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Demographics: Ukraine's major Achilles heel

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Abstract:

Before the war, as a result of its low birth rate and high emigration, Ukraine was the country with the worst ageing prospects in the world.

The armed conflict, which has degenerated into a war of attrition, has further worsened its demographic future.

The disproportionate population between the two contenders: Kiev and Moscow, gives a clear advantage to the latter. The smaller population, with the additional loss of the Russian-occupied territories, limits Ukraine's ability to mobilise and rotate its troops.

The armed conflict has also provoked a large wave of migration, half of which is made up of women and a third of children.

If the armed conflict drags on too long, most of the refugees will not return, many of the younger generation of males will die and the demographic future of the Ukrainian nation will be further compromised.

Even if Ukraine wins the war, it could lose the peace. In the event of defeat, not only will the sacrifice have been futile, but it could mean the ultimate ruin of the nation.

Keywords:

Ukrainian war, Russian Federation, demography, birth rate, emigration, mobilization.

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La demografía: el gran talón de Aquiles de Ucrania

Resumen:

Antes de la guerra, como consecuencia de su baja natalidad y alta emigración, Ucrania era el país con peores perspectivas de envejecimiento del mundo.

La contienda armada, que ha degenerado en una guerra de desgaste, ha venido a empeorar aún más su futuro demográfico.

La desproporción de población entre los dos contendientes: Kiev y Moscú, da una clara ventaja al segundo. La menor población, a la que hay que restar la de los territorios ocupados por Rusia, limita la capacidad de movilización y de rotación de las tropas ucranianas.

El conflicto armado ha provocado además una amplia oleada migratoria, compuesta en su mitad por mujeres y en un tercio por niños.

Si la contienda armada se alarga demasiado, la mayoría de los refugiados no volverán, muchos varones de la escasa generación de jóvenes morirán y el futuro demográfico de la nación ucraniana quedará aún más comprometido.

Incluso ganando la guerra, Ucrania podría perder la paz. En caso de derrota, no solo el sacrificio habrá sido estéril, sino que podría significar la ruina definitiva de la nación.

Palabras clave:

Guerra de Ucrania, Federación Rusa, demografía, natalidad, emigración, movilización.

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Introduction

Before the Russian invasion in February 2022, Ukraine had a serious demographic problem as a result of a combination of an acute birth crisis and high emigration. This had made it the country with the worst prospects for population ageing and sustainability in the world. The war has only worsened the situation.

Japan and South Korea have a higher proportion of older people than Ukraine, which is due to their greater longevity. However, they also have a more harmonious demographic structure, without such steep drops in the younger generations, which means that it will take longer for them to halve their population. Furthermore, their greater economic and social development, and especially their healthcare system, allows them to make the older generations less of a burden on the nation.

Ukraine's demographic structure therefore not only presents an obstacle to the success of its military operations, but also, if the armed conflict drags on for too long, the population future of the Ukrainian nation will be further compromised.

As the military confrontation has degenerated into a war of attrition, the size of the population, especially the male population of conscript age, together with the economic-industrial dimension to support the military effort and the will to fight are the factors that determine its outcome.

Thus, in the event of a Ukrainian victory, which is more and more distant on the horizon, it will most likely be a Pyrrhic one. Even if Kiev were to win the war, it stands to reason that it would lose the peace. How can a country devastated by years of intense fighting on its territory be rebuilt without a generation of young people to sacrifice for? Will the women and children who have left their homeland return to a country with no future?

There is a lack of accurate and reliable data on its demographic development. The most recent (and only) census of post-Soviet Ukraine was conducted over 20 years ago, in 2001. Part of the population – which varies over time – is outside the country and part of the population is in Russian-controlled territory. There are also population flows on both sides of the front line, which are difficult to determine. The information presented here is therefore inevitably inaccurate, although sufficiently approximate. Thus, knowing the dimension of the problem in broad terms, it is possible to make both a strategic and a sociological assessment.

