across the globe, with pronounced population aging and stagnation or decline in working-age manpower for the more developed regions, contraposed with robust manpower growth in many low-income countries where the population structure will remain quite youthful.

This new geography of global demography will have domestic and international geopolitical consequences: on political, economic and social balances, on the weight and role of each state, on migration flows, on the sustainability of welfare and health systems, on relations between old and new generations, between emerging and dominant powers, etc. Fertility numbers seem dull when set against the drama of elections, conflict, pandemic and economic helter-skelter, but if you do not turn on demography, demography will turn on you.

### Use of AI tools declaration

Giuseppe Terranova declares not to have used Artificial Intelligence (AI) tools in the creation of this article.

### Conflict of interest

Giuseppe Terranova is the guest editor for AIMS Geosciences and was not involved in the editorial review or the decision to publish this article. Author declares that there are no competing interests.

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