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Masculinization of births in Eastern Europe

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Sex-selective abortion is not specific to Asia. Christophe Guilmoto and Géraldine Duthé explain why European countries in the Western Balkans and Southern Caucasus are affected too. Although the problem was described for the first time more than ten years ago, it is only now that the authorities in these countries and in Europe are starting to show concern.

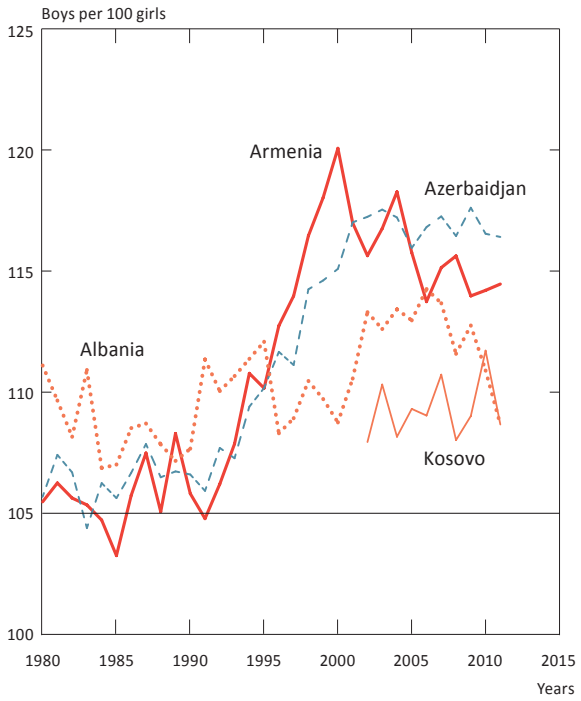
The sex ratio at birth is said to be "skewed" when it exceeds the norm of 105 boys per 100 girls, as has been the case for more than 20 years in China and parts of India (Box 1). Excess male births resulting from sex-selective abortion of female fetuses is an issue generally associated with Asia. [1] But prenatal sex discrimination is by no means limited to that continent alone. [2] Evidence of sex imbalances at birth has been found elsewhere in the world, notably in the Asian diaspora (Box 2), but also in several countries of Eastern Europe where it has so far attracted less attention.

Twenty years of excess male births in certain Eastern European countries

In two regions of Eastern Europe – the Southern Caucasus and the Western Balkans around Albania – the sex ratio at birth is between 110 and 117 (Table). For the three Caucasian countries, it increased in the 1990s (Figure 1, Table) [3, 4, 5] to reach levels even higher than the current estimates for the whole of India. It is highest in Azerbaijan (close to 117), which now ranks second in the world behind China among countries with the largest sex ratio imbalance.

In the other cluster of countries, located in Southeast Europe and centred around Albania but also including Kosovo, Montenegro and western Macedonia, the observed levels are lower, at around 110-111 male births per 100 female ones, but their regularity over time shows that the imbalance is real (Table, Figure 1).

Figure 1. Sex ratio at birth in Albania, Armenia, Azerbaijan and Kosovo, 1980-2011



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Source : Vital records.

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Box 1. The sex imbalance at birth in Asia

The emergence of a sex imbalance at birth was first observed in the early 1980s in Asia. By the mid-1990s it had reached 115 boys per 100 girls in South Korea and China (Figure 3). The trend has since reversed in South Korea, falling to a level of 106 today. This "return to normalcy" can be explained by improvements in women's status and by government measures to eradicate sex-selective abortion.

In China, on the other hand, the sex ratio at birth has continued to rise, reaching a level of 120 boys per 100 girls. The problem has also spread to other countries, such as Vietnam – where the sex ratio has risen over the last decade to reach 112 in 2012 – and Nepal, the region of Kathmandu especially. In India, despite improvements in the most affected north-western states (Punjab, Haryana, Rajasthan), the 2011 census shows that sex selection has taken hold in several other previously untouched states such as Uttar Pradesh or Maharashtra. Not all Asian countries are concerned however. Iran, Thailand, Japan and Indonesia, for example, have normal sex ratios at birth.

Despite pioneering demographic research, [4, 5] the rising sex ratio in these countries went unnoticed for more than a decade, with some seeing it as an artefact linked to the poor quality of vital records. It is true that these countries have seen major socio-political upheaval since 1991 due to the dismantling of the socialist system, combined in some cases – as in Kosovo, Georgia and Armenia – with internal or international conflicts. Yet while their statistical systems have inevitably been disrupted, the latest censuses in all these countries confirm the increasing share of male children, [6, 7] as do the national demographic and socioeconomic surveys conducted on representative population samples.[3, 5]

Understanding the masculinization of births

The increase in sex ratio at birth is attributed to three factors: a traditional preference for boys, access to technologies for prenatal sex selection (mainly ultrasound screening and abortion), and the compounding effect of low fertility. [1, 8]

Fertility in Eastern Europe has fallen dramatically since the 1990s in response to political upheaval and rapidly changing living conditions. With the exception of Kosovo, fertility in all the countries of Eastern Europe affected by masculinization of births is below two children per woman (Table).