This paper aims to highlight that Ukraine's demographic circumstances are not only a serious military problem, as they condition the process of mobilising the population for war, but also that, with a war horizon in which it seems very difficult for Kiev to regain territory seized by Russia – it might even lose even more –, the sacrifice asked of Ukraine might not be proportionate to the population cost it will pay, further exacerbating a pre-existing problem that was already conditioning the biological-genetic survival of the Ukrainian people.

Background

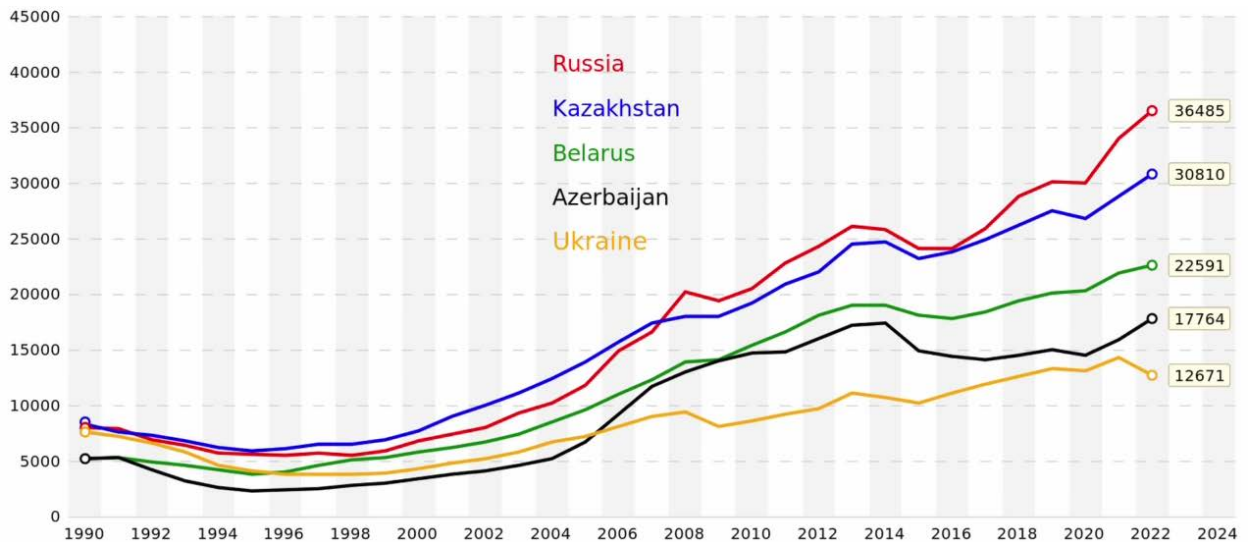


Figure 1: Evolution of GDP per capita in various post-Soviet states, source: KaiserBauch

In the three decades before the war, Ukraine's population fell by almost 20%, a figure clearly higher than that of the rest of Eastern and South-Eastern Europe¹. As Eberstadt explains, there was an abrupt fertility crisis in all countries of the Soviet Union (USSR), even before its implosion². This began with the Chernobyl nuclear accident, which was both a threat to the population and definitive proof of the obsolescence of the Soviet

¹ TVEDORSTUP, Marina (2023). "The Demographic Challenges to Ukraine's Economic Reconstruction". *Vienna Institute for International Economic Studies (WIIW)*. Available at: [The Demographic Challenges to Ukraine's Economic Reconstruction \(wiiw.ac.at\)](https://www.wiiw.ac.at/the-demographic-challenges-to-ukraine-s-economic-reconstruction).

² EBERSTADT, Nicholas (2011). "The Dying Bear. Russia's Demographic Disaster". *Foreign Affairs*.

communist system. It led to a profound crisis of faith in the political-ideological system underpinning the USSR. The subsequent collapse of the Soviet empire and the economic and social deterioration that followed further exacerbated the demoralisation of the population.

With no hope for the future, the population began to have fewer and fewer children and to look to emigration as an alternative, especially the young. Mortality also increased significantly, mainly due to the deterioration of the healthcare system, subsequent cardiovascular diseases, alcoholism, suicides and occupational accidents.

