The triple-burden of depopulation in Ukraine: examining perceptions of population decline

Brienna Perelli-Harris, *University of Southampton*
Yuliya Hilevych, *University of Groningen*

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Abstract

In February 2022, Russia invaded Ukraine, leading to severe population loss as millions exited the country and casualties mounted. However, population decline in Ukraine had been occurring for decades, due to the triple-burden of depopulation: low fertility, high mortality, and substantial emigration. Ukraine had also already experienced years of armed conflict and large-scale displacement after the Russian-backed separatist movement, which started in 2014. This study investigates perspectives on depopulation using online focus groups conducted in July 2021, seven months before the current invasion. We compared discussions in eastern Ukraine, including rural villages; the IDP-receiving city of Mariupol; the large city of Kharkiv; and occupied Donetsk. Participants pointed out that cities were growing at the expense of rural areas. The situation in Donetsk was bleak due to mass emigration, but some pointed to a recent increase in births. Overall, participants acknowledged the triple-burden of depopulation in Ukraine, and consequences such as a shrinking labor force and rapid ageing.

Key words: Depopulation, Ukraine, low fertility, emigration, population decline

Introduction

Russia's war against Ukraine has brought immense suffering to the Ukrainian population. Direct aggression has killed tens of thousands of Ukrainian soldiers and civilians, and countless others have died due to indirect causes such as lack of medical care, disease, and malnutrition. The threat of violence has led to the largest displacement in Europe since World War II, both inside and outside the country. The scale of the refugee flow has been staggering – as of September 2022, 7 million people had left the country - more than the entire population of Norway or Finland (UNHCR 2022). Another 8 million had been internally displaced, fleeing to western or central Ukraine (IOM 2022). Such conditions have also undoubtedly led to a sharp decline in fertility, as childbearing has been postponed indefinitely. These factors have created a vortex of population decline, exacerbating a population process already long in progress.

Although Ukraine's population crisis is clearly evident now, the process of depopulation has been occurring for decades (Romaniuk and Gladun 2015; Coleman 2022). Ukraine has had one of the highest rates of population decrease in Europe, with only Latvia and a few Balkan states recording similar declines (Eurostat 2020). Unlike most countries experiencing extreme population decline, however, Ukraine's population is relatively large. In 2020, Ukraine was the eighth largest country in Europe (sixth if not including Russia and Turkey). Ukraine's population peaked at 52 million around 1993 and has been steadily declining since; however, due to the lack of an accurate census, the exact size of the population remains unknown. Ukrainian demographers have long been concerned about all three factors impacting population structure (e.g. Steshenko 2001, Chuiko 2001), what we call the "triple-burden of depopulation:" low fertility, high mortality, and significant emigration. Population decline has also been a subject of media reports (e.g. Golub 2018 and Kramar 2019) and even satirized in film (Deserted Country 2020). Yet little is known about whether the Ukrainian society itself has been aware of depopulation or considers it to be a problem.

Ukraine is also one of the few countries with low fertility to experience war. Even before Russia's invasion in February 2022, Ukraine had experienced 8 years of armed conflict. In 2014,

fighting broke out in eastern Ukraine, ending with the effective secession of two areas of the "Donbas" region where three million people reside. These territories have been an unknown entity, with little information and no international recognition, until Russia recognised them in February 2022. The war in the Donbas forced 1.5 million Internally Displaced Persons (IDPs) to leave their homes and flee to other regions of Ukraine or Russia (IOM 2021). Although some IDPs settled permanently in other parts of Ukraine, and others returned home, many were caught in a situation of "protracted displacement" that continues for many years. Thus, Ukraine's population has been declining not only due to natural decrease, but also in the context of conflict and substantial population displacement.

Although population decline in Ukraine has been acknowledged, the country has largely been missing from academic discourse, partially due to the lack of reliable and conventional statistical indicators. Thus, alternative approaches are needed to understand population decline in Ukraine. In this study, we used focus group methodology to investigate general perceptions of low fertility and depopulation. Focus group research aims to explore social norms and attitudes in greater depth than possible with surveys, yielding insights into how people think about social processes. The conversational format allows for multiple opinions and perspectives to emerge, which can then feed into underlying explanations for why population change is occurring (Perelli-Harris and Bernardi 2015).

Our focus groups took place in July 2021, 8 years after the original conflict in eastern Ukraine. Working with a Ukrainian research agency, we conducted 16 focus groups online. The groups were divided by gender and took place in urban and rural areas. We were particularly interested in the experiences of those who fled the conflict. Thus, we conducted six focus groups with IDPs and six with residents of regions bordering the conflict area. We also had the unique opportunity to conduct four online focus groups with residents of Donetsk, the largest city in the Donbas. Although focus groups have conventionally been conducted in person, the online methodology provided several advantages. First, we would not have been able to conduct

face-to-face focus groups in Donetsk, because neither we nor the Ukrainian survey agency were allowed to visit this area. Second, because many people had become accustomed to online communication during the pandemic, we found participants were comfortable participating in the discussions and sharing their attitudes. The discussions were lively and informative, providing a glimpse into everyday life in these regions.

Our study explored whether and how Ukrainians perceived population decline, their stated reasons for the decline, and whether they thought it had negative social and economic consequences. We aimed to answer the following general research questions. 1) Had focus group participants perceived a change in their local surroundings over the past few years? 2) Did perceptions differ by whether participants lived in rural or urban areas? 3) How did participants in Donetsk, in the Russian-backed separatist territory, view population change in their city? 4) Was population decline in Ukraine a problem? 5) How did the participants perceive the causes and consequences of population decline for the country? Although anthropologists have attempted to describe and find meaning in the emptiness of shrinking settlements in eastern Europe (see, for example, Dzenovska's project on Emptiness, 2018), few studies have approached the topic through a demographic lens. By doing so, we can better understand whether and how a society recognises population dynamics, and the challenges associated with population decline.

Six months after our focus groups, Russia invaded Ukraine, destroying the homes and lives of our focus group participants. When originally choosing our research sites, we deliberately focused on eastern Ukraine, close to the contact line and where the majority of IDPs had settled. As of writing in November 2022, these areas have been severely impacted by Russia's aggression. Kharkiv is under constant shelling and half the population of 1.5 million has fled. The villages along the edge of the previously frozen conflict have become the front line in battles reminiscent of World War II. Mariupol has been completely obliterated in one of the most protracted and heinous assaults of the war. Thus, although we do not know the fate of our participants, we assume that all have had their lives turned upside down and forced to leave their homes, some for the second time in their lives.

Background

Depopulation in Ukraine

[Figure 1 about here]

As can be seen in Figure 1, Ukraine's population was just under 52 million when it gained independence in 1991. The population then steadily decreased until 2014 when it experienced a sharp contraction due to the removal of the Donbas occupied territories from official statistics. By 2021, the population was estimated to be around 41 million, a loss of over 10 million in 20 years (State Statistics Committee 2022). As discussed above, Ukraine has been experiencing a "triple burden" of depopulation; however, the main reasons for the decline in population are reflected in the rate of natural decrease (Figure 2a). Since the collapse of the Soviet Union, the natural rate has declined primarily due to the very low fertility rates of the late 1990s and early 2000s. [1] In 2001, Ukraine experienced the lowest fertility rates in the world when the TFR reached 1.1 (Perelli-Harris 2008, Perelli-Harris 2005). Although some of the fertility decline was due to the postponement of first births; the majority of the initial decline was due to fewer second and higher order births (Perelli-Harris 2005). Increases in mortality also contributed to the natural decrease, as male life expectancy dipped to around 61 years. In 1992, the crude birth rate fell below the crude death rate (Figure 2b). However, in the early 1990s, when the Soviet Union was collapsing, the population growth rate increased due to an influx of migrants. Subsequently the net migration rate dipped again, reflecting Russians returning to Russia as well as labor migration. Thus, the late 1990s saw the rate of population decline fall as low as -10.7.