If a woman has two children, there is a 25% statistical chance that both will be girls. So in the absence of alternative sex selection methods, or of a freak biological phenomenon that alters the sex ratio at birth in these countries, the imbalance must be due to the abortion of female fetuses. In other words, couples wishing to have at least one son can undergo sex-selective abortion to avoid giving birth to a girl. This does not guarantee success, however, since the next pregnancy will not necessarily be a boy either; several successive pregnancies and abortions may precede a male birth.

Table. Demographic indicators of countries with a high sex ratio

Country	Sex ratio at birth (1)	Fertility (children per woman) (2)	Population size (millions) (3)
Asia			
China	117.8	1.7	1359.8
Vietnam	111.2	1.8	89.0
India	110.5	2.5	1205.6
Southern Caucasus			
Azerbaijan	116.8	1.9	9.1
Armenia	114.8	1.7	3.0
Georgia	111.8	1.8	4.4
Southeast Europe			
Albania	111.7	1.8	3.1
Kosovo	109.7	2.3	1.8
Macedonia (North-west)	110.9	1.5	0.3
Montenegro	109.8	1.7	0.6

Notes : (1) boys per 100 girls circa 2010, (2) in 2010-2015, (3) in 2010.

Sources : The sex ratios in Europe are calculated from vital records for Albania, Armenia, Azerbaijan, Georgia, Kosovo, Macedonia and Montenegro. Estimates are based on various sources for the other countries. The other indicators come from the United Nations Population Division and the World Bank (Kosovo). North-western Macedonia corresponds to the Polog region, for which we estimated the corresponding fertility level.

Modern prenatal sex selection methods have become available in eastern European countries since the opening of their borders and the development of a market economy. Although abortion has been available in most of these countries for many years, often under excellent conditions of hygiene and safety,(1) ultrasound equipment did not exist in the past, or was based on obsolete Soviet technology producing poor-quality images that were difficult to interpret. When the borders were opened in the early 1990s, more advanced equipment could be imported and private clinics offering reproductive health services for future mothers sprang up across the region.

At least one boy at all costs

Son preference is the main explanation for the high sex ratio at birth. In most European countries, low fertility and access to technology do not lead to distortions of this type. In the Western Balkans and the Southern

(1) Abortion was widely used for many years as a birth control method in the former socialist countries (Soviet Union and Yugoslavia). The only exception was Albania, where abortion was prohibited during the Communist era for pronatalist reasons. It was not legalized until 1995.

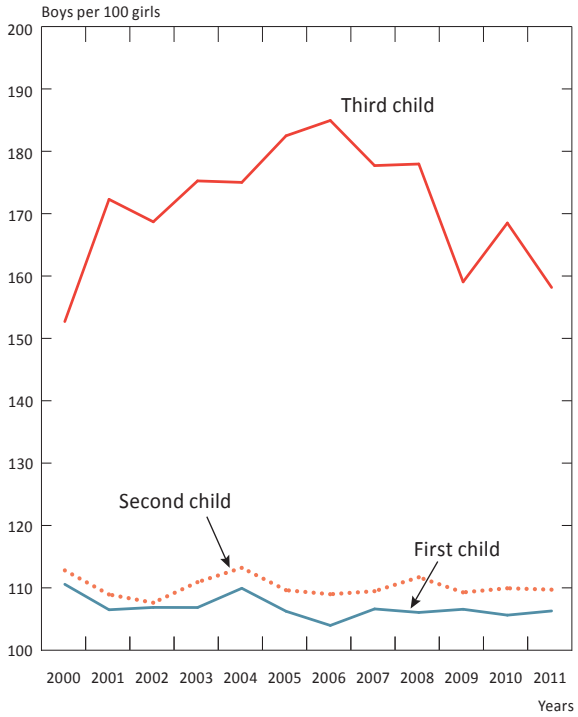
Box 2. Skewed sex ratios in the diaspora

Excess male births have been observed in Europe and elsewhere in diaspora populations, notably among migrants of Asian origin. This is the case for populations of Indian origin in England, for example, among whom a sex ratio of 113 boys per 100 girls has been observed for third births. [12] A similar phenomenon has been reported among Chinese populations in Italy, Indians in Norway and among Albanian immigrants in Greece and Italy. It has also been observed in the United States, with sex ratios of around 110 for third births among the Chinese, Korean and Indian populations. There is no way of knowing if the problem exists in France due to the absence of data by ethnic origin.

In countries where prenatal sex selection is practically non-existent, these populations of immigrant origin account for a very small proportion of total births, so national sex ratios are barely affected. However, the existence of these preferences in the Asian diaspora populations, far from their countries of origin, shows that sex selection is linked more to the cultural attitudes brought by migrants to their host country than to the circumstances of the origin country (such as restrictive birth control policies like those enforced in China). These practices are likely to wane among populations of immigrant origin who settle permanently in industrialized countries, as patriarchal norms become progressively weaker and the status of women improves.