In Ukraine, where the nuclear power plant was located and where, as Figure 1 shows, the economic and demographic situation was even worse than in other states resulting from the collapse of the USSR, there was an even lower birth rate and higher emigration. This was caused by persistent corruption and the unpredictability of the business environment, which prevented foreign investment and, from 2014 onwards, also the security risk that Russia posed to its neighbour.

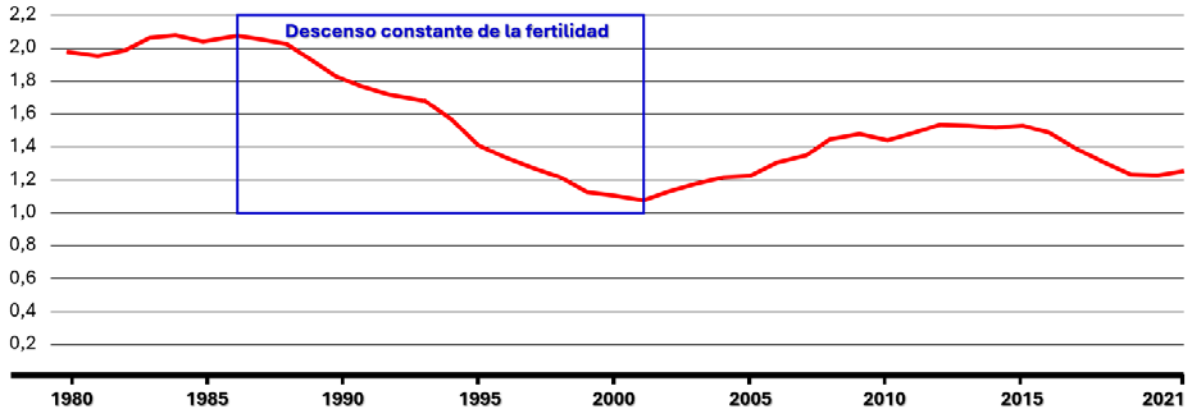


Figure 2: Evolution of the fertility rate in Ukraine, source: developed by author with data from Datosmacro

Thus (Figure 2), in 1986 (date of the Chernobyl accident) its fertility rate was 2.08 and fell steadily, year after year, to 1.08 in 2001³. From that year onwards, the birth rate improved slightly, but the crisis of 2014 caused it to fall again and emigration increased. Thus, by

³ [Ukraine - Birth Rate 2021 | Datosmacro.com \(expansion.com\)](https://datosmacro.com/expansion.com)

the start of the war, Ukraine's population had shrunk from 52 million in 1993, the demographic peak, to around 43 million at the end of 2021⁴.

Another demographic characteristic of Ukraine, which it shares with Russia, is the marked difference in life expectancy between men, 68 years, and women, 78 years (in Spain, 80 and 85). This is due to a number of factors, with alcoholism, which is more prevalent among men, being the most important determinant.