[Figure 2a and 2b about here]

After 2001, the crude death rate stabilised and the crude birth rate started to increase again. Like other eastern European countries, Ukraine has had a policy on childbirth payments and

[1] Albeit limited, historical studies suggest that depopulation in Ukraine, started already after World War II (Romaniuk and Gladun 2015). For example, between 1951 and 1987, the decline of 28% was observed in eastern and southern Ukraine (Pallot 1990). Similarly, the emergence of low fertility traces its roots to the postwar period in urban areas in eastern Ukraine (Hilevych 2016, 2020).

maternity leave, which with some adjustments have been in place since 2005 (Perelli-Harris 2008). Although not as extensive as maternity capital in Russia, the policy has deliberately attempted to increase fertility rates. In 2010, the maternity grant increased with each successive child (Wesolowski and Billingsley 2022). By 2012, the TFR had increased to 1.53 (State Statistics Service of Ukraine 2019). While some of the recuperation was due to the end of tempo distortions from first birth postponement, the quantum of childbearing, including second and higher-parity births, also increased (Goldstein et al 2009). Since 2014, childbirth payments In Ukraine were set at 41 280 UAH (~1.065,18 Euro), regardless of the number of births (MISSCEO 2021). And in 2019, additional payments were introduced for large families with three and more children (Ministry of Social Policy 2019). As a result of more births, the natural rate of decline started to increase. Out-migration also stalled and the net migration rate hovered around zero, resulting in an increase in the population growth rate. However, it remained below 0 and in 2012 only peaked at -1.8 indicating that the population was still shrinking.

Subsequently, political turmoil, war, and instability most likely led to population decline as the crude birth rate started to fall again, despite the aforementioned maternity policies (Figure 2b). The TFR steadily declined, reaching a low of 1.23 in 2019 (State Statistics Service of Ukraine 2019). Although the crude death rate was relatively stable throughout this period, the decline in the birth rate was sufficient to produce a declining natural rate again. And although migrants entered Ukraine - possibly international students or labor migrants from Central Asia (Coleman 2022) - the increase in net migration rate did not offset the declining rate of population. Finally, as Covid struck in 2019-21, the crude death rate increased to a high of 17.3, and the birth rate fell to a low of 6.1, resulting in both a decline in the natural rate and population growth rate. By 2021, the time of our focus group interviews, the rate of population decline was as fast as it had ever been (-10.7), signifying a rapidly shrinking population.

[Figure 3 about here]

It is important to note that Ukraine's population decline has not been even, with some areas rapidly declining and others growing. Figure 3 shows the rate of natural change across Ukraine, with darker red indicating a natural population decrease of -22 to -14 per 1000 people, and dark green indicating a population increase of 1 to 7. According to the map, the northern and central regions were most likely to experience declines, while parts of north-west and south-west Ukraine increased in population. Western Ukraine has long had higher fertility rates than eastern and central Ukraine due to its rural traditional background, supported by the Ukrainian Greek Catholic church. A study using survey data found inhabitants of these regions also tend to prefer Western-type democracy and a market economy, which is in turn associated with higher second birth rates (Perelli-Harris and Permyakova 2018). Note also that population decline is more likely to happen in rural regions, with increasing numbers moving to the cities. In the eastern regions where our focus groups took place, some of the districts near the contact line had a population deficit, potentially due to continued hostilities and deterioration of conditions. Below, we point out how our focus group participants are aware of different regional patterns of population change and compare rural and urban areas.

War in eastern Ukraine since 2014

Ukraine's population has also been impacted by armed conflict and violence. Russia's annexation of Crimea in 2014 and the rebellion by pro-Russian separatists effectively decreased Ukraine's government-controlled population by around 2.5 million (State Statistics Service of Ukraine 2019). Millions fled the fighting in 2014, and by 2015, Ukraine was the fourth largest producer of new IDPs in the world. Over time, some IDPs returned home, but most remained in Ukrainian territories, resulting in a situation of protracted displacement (defined by UNHCR as five years). The Ukrainian government estimated that in 2021, around 1.4 million IDPs lived in the government-controlled areas of Ukraine (UNHCR 2021). Most of the IDPs settled in the east, which motivated the location of our focus groups. Several large cities, such as Kharkiv and Mariupol, grew rapidly due to the influx of IDPs, while rural areas in Ukraine and parts of the Donbas depopulated

(UNHCR 2021) In this study, we capture perceptions of both regional and national population decline in eastern Ukraine before the current full-scale war.

Methodology and data

In this study, we use qualitative methods to delve into the reasons underlying low fertility and depopulation in Ukraine. Focus group research is intended to elicit social perspectives, essential for understanding context-specific phenomenon and generating research hypotheses (Morgan 1998). A focus group is a small group of individuals (usually 6-8 people) that discusses topics organized around a central theme, with the discussion facilitated by a trained moderator. Because focus groups rely on purposive sampling techniques, they are not representative of the population.

Due to the Covid-19 pandemic and continued fighting in the occupied territories, conventional in person focus groups were impossible to hold; thus, the focus groups had to be conducted online using Zoom. The online format resulted in a relaxed atmosphere, as participants were able to join the discussion from the comfort of their home. We employed a survey agency, the Kyiv International Institute for Sociology, to recruit respondents in local public areas (e.g. marketplaces, bus stations), from a database of prior participants, and with snowball methods. The agency conducted an online screening interview to ensure participants met the criteria (i.e. aged 18-45) and the quotas for each group: men and women; IDPs and locals. We divided the groups by gender, because we wanted participants to feel comfortable discussing attitudes towards partnership formation and childbearing, which often differs by gender. We also divided them by displacement status, because we directly asked IDPs about experiences fleeing armed conflict and integration. Four focus groups took place in Kharkiv, a large, well-off city in eastern Ukraine; four in Mariupol, a medium-sized city in Donetsk oblast near the Contact Line; four in rural areas in Donetsk oblast also near the Contact Line; and four in Donetsk. Because travel to Donetsk was not permitted, the agency used Computer Assisted Telephone Interviewing to assist with recruitment. Because the majority of residents in eastern Ukraine speak Russian at home, all focus groups were conducted in Russian.

Sometimes participants inserted sentences or words in Ukrainian. The preference for Russian language did not signify any political views. The participants were paid a small compensation. All the names of people and small locations (villages and streets) were anonymised. In the translation of the quotes, we used the original spelling used by the participants, e.g., Kharkov instead of Kharkiv. Outside of the quotes, for the reasons of consistency throughout the paper, we use Ukrainian spellings of the cities, i.e. Kharkiv, Mariupol, Kyiv etc. The ethics for the study was approved by the University of Southampton.

Each focus group consisted of 8-9 participants; in total, 134 people participated across the 16 focus groups. The discussions were guided by a set of open-ended questions about population decline at the national and local levels; partnership formation; and childbearing intentions. The discussions started with questions about general problems in the past year and experience with the conflict in the Donbas or as an IDP. We then asked who they thought had remained in Donbas, in order to gauge perceptions on depopulation in this area. Subsequent questions delved deeper into how the population around them had been changing, both in their local area and in Ukraine as a whole. We specifically asked if they saw population decline in their country as a "problem". The following questions about partnerships and childbearing were also useful to understand why population is declining. We probed into whether they thought the number of children born in the country was too few, too many, or just right, and about the ideal family size in Ukraine. The discussions around what influences childbearing decision-making provided insights into how micro-level decisions aggregate up to macro-level population processes.