Caucasus, however, decades of socialism which had eradicated many of the most flagrant forms of gender discrimination in society (in employment, education or socio-political autonomy) did little to reduce inequalities within the family unit. The family is still based upon the traditional male lineage, and the presence of sons, who often live with their parents after marriage, further strengthens family bonds. These strongly patrilineal and patrilocal structures not only remained robust throughout the Communist era, but even grew in strength after the fall of the Soviet regime. [9] In the ensuing period of widespread upheaval, the rapid withdrawal of state control led to a breakdown in solidarity and to mass unemployment that shook the fabric of society. The family structure was the social institution most resilient to such change. It provided its members with guaranteed security, financial support and housing, and offered a substitute for the shrinking state bodies and the immature market mechanisms that were incapable of regulating economic activity during the socioeconomic transition period. However, it is difficult to understand why no sex imbalance is observed in neighbouring countries with comparable social and historical backgrounds and with similar patriarchal values (Northern Caucasus and Central Asia for example).

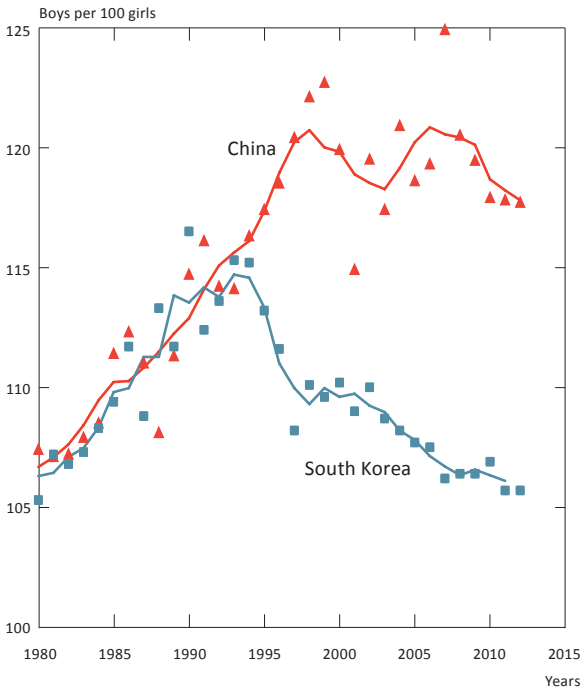
Figure 2. Sex ratio at birth by birth order in Armenia, 2000-2011



(C. Z. Guilmoto et G. Duthé, *Population and Societies*, no. 506, Ined, December 2013)

Source : Vital records.

Figure 3. Sex ratio at birth in South Korea and China, 1980-2012



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Source : Vital records.

Notes : ▲ ■ : observations —— : smoothed curves.

In countries where sex selection is practiced, the probability of having a third child tends to double or even triple if the first two are girls, and the sex ratio at birth increases sharply for third births, often exceeding 120 or 130. In the 2000s, the ratio even reached 185 for third births in Armenia, probably a world record (Figure 2). [2]

Conclusion

The countries of Eastern Europe affected by a skewed sex ratio are sparsely populated, with a total population of just 23 million, equivalent to that of Shanghai, where the sex ratio at birth is also abnormally high. Asian diasporas are even smaller, so the effect of prenatal sex selection on the future demography of Europe is hardly comparable with the massive impact of such practices on the Asian giants. Moreover, certain countries such as Albania and Armenia are losing large numbers of young adults, mainly men, who are emigrating to Italy or Russia, thereby attenuating the effects of excess male births.

The discriminatory practices made possible by modern technologies are viewed as a practically "normal" feature of demographic choice in these countries, and reveal the true extent of gender inequalities. With technological progress, it will perhaps become even easier to determine the sex of an unborn child using a fetal blood test or other preconception methods, thus further encouraging sex selection. These methods are now at the centre of a new Europe-wide bioethical debate. [10] In the meantime, East European populations characterized by strong patriarchal values are testing a system of demographic laissez-faire on a local scale. Governments and civil society have paid little attention to this question, often to due relative ignorance of the problems associated with skewed sex ratios at birth. Recent efforts to understand the phenomenon stem more from international concern [11] than from local awareness, and have not yet given rise to any practical response in the form of campaigns to prevent sex-selective abortion or more far-reaching policies to restore gender equality within the family.

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Abstract

In several countries of Eastern Europe, the sex ratio at birth is abnormally high. This is especially the case in the Southern Caucasus (Armenia, Azerbaijan and Georgia) where it has sometimes exceeded 115 boys per 100 girls (a normal sex ratio is 105), and to a lesser extent in the Western Balkans, around Albania, where it hovers around 110. The persistence of traditional patriarchal values is central to the son preference observed in these regions, but the fertility decline and the development of modern healthcare services under the new political and economic regimes have raised demand for prenatal sex selection.

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