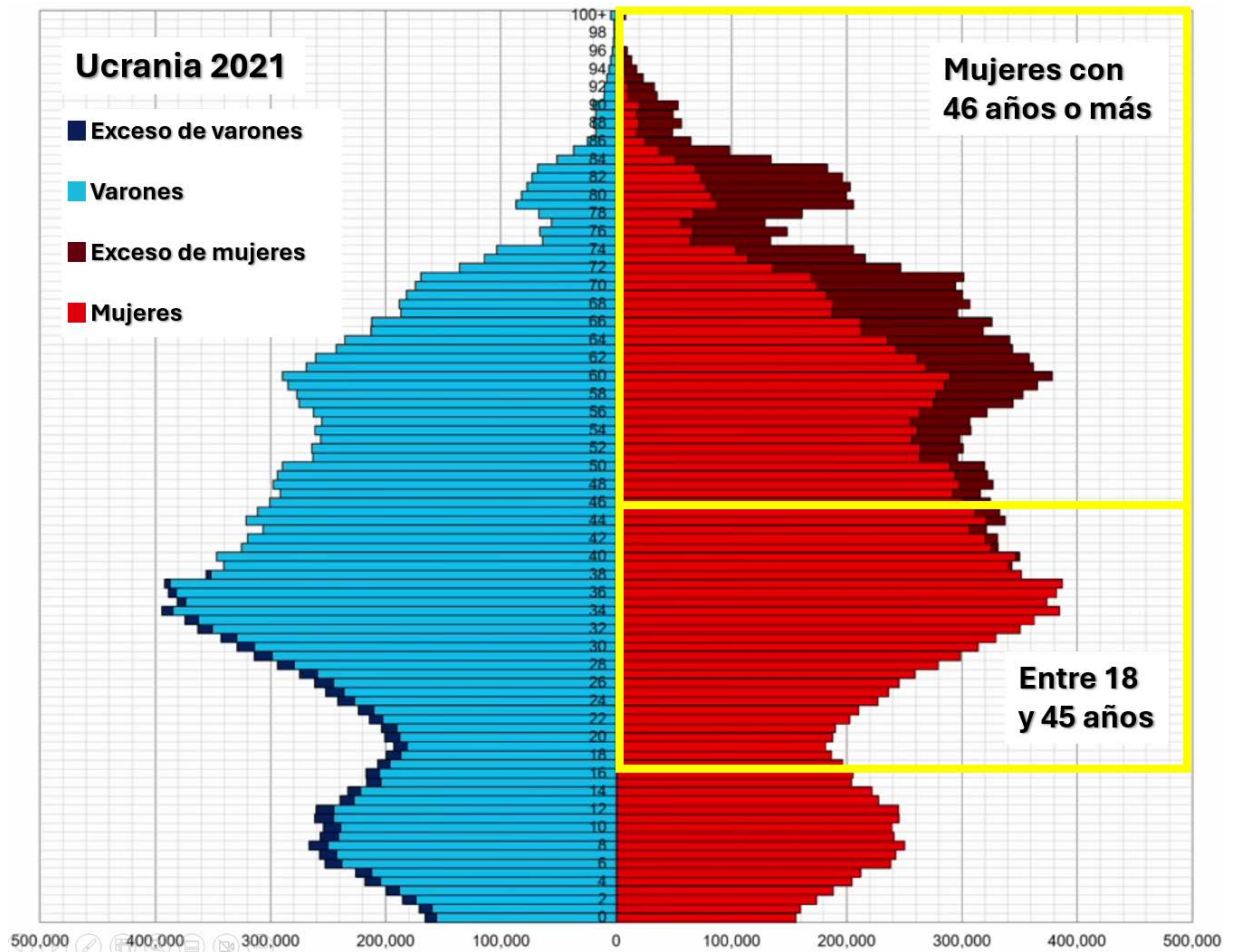


Figure 3: Ukraine's population pyramid in 2021, source: developed by author

The result was a highly unbalanced demographic pyramid (Figure 3) that had made Ukraine, even before the war, the country with the worst ageing prospects in the world. The phenomenon was even more pronounced among women than among men. As a

⁴ [Ukraine Population \(2024\) - Worldometer \(worldometers.info\)](https://worldometers.info/ukraine-population/)

result, more women were over the age of childbearing (46 and over) than were of childbearing age (between 18 and 45), with a clear trend for the proportion to continue to fall. For example, there were 380,000 women aged 60, a figure similar to that of the 34-37 age group, and fewer than 200,000 in the 17-21 age group.

With such a demographic pyramid, not counting the consequences of the armed conflict, Ukraine's population was set to be halved within fifty to sixty years, long before the end of this century. With the passage of time, only a small indigenous remnant would remain, which would end up ceding the national territory to a population of other origins.

The effect of war on demographics

In one way or another, the war will alter this process: in the short term for the worse, in the long term it can act as a catalyst, but also as the final straw.

If at the end of 2021, before the start of the armed conflict, there were around 43 million inhabitants within Ukraine's 2013 borders, the annexation of Crimea to Russia in 2014 meant a de facto loss of more than two million inhabitants and the rebel territories of the Donbas subtracted another million. This reduced the population under Kiev's control to fewer than 40 million.