Note that although the discussions flowed freely and participants seemed to speak openly about their problems and opinions, the political context may have curtailed truly open discussions. Although criticism of the "government" was rampant, few explicitly expressed support for Ukraine or Russia, and none blamed Putin or the Russian government for the war in Donbas. One participant noted that people had stopped talking about the war, as it had led to deep divisions between friends and families. This self-censoring was acute in Donbas, as participants were wary about who was

listening, whether American, Ukrainian or Russian. Although participants complained about transport, hospital care, obtaining documents, and other problems of everyday life, they rarely blamed the separatists or local government, potentially because any protests could compromise their security. Stories circulate about people who have been interrogated or tortured in "basements" for expressing anti-secessionist views (Verini 2022). Thus, while the narratives below appear to be open and honest, they may have only scratched a superficial surface, and deeper opinions may have remained hidden.

Because our main interest was the extent to which people can gauge or understand population change based on personal observation, we asked each focus group the question ''How has the population changed in your hometown/village in the past years? Is this change positive or negative?[2]' To the participants residing in Kharkiv, Mariupol and Donbas villages, we also asked a follow up question concerning the whole of Ukraine: 'Do you think that population decline is a problem. Why yes/no?'[3]. Note that by July 2021 when the focus group research took place, Covid-19 restrictions in Ukraine had been relaxed, and although vaccinations were just becoming available, Covid infections were relatively low. The increased activity after Covid-19 lockdowns inevitably influenced how people perceived their surroundings. Finally, although we asked IDPs about their experience with displacement, it is important to remember that the IDPs may have moved seven or eight years previously, and thus their observations were more likely to reflect the present situation.

Analysis

We started the discussions about population change focusing on perceptions of the situation in participants' local areas. Initially, some focus groups struggled to answer our questions, not understanding what we meant by "population change." Instead, some participants described the

[2] Как менялось население вашего города/села за последние годы? На ваш взгляд, эти изменения положительны или отрицательны?
[3] Как вы считаете, сокращение населения в Украине в целом – это проблема? Почему/почему нет?

general disposition of local people, with participants opining that recently people had become "meaner," more "closed" or prone to disorderly behaviour and alcoholism. Once the question was clarified, participants described, sometimes in great detail, the population changes they observed, using metaphors or references to demographic knowledge from the media, Wikipedia, and even conspiracy theories. In general, we did not observe differences in population perceptions based on IDP status or gender, which were the primary categories by which the FGDs were split. Instead, perceptions differed by location, reflecting urban-rural differences, and whether the local area had experienced an influx of IDPs, or instead depopulation. Below we present the analysis of participants' discussions of local and population changes based on locality: the urban areas of Mariupol and Kharkiv, rural Donbas, and separatist-occupied Donetsk.

Perceptions of local population change in the cities of Mariupol and Kharkiv. The participants from Mariupol and Kharkiv largely shared similar perceptions of population change. While they acknowledged general population decline across Ukraine, they thought any decline was more prominent in rural areas; it was not happening in the cities where they lived. The noticeable population increase in the cities was due to the influx of various newcomers, most notably IDPs who arrived after 2014 from eastern Ukraine. While for Kharkiv these population increases were part of the long-term development of the city from Soviet times, in the case of Mariupol the changes were more recent. As such, we observed a contrast in the perceptions of population decline between the residents of Kharkiv and Mariupol.

"Here the population is changing in different ways"

In Mariupol, the influx of newcomers was a post-2014 development that was for many participants noticeable in their everyday lives. They mentioned longer queues at the shops and administrative institutions, traffic jams, as well as chaos with new buildings and housing:

> [New] houses are built from all directions, once one snatches a place for themselves. Traffic jams have not touched us yet… but there are cars…let's say somewhere in the city center ... for

example, you can't drive up to the supermarket. There are a lot of people here. […] And my personal opinion is that the city is not designed for this. (P4, FGD-1 Mariupol_IDPs_men)

Besides practical issues, the influx of newcomers was seen in a positive light that brought more professionals to Mariupol. For example, new businesses, investors and specialists were seen as contributing to the economic growth of the city.

> People came here with their investments and things got refreshed; something was opened, something was launched, money was poured into something, something that was dead before, now started working. Again, population density increased in the city. (P2, FGD-2 Mariupol_locals_men)

> Active and professional specialists are always a plus. We do not feel that IDPs are more intelligent and are taking away jobs from Mariupolets, because maybe they have some welfare benefits, or something. It feels that, as they say, new blood was added to the old blood and, at the same time, this new blood no worse than the old blood. (P5, FGD-4 Mariupol_local_women)

As the quote below illustrates, Mariupol residents did not necessarily see increased population density as an issue; neither did they perceive the newcomers as a threat or competing for jobs. They also explicitly highlighted the multinational background of the city, and Ukraine more generally, as being a continuous development. The professional diversification of the city through new student and professional populations was seen as a positive development for Mariupol:

> Here the population is changing in different ways. Andrei [previous participant] was right when he said that students not only come from Donetsk, but also from other countries. And it seems that people come here to live, and they really do appreciate the kind of city it is. So, the city is still changing and will be transforming in the coming years. In as much as Mariupol started to change, its population also began to change. (P6, FGD-2 Mariupol_locals_men)

The development of Mariupol and its booming population were also mentioned as coming at the expense of outmigration from other predominantly rural areas. This was framed, however, not as a regional phenomenon but a general one that prevailed across Ukraine:

> P4: My attitude is that they [people] should not leave, so that our country would have a normal standard of living, wages, and work.
>
> P1, P4 [together]: If only we had some stability.
>
> P6: We are unlikely to have it, this stability. Every year it gets worse and worse.
>
> P4: Factories in Mariupol are operating. But in other cities everything is closed. And in the villages, there is nothing to do at all. […] There used to be fields, there were farms, there were clubs, kindergartens... Now even take those villages near Mariupol…. Kindergartens do not work; schools do not work. (FGD-3 Mariupol_IDPs_women)

"The bulk of Kharkiv residents are not Kharkivites"

In Kharkiv, the participants perceived the increased population as putting a strain on resources and infrastructure. Despite the city having a well-developed underground metro system, the participants noticed an increase in traffic jams and the emergence of new retail shops, which they associated with population growth. They also mentioned that population pressures were noticeable in the housing market, which had become more competitive for renters and expensive for buyers.

> Judging from the traffic jams, they have increased in the past 5 years. If you look from the perspective of the number of retail spaces, kiosks, shops, these numbers also went up. That means that there must be enough purchasing power. There are more people, that's for sure. New buildings are being built; apartments are being bought up. Renting an apartment has become challenging. At rush hour, it's not realistic to leave the city on Friday or return on Sunday. That is, you can see what kind of flow goes to Kharkov. And in the railway, it's the same. You can't just get a ticket [on the spot] to go somewhere, or to come back to Kharkov. And this is

given the full-fledged work of the railway. Well, it's my opinion but of course, the number of people has gone up. (P8, FGD-10 Kharkiv_locals_men)

In addition to my private business, I have worked as a taxi driver during the lockdown. Half of all new buildings are occupied by [people from] Luhansk and Donetsk. That is, you drive into the parking lot of any newbuild, and half are АН and ВВ [license plates from Donetsk and Luhansk]. As for the real estate market in Kharkov, I think that the newcomers raised [prices in] this segment. But a plus is that mostly economically active people moved here anyway. I think the city only benefited from this. (P1, FGD-10 Kharkiv_locals_men)

Kharkiv participants thought that the inflow of newcomers to the city reinforced previous migration processes. Even IDPs who had moved to the city within the last few years thought the city was predominantly composed of newcomers. Unlike in Mariupol, however, Kharkiv participants were sometimes critical of – especially foreign – newcomers from Western and other countries, mentioning the challenges of assimilation.