For its part, the war itself has caused between 6 and 8 million refugees to leave the country, of whom only a little more than a million have returned. This is not just a quantitative issue, as it appears to be losing a disproportionate number of its best educated citizens⁵. Although there are no official figures, it can be assumed that Ukraine has suffered hundreds of thousands of dead and wounded. If we add to this population reduction those in the new territories that the Russian army has seized from its neighbouring country⁶, we find fewer than 30 million citizens in the territorial space that the Ukrainian government controls.

At this stage, it is difficult to predict how many refugees will return to the country when the war ends. According to a July 2023 UNHCR survey, 18% of those displaced abroad

⁵ TVEDORSTUP, Marina. Op. cit.

⁶ In March 2024, the Russian Central Election Commission (CEC) published data on the number of voters in the annexed territories participating, for the first time, in Russian presidential elections: DPR: 1.971.529, LPR: 1,652,444, Zaporizhzhia Oblast: 470,342, Kherson Oblast: 468,472. Total: 4,562,784 men and women over the age of 18 (eligible citizens).

wanted to return to Ukraine within the next three months and 62% when the necessary security and stability conditions were in place; the remaining 20% were inclined not to return⁷. Moreover, half of the refugees are women and a third are children. It is also estimated that half of under-10s are outside Ukraine, partly in Russia and partly in other countries. Thus, if there is no significant return, the Ukrainian nation's capacity for long-term biological sustenance of its own population will be further aggravated.

We know for reference that after the Balkan war only one third of the refugees returned to their countries of origin.

It is reasonable to assume that the number of Ukrainian returnees will be smaller the longer the armed conflict continues and the more the country is destroyed. The efforts of the international community, and especially Western powers, to rebuild the country will also have an important impact on the return of refugees. The Gaza war and the growing uncertainty over the European security landscape cast an additional shadow of concern, as future scenarios might arise where other issues divert attention from Ukraine elsewhere.

It also has to be assumed that after the war many Ukrainian men will leave the country to join their families in a more advantageous economic and social situation outside its borders. The demand for skilled labour from neighbouring countries, both in the West and in Russia itself, can also drain Ukraine of its population.

As might be expected, the war has caused the fertility rate to fall from 1.16 children per woman in 2021 to 0.9 in 2022 and 0.7 in 2023⁸. This, together with the departure of large numbers of young women, has meant that the number of births in Ukraine has halved in the years of war⁹, with only 187,000 births in 2023. According to Eurostat, 800,000 women aged 18-34 have fled to the countries of the European Union¹⁰. Similarly, life expectancy has also decreased so far during this war from 66.4 years to 57.3 years for men and from 76.4 to 70.9 for women. And this not only because of the tens of thousands of soldiers

⁷ SEGURA, Christian (2023). "Ukraine's demographic drain puts its post-war recovery at risk". *El país internacional*. [Ukraine's demographic drain puts its post-war recovery at risk | International | EL PAÍS English \[elpais.com\]](https://elpais.com).

⁸ Ibid.

⁹ KRAMER, Andrew E. and HOLDER, Josh. 2024. "Can Ukraine Find New Soldiers Without Decimating a Whole Generation?" *The New York Times*.

¹⁰ Ibid.

and civilians killed or wounded, but also because of a worsening of the mental and physical state of Ukrainians that the war situation has caused¹¹.

Nor can we forget the burden that will be placed on the healthcare system – already overburdened by an ageing population – by the high number of wounded, many of them invalids, or the emotional impact of the loss of an only child – the most frequent case in Ukrainian families – leaving parents and grandparents without offspring and, to a large extent, without hope and a reason to sacrifice for the reconstruction of the country. There has so far been no precedent for a war waged by a nation with such a small number of descendants, and its sociological impact remains to be seen. Intuition suggests that with few young people and children, any post-war period will look very much like a wake.

All these accumulated facts suggest that a very protracted war will have irreparable consequences for Ukraine and its people.

Ukraine's population and mobilisation capacity

The military confrontation between Russia and Ukraine has degenerated into a war of attrition. This means that each side expects to exhaust the military resources and the will and determination to fight of the other, assuming heavy material and human losses. In such conditions, Russia's demographic advantage is overwhelming. Compare the 30 million or so people Kiev has available to sustain the war with the 146 million plus the 7 million or so it has taken from Ukraine (Crimea plus occupied territory) that Moscow has at its disposal. There is therefore a pressing need to mobilise more troops in Ukraine.

Furthermore, Russia is expected to launch a major offensive from the end of May onwards. In this case, if it is significantly successful, Kiev will need to mobilise more troops in the short term.

As we can see in Figure 4, in the age brackets of young men aged 18-35, the age brackets that countries most commonly mobilise to go to war, with each lower year, the volume of said bracket decreases, going from 350,000 men aged 35 to 230,000 aged 30, 150,000 aged 25 and 140,000 aged 23. From that age onwards, there is some recovery. The age

¹¹ SEGURA, Christian. Op. cit.

group with the highest number of men is the 40s, with a total of 410,000 men, which is almost three times the number of young men aged 23 mentioned above.

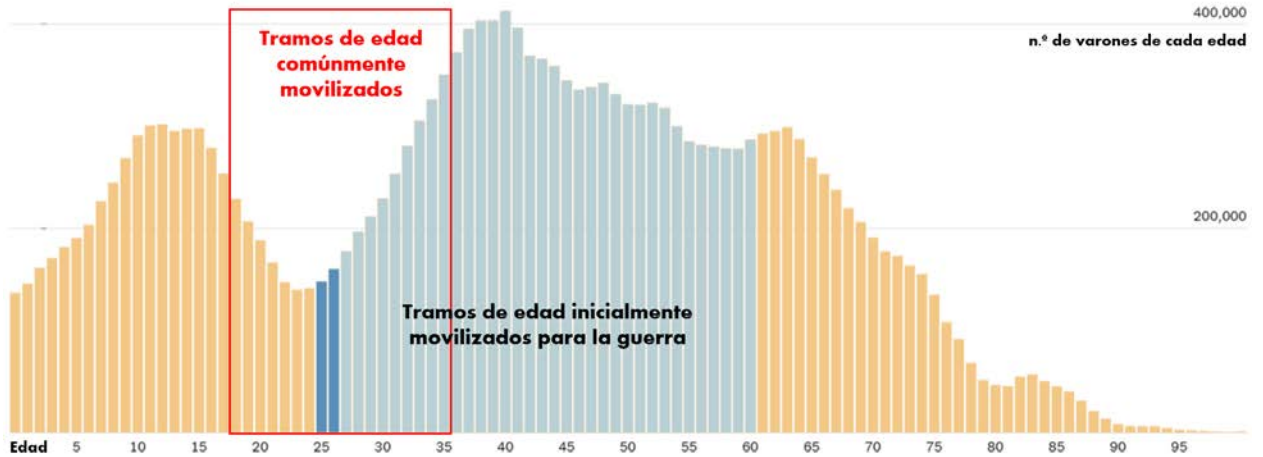


Figure 4: Ukrainian male population pyramid in 2023, source: developed by author with graph from The New York Times

In addition, around 650,000 men of fighting age are estimated to be in the European Union, having evaded military service by one means or another. Ukraine has continued to request their extradition, but so far European countries have been reluctant.

The data given about the shortage of men in the most typical generation to be drafted, has led the Ukrainian army to initially mobilise the population aged between 27 and 60, resulting in the average age of the Ukrainian soldier being an unusually high 43. It is therefore very clear that Kiev is trying to preserve as much as possible and prevent the decimation of the male population in the age groups that are the fewest in number, which are key to the future survival of the nation. Compare this with the fact that in the occupied territories of Ukraine, Russia mobilises boys from the age of 18¹².

Moreover, in addition to the 45,000 women currently serving in Ukrainian law enforcement, the number of women fighting for their country is estimated at 5,500, in combat roles such as snipers, artillery specialists and assault forces¹³.