My observations have shown that the bulk of Kharkiv residents are not Kharkivites. I even meet people at work…. You communicate with them for a long time, you think that they are from Kharkiv. And then he tells you: "Yes, I came from Vinnitsa." Or from somewhere else. For me, this is an indicator that the city is developing, the city is alive, the city has some prospects. People come here not only out of necessity, but they also have goals. There are enough jobs. It's good, I think. (P4, FGD-11 Kharkiv_IDPs_women)

I have also noticed a very large influx of foreigners. From the West and other countries, it is colossal. I have not come across them before, only after I started working part-time in a taxi. And it’s not very good, I think. Kharkiv does not benefit from this. People, they live… for

> example, to compare, people not only from Luhansk who move to Kharkiv, but also from neighboring areas... People from rural areas are coming to the center [city of Kharkiv]. I communicate with many people, and these people somehow integrate into the city, and they assimilate. But the foreigners who come here, they do not particularly assimilate neither do they merge into [our] society (P1, FGD-10 Kharkiv_locals_men)

The participants from Kharkiv mentioned that the population increase in their cities came at the expense of surrounding rural areas, which had been suffering from outmigration for decades. The empty towns and villages reflected the loss of opportunities and decaying infrastructure now widespread across rural Ukraine. The two quotes from the same focus group vividly illustrate this point:

> Cities are growing. But what about the villages? Well yes, the villages are dying out. I know that around Kharkiv, there were many farms that no longer exist. Where did these people go? All of these people are in Kharkiv, their descendants or they themselves. (P4, FGD-10 Kharkiv_locals_men)

> Well, in Kharkov I can take my younger child to school, we have at least 4 classes, and it's normal. When I visit my parents, where my sister also lives, the schools there are empty. Schools are closed there. So, in the cities, yes, cities are growing. But the villages are dying out. In my case, I have a bit of knowledge of rural areas, as I provide Internet there. Schools there are simply…damn it…they are still open because of those several families… because they still have children who are 10 y.o., and that's it. (P1, FGD-10 Kharkiv_locals_men)

"A lot of women with baby carriages."

We also probed the participants to think about the reasons for increased population in the urban areas. Some participants thought the "overpopulation" coincided with a so-called "baby boom" in

recent years. The baby boom could be linked to both the increasing number of people in the cities as well as recent improvements, compared to the war period:

> -Well, I noticed, that in 2014-2015, fewer children were born. About three years later, especially in the last year, I noticed a lot of women with baby carriage. Maybe they are from the regions. And for some reason there are a lot of twins. And a lot of people who have two or three children. I have not noticed that there were fewer children.
>
> *And in 2014-2015, according to your observations?*
>
> -It seems to me that then there was much more uncertainty. Before that, this is how it was. Because of the threat of the war. It was not clear [to people] what's going on. (P7, FGD-12 Kharkiv_locals_women)

Nonetheless, opinions were mixed, with some participants saying they saw many children, but providing anecdotes about their own acquaintances who were not having children.

> Visually speaking about parks, schools, kindergartens, I see that there are quite a lot of children. And it seems to me that there are more of them, visually, compared to the previous year. Although, judging from my conversations, most of my friends, as it were, well ... do not want to have children. It's because of financial problems. (P2, FGD-1 Mariupol_IDPs_men)

A general concern about having children, especially more than one, permeated the discussions. These anxieties were often linked to economic uncertainty, the pandemic, and the war. They mentioned that people they know are afraid to have any children or to have more than one child, as the following quotes illustrate:

> It seems to me that the birth rate has fallen. Yes, there are children around. But I want to say that there is a fear to give birth to more than one child. Maximum two [children]. Two [children] is a ceiling. And three is considered like 'Oh, that's it. What are you thinking about?'. One family - one child. If there are two, it's already something like…. Three is completely incomprehensible. (P1, FGD-12 Kharkiv_locals_women)

The majority of discussions described Kharkiv and Mariupol as thriving, vibrant cities, especially visible since the Covid-19 lockdowns were over. The population growth was attributed to immigration, particularly from the Donbas, and higher fertility. Note that few people in these cities discussed high mortality, even in the context of Covid-19. Although participants certainly mentioned issues related to poor infrastructure, unemployment, and high costs, the cities themselves did not seem to be shrinking.

Perceptions of local population decline in Donbas villages.

"I see more people leaving and empty houses appear"

In the rural Donbas participants were much more concerned about depopulating villages. The triple-burden was evident in the participants' narratives; they especially focused on out-migration, but also acknowledged low fertility and high mortality. The underlying reasons for the decline were the lack of job opportunities, degradation of infrastructure, and limited public transport. As a result, more and more people, especially young ones, were leaving villages.

> But still, young people go and look for work in the city more and more. A few [young people] work on the soil. More go to the city - Mariupol is not far away. And they drive. […] If before, there were more intercity buses, now there are… for example, after 7, even after 6 in the evening, you will not always be able to get back to the village. The reduced transport, as far as I understand. And it is very difficult to get home in the evening. So, one needs to have such a job that before dinner, they are able to get home. (P1, FGD-8 Don-rural_locals_women)

> I can only speak for my village. Here, it is not ... it is not such a popular resort that people come here to buy houses and settle down. It is not often that something like this happens. Our location is close to the centre, I mean Mariupol, but still… People do not come here in large numbers. Those who do come, are not enough. More people leave and go to work

somewhere, in other places. Mariupol, and nearby. I see more people leaving [the village] and empty houses appear. (P6, FGD-6 Don-rural_locals_men)

Even IDPs who first arrived in the area were leaving:

When the hostilities began, people immediately came to our village. There were not many of them. They left almost immediately… let's say, they lived here for a year, a year, and a half, and left somewhere else. (P1, FGD-6 Don-rural_locals_men)

"There are 10-15 times more deaths than people born"

Unlike the urban participants, rural participants mentioned high mortality as a cause of population decline in their villages. They claimed that mortality was higher than fertility, demonstrating that they were aware and concerned about the trends.

- Let's say there are 10-15 times more deaths than people born.

10-15 times?

- Yes, if 3 people were born, then up to 30 people die, let's say. Especially with Covid. Well, a lot of people are dying.

It has affected many, right?

- Yes, exactly, let's say, people over 50. Well, not very old. (P1, FGD-6 Don-rural_locals_men)

If the death rate rises, it [population] decreases... Now it is for certain that the death rate is high not only among the elderly, but also among the youth. There are numbers…they even register [death] among children. Of course, the birth rate is decreasing, and this is quite normal. But natural growth is also decreasing, … (P9, FGD-7 Don-rural_IDPs_women)

High mortality was linked to the war and COVID, as well as structural factors such a lack of professionals in the villages and the expenses one needed to access healthcare services. This meant that older people on a minimal pension, especially without any relatives, were the most vulnerable.

> The war has killed youth. Covid has brought down everyone in a row…those who had issues with immunity, or other complications, it's not clear why. Then, there is a lack of doctors and their intellectual skills, so to speak, unfortunately. Then, of course, also the material condition. Because in order to get cured properly, you need money. And if there is no money, let's say a pensioner went there [to a hospital], who has a pension of 4000 UAH (equivalent of 108 EUR), then he will end there…without relatives, then that's it [for him] (P4, FGD-7 Don-rural_IDPs_women)

According to the participants, fertility decline was noticeably visible at local kindergartens and schools. They also mentioned a lack of higher parity births.

> I think that the birth rate has indeed decreased. I look at ... my children go to kindergarten. Before, the group was of 20 people, now it is only 12, let's say. The same applies to the schools, where classes are with 12 people. When I was finishing school, we were 30 people in my class. I think the birth rate has definitely gone down. And this has to do with money. (P3, FGD-7 Don-rural_IDPs_women)

> Families used to have two or three children. But now, if young people give birth to one child, they cannot afford any more, or do not dare because of the current situation. […] There are fewer children at schools. Our rural schools were grouped into one in neighboring villages. So, in our village we have a very good school and a kindergarten. But due to the fact that there are so few children, we will be transferred to neighboring villages and grouped with the schools from other villages. (P7, FGD-8 Don-rural_locals_women)

In general, the demographic situation in the rural areas seemed bleak in comparison with the urban areas, as observed by both village and city dwellers. The rural Donbass participants described how a lack of development and general stagnation constantly reinforced all three population components. People left the villages because of few opportunities; fertility was low because of reduced standard

of living; and mortality was high because professional health care staff had left. Thus, participants in the rural areas could feel the consequences of the triple-burden of population decline.