¹² KRAMER, Andrew E. and HOLDER, Josh. 2024. Op. cit.

¹³ GUMENYUK, Natalia (2024). "Brave New Ukraine. How the World's Most Besieged Democracy Is Adjusting to Permanent War". *Foreign Affairs*.

However, because the more than one million armed personnel covering the various fronts are battered and exhausted – many of whom have been fighting relentlessly for two years now and tens of thousands have been killed or seriously wounded¹⁴–, Kiev has been forced to take the measure of lowering the age limit for conscription by two years, from 27 to 25. This decision has also been accompanied by the abolition of certain exemptions. The new mobilisation law, which was signed on 16 April, addressed a particularly sensitive issue. Subject to more than 4,200 amendments, it required months of contentious debate in the Ukrainian Parliament¹⁵.

“For many of the country’s military leaders, a top priority is providing a fair deal for those who have been risking their lives for two years already, even as millions of other Ukrainians have preserved a relatively normal way of life away from the battlefield. Thus, as new troops are mobilized, the army is under pressure to release some of its most experienced service personnel. But it is no secret that the vast combat experience that these veterans have cannot be matched by even the best-trained recruits, creating a dilemma for the army”¹⁶.

There is every indication that the measures taken will be insufficient: many of the limited group of 25- and 26-year-old men are already serving in the army on a voluntary basis, live in occupied areas or are outside Ukraine. Others have jobs or disabilities that exempt them from compulsory military service.

The Ukrainian government's reluctance to lower the age further reflects the serious lingering impact that the war will have on future demographics. For the time being, however, the decline in the number of women of childbearing age is having a more negative impact on future demographic projections than declines in the young male population. When the war is over, if a significant proportion of young Ukrainian women were to return home, the situation would be reversed.

If the war drags on beyond this year, which will depend on the quantity and quality of military aid Kiev receives from abroad, the government will be forced to draft more men from all age groups under 60. Thus, since the beginning of the conflict, martial law has prohibited men between the ages of 18 and that same age, those who may potentially be

¹⁴ KRAMER, Andrew E. and HOLDER, Josh. 2024. Op. cit.

¹⁵ GUMENYUK, Natalia. Op. cit.

¹⁶ Ibid.

drafted, from leaving the country, with a few exceptions such as those who are the parents of more than three children¹⁷.

As we have seen, military needs and the demographic prospects for the biological continuity of the Ukrainian people are in clear contradiction and the dilemma does not seem to have a solution. If the war ends in defeat, the sacrifice will not only have been futile, but the nation could be mortally wounded. But if it is won, there is no guarantee that peace will not be lost, precisely because of the lack of a young generation that can represent its future and provide continuity to the demographic pyramid. In addition, the small population in terms of age and working conditions compared with those who will already live on a pension due to age, illness or disability, could succumb under the economic weight of supporting the latter.

Conclusion

Before the war, Ukraine was already the country with the worst ageing prospects in the world. The low birth rate and high emigration were the cause of this worrying demographic situation.

Armed conflict can make the population outlook catastrophic.

From 52 million inhabitants in 1993, Ukraine had already lost 9 million by 2021. The war has meant that Kiev has suffered a temporary loss of another 6-7 million from the large migration wave and a similar number from the population remaining in Russian-controlled territories. This is compounded by the number of dead and wounded, who must number in the hundreds of thousands.

In a war of attrition, such as the one under consideration, Moscow, which has four times the population to mobilise troops from, has a significant advantage.

If the war drags on, the demographic crisis will worsen, the likelihood of refugees returning will probably decrease, the birth rate will continue to fall, more people will die, the economy will be in worse shape, and the long-term prospects for the Ukrainian nation's biological survival will be bleaker.

¹⁷ SEGURA, Christian. Op. cit.

If, in the end, the Kremlin ends up imposing its will on Ukraine, the sacrifice will not only have been futile, but Ukraine will have been mortally wounded.

Even if Kiev were to emerge victorious, in what spirit will a nation that has lost the generation that represents its future strive to rebuild its tomorrow?

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