Perceptions of local population decline in Donetsk.

"Empty! Empty!"

The situation in Donetsk, however, was even worse. An overwhelming sense of desolation permeated the discussions. Remember that Donetsk experienced armed conflict in 2014, followed by a massive outflow of people in subsequent years. These population processes were reflected in the participants' descriptions of Donetsk, as well as the neighbouring towns and villages. They spoke nostalgically of pre-2014 Donetsk, a once bustling city with nearly 2 million people, which had been cut off from the world. Now Donetsk felt like a village, with only familiar faces on the streets and few foreigners or newcomers. Residents spoke of empty apartments, deserted neighbourhoods, and eerily quiet streets with few people or cars. The 10pm curfew, which has been in effect since the time of the war, exacerbated the situation and stifled any evening activity or nightlife.

> Empty! Empty! There are now fewer cars on the street during the day than before the war at night. Empty! You walk… there is only one boulevard named after Pushkin – 10-20 people walk along the boulevard - that's all. Now, you go out into the street and it's empty, there really is no one. People come to buy something, and they leave. There already a reflex like that of Pavlov's dog - at 10 o'clock I already want to sleep. (P4, FGD-13 NGCA_men)
>
> P3: The fewer the people, the fewer the facilities, the fewer enterprises are created. Even within the service sector, nothing is developing. Fewer facilities, fewer developments, less life.
>
> P5: It turns out that now, judging from the internal situation, we very much look like some small urban-type settlement, in which …I don't know…people come from the nearest

villages. Everyone knows each other here. And there is no influx of new people. (FGD-14 NGCA_men)

P5: I went to Rostov(on-Don) [an oblast center city in Russia, 208 km from Donetsk] for two or three years in a row. If we compare [Donetsk], for example, with the same Rostov, there are people everywhere. You go to the right - there are people, to the left - there are also people. Straight - people too. People are everywhere. You come back here, but it is empty, there is no one. Maybe some people are around during the day. […] Compared to the same year 2013-14, when everything was fine, there were a lot of people here, many kinds of events and so on. This is very sad. (FGD-14 NGCA_men)

"All the good specialists have left"

Outmigration was clearly one of the main reasons for population decline in Donetsk.

P9: The most active, the visible ones, are leaving. That is, those people who travel, are around and do something. So, those people, they left. And those who sit at home, they do not move anywhere ...

P6: No, I can say by the number of free apartments in my house that 30% [has left] for sure. So, we now have 30% fewer [people]. In my hallway, specifically, there 40% of apartments are empty. This is just in my hallway. So, 30% is the minimum figure. (FGD-14 NGCA_men)

The accounts in Donetsk complemented those in Kharkiv and Mariupol, where participants said that many IDPs were qualified experts. Doctors and medical personnel were most likely to leave for Ukraine and Russia, partially because the main medical university, which used to be one of the largest in Ukraine, moved to Mariupol. As a result, the participants complained that there were not enough experts to provide adequate healthcare.

P4: I mean the medical school. I have acquaintances who have left since the beginning of the conflict… Specialists have left for Ukraine. (P4, FGD-13 NGCA_men)

> Many specialists, such as doctors, who were very good, had left. Basically, all the good specialists had left. Apparently, they are well paid now. [They had left] mainly to Russia. (P2, FGD-15 NGCA_2women)

"*If there is no light in the tunnel, then there is nowhere to go*."

Those who wanted to leave struggled with unemployment, insufficient job prospects, and low salaries. But many said they did not have the necessary connections or funds to allow them to pursue opportunities elsewhere. Some also said they could not leave, because they had to take care of elderly relatives or for health reasons. Age was also mentioned as a factor that was likely to make people over 40 stay and those under leave.

> People in the age of 40 and plus, plus, plus ... They remain, young people leave either for Ukraine or for Russia. Because what are the prospects? Prospects are zero. (P7, FGD-13 NGCA_men)

Those who were more comfortable staying had a decent job, often online or at small entrepreneurships, or did seasonal work in Russia. At the same time, there was still the fear of something bigger looming over them which would force them to leave.

> P3: Traveling into the unknown is a double-edged sword. One must decide for oneself. But at this stage of life, for the next maybe 5 or 10 years, I and my family are not considering such a plan. But life is such a thing that it can turn around at any moment, as with the war. That you pack everything and leave.
>
> *What about others? Any plans?*
>
> P7: Of course, I want to leave. You know, the difficulties that await upon arrival in another city are not as frightening as continuing to live in the conditions that we now must live in. Young people have a lot of ambition and a lot of potential. And this potential is destroyed [if they work] as waiters - this is a so-so prospect. (FGD-15 NGCA_women)

Some people had themselves or knew of others who had tried to establish themselves in Russia or Ukraine. These were often the more 'proactive' groups mentioned before. However, they had had to return to Donetsk for family, business, housing or other reasons.

> I also went to Russia to visit the relatives. And I worked in Moscow for a while. Basically, I came back because there was no possibility ... Here I have my own property, but there it is not possible to buy one. Because it takes a long time… And to live permanently in a rented apartment is expensive. And a plus is that my parents are here. I had left when the conflict was more acute, but then returned later. Well, anyhow, I am not fixed here, I can go to work at any time if I decide that I urgently need money. Because there are no opportunities to earn money here now. (P6, FGD-14 NGCA_men)

> I can't speak for everyone. But if we take our family… there was one unsuccessful attempt to leave, and it was not very successful. We could not gain a foothold and stay there. But we haven't tried and won't try to do it again. Because of my parents. […] Because my mother, who travelled with us, upon returning, said categorically: "I won't go anywhere anymore." And we would not leave her here alone anyway. (P5, FGD-15 NGCA_women)

We also asked those in Kharkiv, Mariupol and rural Donbas about who they thought had remained in separatist-occupied Donbas. Interestingly, no one inside or outside the occupied territories said people stayed due to ideology, or because they believed the secessionist republics should be independent or part of Russia. The initial responses were always practical and pragmatic – those who stayed behind were pensioners, or had the responsibility to care for older people, or had families. Those without means or who could not sell their home were unable to leave.

> They do not know how to find themselves in the future. And those who have just graduated from school, where should they go next? With this diploma, where can they go, to South Ossetia? Or to Transnistria? It is not clear where to run. Many students come to Mariupol. Well, again, it's difficult with the [high] prices here. I have a relative who receives a scholarship

both in Ukraine and in the uncontrolled territory. People don't like it, but they can't change anything. (P4, FGD-6 Don-rural_locals_men)

Young people leave, but families… I don't know, maybe it's difficult for them to leave. There are other reasons, I can't say for sure. Well, because housing is a very strong anchor. It [leaving] scares you...you don't know if you will find a good job there to feed your family. Well, "there", I mean - in Ukraine, if you consider our current moment. Good job so you can secure a rental for your family. My parents always call me – 'We have our own housing there, empty'. But we are not going with my husband. For obvious reasons, my husband does not want to go to Donetsk very much. The war is still there. (P2, FGD-3 Mariupol_IDPs_women)

"Giving birth still brings some stability"

Despite the bleak description of Donetsk and the surrounding areas, residents noted that birth rates had seemed to increase in central Donetsk in recent years. Some participants were even optimistic, mentioning their own and friends' decisions to have a second child.

-The birth rate has slightly increased compared to 2014. We even decided on having a second child. About 2 years ago, yes.

What helped you to decide?

P2: Husband wanted (laughs). (P2, FGD-15 NGCA_women)

P4: There is a boom. All my friends began to give birth to a second child, a third. I don't know what it's about…

Interesting, why?

P4: ..but a lot, really a lot.

P6: It has to do with the curfew (laughs). (FGD-16 NGCA_women)

Others mentioned that childbearing was stimulated with payments for childbearing, which gave women some feeling of stability, especially if she did not work. The participants openly confronted the idea of being childfree as a choice, suggesting that those who can have children would rather have them, unless they do not have money.

> The birth rate has gone up during the pandemic precisely because giving birth still brings some stability. A woman may think that she may lose her job due to any reason… Then, she takes maternity leave, and there is already some kind of stability for three years, there are at least some payments. At least she's doing something. (P9, FGD-14 NGCA_men)

> There are just fewer people of childbearing age. People of childbearing age are the ones who leave [the region]. So those people who can give birth to children, they try to give birth. That's why there are fewer children but more people who can potentially have children. There is no such a thing as childfree, that is people who do not want to have children. (P9, FGD-14 NGCA_men)

And as described above, some areas around Donetsk had been devastated by the war. People who lived on the outskirts could still hear the bombs, and as one participant put it "where shooting is still heard, and god forbid, the shooting is still seen, naturally, there will be no children" (P1, FGD-14 NGCA_men). Thus, although birth rates had apparently started to rise in some areas of Donetsk, overall, it was clear that Donetsk had and was experiencing severe depopulation.

Perceptions of Ukraine's population decline.

The "demographic hole"

After asking about perceptions of local population decline, we explicitly asked participants whether they thought population decline in Ukraine as a whole was a problem. We did not ask this question in occupied Donetsk, given the political situation. Although some participants had clear opinions, others found the question challenging, due to lack of knowledge or distrust in information. Some

referenced statistics and Wikipedia, official sources, and news, while others referred to blogs and even conspiracy theories. Those who referred to official statistics, for example, estimations that 38 million people lived in the country, expressed reserve about the accuracy of the data. Given Ukraine has not had a census since 2001, such concerns are warranted; however, it is difficult to know whether the lack of trust in statistics was due to a lack of trust in government or in science or both. In general, the participants acknowledged the difficulty of knowing who to believe, especially when their own observations countered the statistics, as expressed by this rural participant.

> Of course, there are enough young mothers with strollers that you can bump into on a street. But according to the statistics, there is only one person born for two dead in Ukraine. This means that the population is decreasing, if one trusts the mass media. But visually it does not seem visible that the birth rate has fallen. So, I don't know what to believe. (P2, FGD-5, Don-rural_IDPs_men)

Despite data scepticism, the participants thought population decline was a problem, using terms such as “catastrophic,” a “demographic hole” or “dying out of the nation.” Declining population was a problem for now, and in the future. Some of them described the problem as circular, referring to all the three factors of the triple burden of depopulation – low fertility, high mortality, and outmigration.

As a result, people did not want to stay in the country.

> This is a huge problem. Because the youths have left, in huge numbers. Some simply died before COVID because of the conflict in Donbass. … battles claimed a huge number of lives. This is the second factor. And the third one is the coronavirus. Now, I don’t know how huge the demographic hole is, but the birth rate is falling, because there is not enough money for anything. Naturally, if you have two children, you will not allow yourself a third one. Of course, this is a problem. If I love my country, I want it to prosper, so that at least something was done here. Not that people only go to sell something on Barabashova (the largest bazar in Kharkiv)

> or which one is now the biggest where people sell things?! [I want] that something was produced, and that there is science. At our universities we not only have foreigners, but many of them. What about Ukrainians? What will happen in 5 years? (P6, FGD 12, Kharkiv-local_women)

This link between population and national decline did have undertones of xenophobia and racism. The critique above implied that the government was not doing enough for its citizens, while allowing immigration. In addition, declining population was seen as having an impact on cultural and national traditions that were decaying, which in turn further motivated people not to stay, but to leave.

> The disappearance of nation, culture, and everything else, traditions. Then, if people are leaving their country, this means that they are no longer patriots. They are simply seeking better life possibilities. Because here they feel themselves insecure, deprived and inferior. (P7, FGD-8, Don-rural locals women)

"If people leave, it means that we can expect nothing good."

The participants, who were of reproductive age, frequently mentioned that emigration had negative consequences for Ukraine, especially because it meant that only pensioners would be left. Indeed, the issue of ageing came up repeatedly, and some compared Ukraine to Europe, citing common worries about the pension system. They argued that the current pension system was not solid and would not survive more than one or two years, when no one would be left to pay into the pension fund. Others recognised that fewer active people meant fewer taxes. Thus, living in an "old nation," was clearly an issue of concern.

> And the nation is ageing, unfortunately. Many are becoming pensioners, and young people under 40, who may be useful to the country, to the cities, leave for Poland and other countries. Therefore, it is all very sad. (P1, FGD-2 Mariupol_locals_men)

The focus group participants frequently mentioned emigration, and that many Ukrainians, including their own children and relatives, had left for better opportunities and to earn higher wages. A man from Kharkiv estimated that 10% of Ukrainians work in Poland, Germany, Czechia, and Russia, although he also noted that the migration was not always permanent. The participants also remarked that the people who migrated were the "best population," the hardest working, from 20 to 35. These were individuals who had a university or professional education but no prospects in Ukraine, often seeking higher salaries and better lives abroad. These discussions gave the impression that Ukrainians were a highly mobile population. However, the participants also discussed the situation with sorrow and doom.

> "There is no stability [in the country]. If people leave, it means that they can expect nothing good. […] If before some people were indecisive, now everyone leaves" (P1, FGD-8, Don-rural_local_women)

> "I think this is problem for the country, because these guys sell their young heads, their labour force, in another country. And they do not invest it somehow within the framework of Ukraine. Instead, they go and sell their labour force somewhere abroad. They do not do it in their own country" (FGD-5 Don-rural_IDPs_men)

"Our government has done everything it could, so that people would not have children"

Participants recognised that the main reason for population decline was fewer births – and that the number of deaths exceeded the number of births. They also often blamed the government or political situation for the decline in childbearing. Earlier generations had the support of the government, which provided opportunities to raise and teach children. However, today raising children was exclusively the parents' problem. According to many participants, the current government no longer provides social support and was directly responsible for their lack of income, degradation of education, and low level of medicine. In several focus groups, participants quipped that the payments were not enough to buy a "packet of Pampers."

> Our government has done everything it could, so that people would not have children. First, low payments. Who will give birth, how will the population be replenished if people don't have children? Children need to be given something, and so on. This is why, this is a problem. (P2, FGD-7, Don-rural_IDPs_women)

As in the discussions about local areas, the participants linked the fall in fertility to the economic situation, noting how difficult it was for young people to have children. Financial reasons permeated all focus group discussions, for example low standards of living, insufficient income, and rising costs. The war was mentioned as leading young people to postpone childbearing. Subsequently, the outmigration of youth, and cohabitation rather than marriage, was seen as having impact on fertility and overall population decline in Ukraine:

> I read some statistics and judging from my friends… There are not many children now. In general, there are problems with this in our country. And young people are leaving. This is why we have this birth crisis. If I'm not mistaken, births rate is now equal to that in the 1990s. Well, that was the period of my youth. And in my opinion, this is very low. Plus, now there's a war. […] Plus, these civil marriages which, in my opinion, affect the fact that… A girl often wants to have a stamp in her passport [a legal proof of marriage], and then have children… [If this does not happen] children are postponed. In one word, I feel very sorry. I can't imagine what will happen next. I feel so sorry for our country. (P6, FGD-12 Kharkiv_locals_women).

"We are like cockroaches here"

Surprisingly, references to conspiracy theories around population decline came up in at least 6 out of 16 focus group. While it is difficult to know how seriously participants believed these "rumours," they often linked them to the state not doing enough and even being against its own citizens.

> Dying…war…then the virus, and then ... plus a bunch of all sorts of other things that push you to not give birth. Because it's hard to "put a child on his feet". You can do this with one, but if

> you have two or three…no comment. This is where it all boils down to. And what is all this for? Who is worse off for this? We are like cockroaches here. Those who do all this, they do it on purpose. We have long proven that overpopulation is happening on the Planet Earth. And somehow... no one asks us, unfortunately, whether we want to live on not, they mow down everyone in a row. (P4, FGD-7 Don rural_IDP_women)

The discussions sometimes touched a nerve or became heated, especially when participants talked about environmental and health factors underlying high mortality and low fertility. Covid and high mortality were seen as something done intentionally to Ukraine and that someone (financially) benefited from it.

> Due to poor ecology, there are many diseases. There is a lot of infertility now. Therefore, Ukraine is essentially dying out. With such a politics of population destruction from our government – the increase in the utility bills tariffs, with a conflict in the country, none can make ends meet. I do not want to sound rude but, for example, people who are considerate and conscious, they think ahead, so before they given a birth to the child, about how to provide for him. (P4, FGD-1 Mariupol_IDP_men).

Finally, some participants did argue that population decline was not a problem from a global environmental perspective, as more people and global overpopulation put a strain on ecological resources. They also reasoned that fewer people would be better, because there are not enough jobs for everyone.

> People do not use them [resources] rationally. We harm nature. Again, babies mean diapers, they are made of plastic. We use more, we drink more, we also ‘shit’ more, pardon the expression. Subsequently, the fewer people are there, not only in Ukraine, but, in principle, all over the world… I am only in favour of reducing the [population] numbers because we need somewhere to live, something to breathe, something to eat. All this only worsens the condition of our land. And I don't understand why it is being done. Except for political and

economic reasons, do we need more labour force? Is it necessary for the state? On the other hand, if we have more people – do we have enough jobs for them? None will pay for their education. They say that we need to give more births. Who do we owe this? What for? It is not clear to me. (P7, FGD-11 Kharkiv_IDPs_women)

Conclusions

For several decades, demographers have recognised that Ukraine faces a "depopulation crisis" (Chuiko 2001; Steshenko 2001), and it has been the subject of media and news reports (Kramar 2019, Golub 2018). Our on-line focus groups now demonstrate that average Ukrainians have also been aware of this crisis; the knowledge has trickled down to popular consciousness and been reinforced through personal observation. The conversations about national population decline were often bleak, with a sense of doom about the future of the country. Depopulation has had dire consequences for Ukraine: a shrinking labor force, severe ageing, and general lack of development. Participants also identified the triple-burden of depopulation. The main concern was lack of births, especially second or third children, as young people were "refusing" to give birth. Participants complained about the toll that high emigration was taking, with the most active young people leaving. Mortality was also mentioned, but it was the least recognised factor in population decline, despite the high excess deaths from Covid that had occurred over the previous year (Ourworldindata 2022).

Our focus groups also recognized that the decline in population was uneven across the country, and that even though a nation's population may be declining as a whole, cities could still be expanding. Participants in all focus groups contrasted the growth in urban areas with the deterioration of conditions in rural areas and made the direct link between people moving out of villages and into the cities. The discourse of the decline of the rural areas in contrast to the growth of neighbouring urban areas is familiar throughout much of Europe (Collantes 2011; Copus et al 2021;

see also xxx in this Volume). Predictably, our participants complained about the degradation of infrastructure and lack of resources in rural areas. Rural residents recognised that the decline was not only due to outmigration, but also low birth rates. They observed how childcare centres were closing and schools from different villages had to be merged. Economic conditions in rural areas prevented residents from wanting more than one child. Rural participants also spoke of high death rates due to older and impoverished residents being unable to obtain adequate health care, along with the devastating impact of Covid-19. Many mentioned they had lost relatives recently, although the majority of deaths from Covid-19 was yet to come in the winter of 2021-22 (Ourworldindata.org). In any case, the triple burden underlying depopulation in rural areas, combined with poverty and neglect, seemed to be more severe than in many parts of rural Europe.

Unlike most other depopulating regions of Europe, the area we studied also reflected war and years of "frozen conflict." These events visibly shaped the larger regional cities at the expense of population losses in rural Donbas and Donetsk. For the most part, participants in Kharkiv and Mariupol pointed out that their cities benefited from the influx of specialists and experts, but some argued that the increased population was straining infrastructure and resources. Although internally displaced persons were usually portrayed in a positive light, some participants, particularly in Mariupol, were wary about additional population pressure. These discussions are a reminder that even though a country may be depopulating overall, certain regions, especially urban areas, may still be growing, especially due to unexpected migration processes.

We also had the unprecedented opportunity to conduct focus groups with people in the separatist-occupied territory of Donetsk – an area that has been nearly inaccessible to Western, or even Ukrainian, researchers. Despite this area being physically cut off from the rest of the world, the online discussions revealed how virtually connected the regions are through the internet, zoom, and social media (although increasingly these areas had been falling under Russian media control). Participants described the types of people who had left Donetsk, who had stayed behind, and how

ordinary people still live. The discussions corroborated the observations of those living in Kharkiv and Mariupol; those who remained behind were primarily elderly, caring for older people, lacking in funds and networks outside of Donetsk, or in some cases financially befitting from the Russian occupation. Overall, Donetsk residents acutely felt the population decline: in their apartment buildings, on the streets, and in their social networks. They recognised that the shrinking population had led to less diversity and fewer younger people, drastically changing the age structure of the population. Indeed, the participants who remained seemed "displaced in place," with little hope for the future (Rimpilainen 2021). As one participant put it, "We are dying out here."

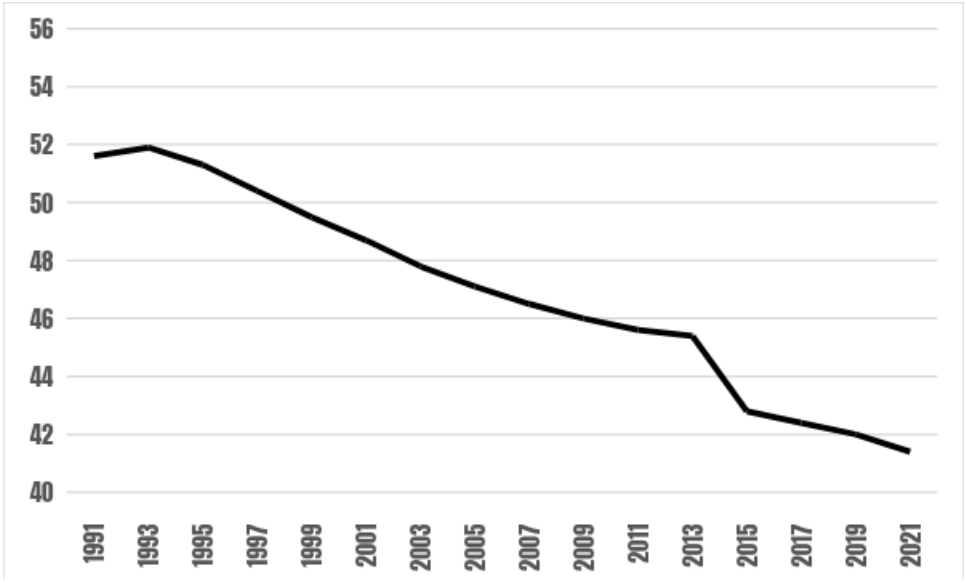
Although our participants often had strident opinions about population change, they also expressed uncertainty in their answers mixed with a lack of trust in statistics and the Ukrainian government. To some extent, these anxieties were warranted, as Ukraine had not had a census in two decades and the political situation has long been unstable. However, we were surprised at the presence and power of global conspiracy theories, which had spread even to rural Ukraine. Statements such as "those who are doing this, they are doing it on purpose" reflected a lack of agency as events such as war, pandemic, inflation, and economic crisis buffeted their lives. Although our participants described their own individual decisions – to move or have a child – it was clear they recognised the impact of macro-level shocks on population composition and size, even if they had no explanation for why they occurred.

In conclusion, even though our research is not representative of the population of Ukraine, or even the regions where we conducted the focus groups, the discussions provide evidence that Ukrainians have been aware of population change on both the local and national level, and individuals can perceive how major events shape populations. It is important to note, however, that concerns about depopulation were not at the top of our participants' list of problems. Rising costs, under-employment, Covid lockdowns, and children's education were far more important in Kharkiv, Mariupol, and the villages. In Donetsk, curfews, difficulties in obtaining official documents, lost

contact with relatives, and deteriorating infrastructure were participants' main grievances (Perelli-Harris et al 2022). Overall, participants blamed economic stagnation, government ineptitude, Covid, and political impasse for their woes, but not population decline per se. Nonetheless, although population decline was not considered to be the most important issue in Ukraine, when we posed the question to the focus groups directly, participants did recognize population decline to be both a cause and consequence of Ukraine's larger problems.

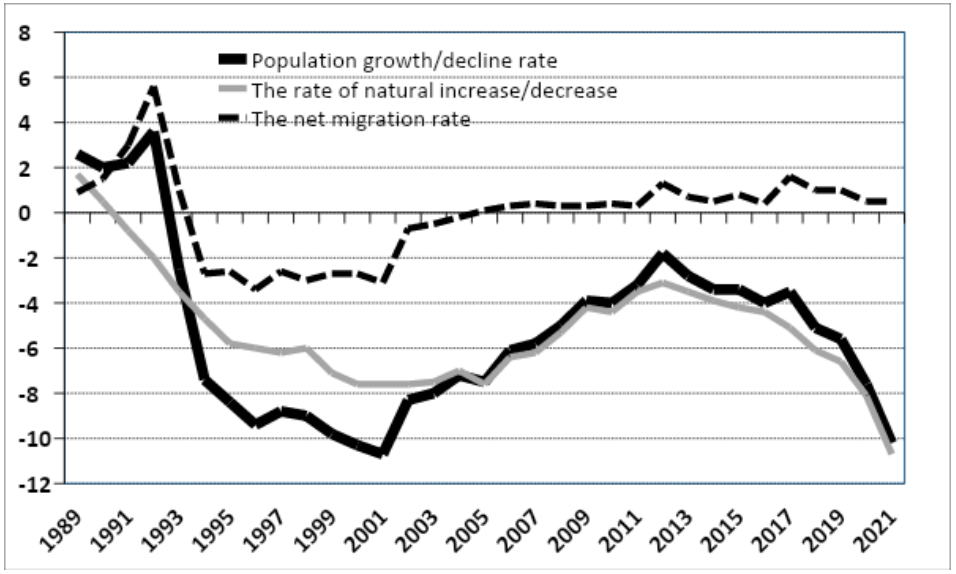
To our great sadness, the horrible events of the past year have accelerated Ukraine's population decline in ways scarcely imaginable in July 2021. Ukraine's people have experienced immense turmoil and trauma, especially in the regions where our focus groups took place. Kharkiv, described in our focus groups as a vibrant, bustling and rapidly growing city, has had half of its population move away and is still shelled daily. Mariupol, which residents said would develop and thrive in the coming years, has been completely obliterated. The villages where our focus groups took place are currently occupied by Russians or experiencing hell on the front line. Their plight is now indicative of the extreme desolation that will occur throughout the Donbas and southeast Ukraine as these regions turn into near-empty wastelands. Most importantly, we must remember the voices of our focus group participants, who have had their lives directly threatened by violence. They have become displaced, destitute, detained, forcibly deported, conscripted into the Russian army, or worse. We can only hope that the war will end soon so that Ukraine and its people can rebuild, regenerate, and stop the inimical spiral of depopulation.

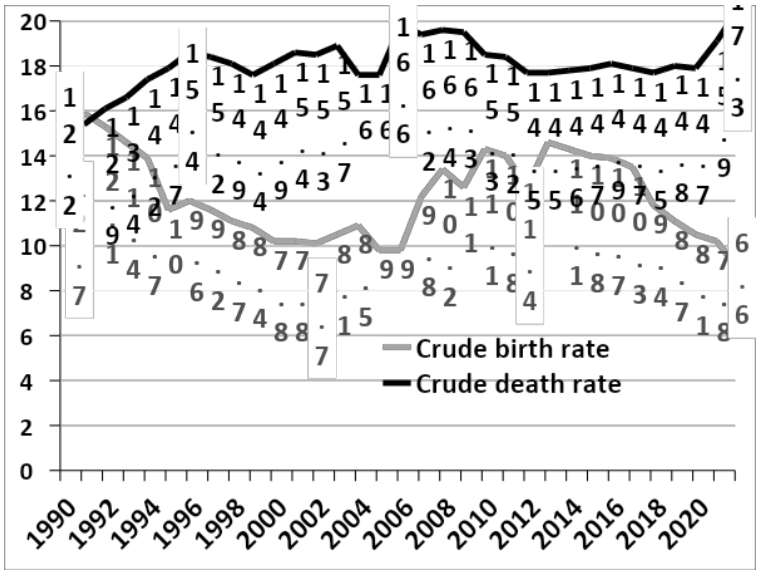
Figure 1. Population of Ukraine (Millions), 1991 to 2021



Source: State Statistics Committee of Ukraine. 2021

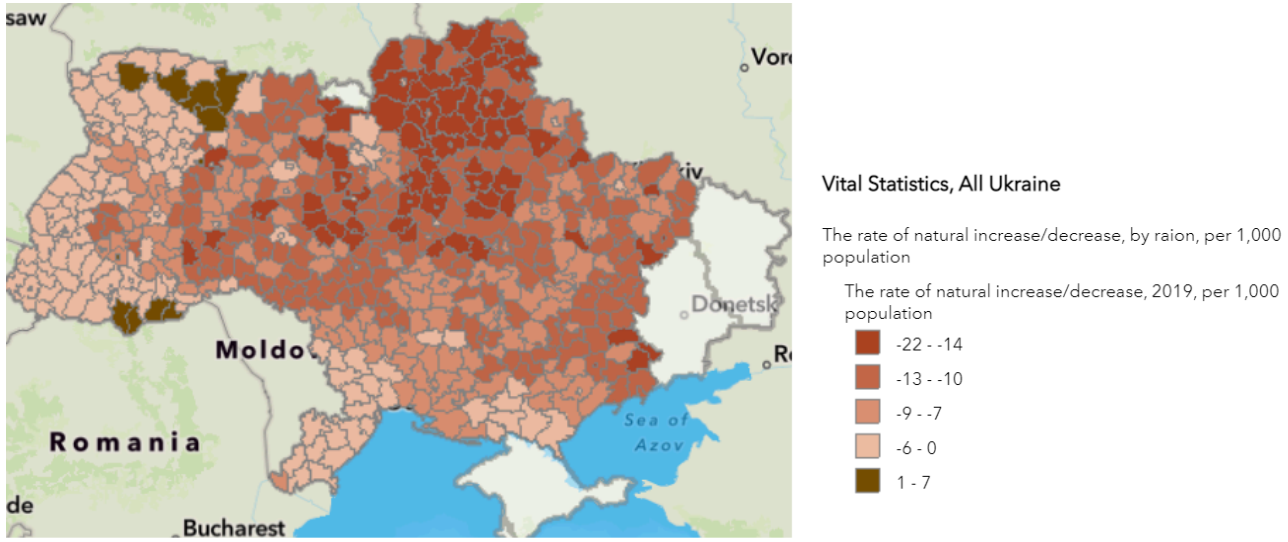
Figure 2a and 2b. Population growth, natural increase, and net migration, 1989 to 2021





Source: State Statistics Service of Ukraine, courtesy of Nataliia Levchuk, Ptoukha Institute for Demography and Social Studies, Kyiv

Figure 3. Natural increase/decrease rate by region, 2019.



Source: MAPA. Digital Atlas of Ukraine (HURI), courtesy of Nataliia Levchuk.

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