

Issues Paper: Towards increasing regional resilience to demographic change



Introduction

OECD Member countries and EU Member States are bearing witness to substantial demographic change. Between 2011 and 2022, almost 30% of OECD regions (TL3) saw their population decline (OECD, 2023^[1]). Projections show that by 2040, half the population of the EU will live in a shrinking region. This effect will be particularly pronounced in Eastern and Southern European countries (e.g. Greece, Spain, Romania). In fact, projections suggest that 85% of the population in Eastern European countries, including Croatia will live in a depopulating region by 2040 (European Commission, 2022^[2]).

At the same time, the age composition of OECD Member countries and EU Member States is changing. For example, the share of EU population aged 65 and over has increased in the past decade: from 17.7% in 2010 to 21.2% in 2022 (OECD, 2023^[1]). Moreover, the number of young people (aged 0 to 19) is projected to shrink by 5% in the EU over the next decade, with many Southern and Eastern regions facing reductions of over 10% (European Commission, 2022^[2]).

Croatia is deeply affected by these demographic changes. In the last 20 years, the country's total population has declined by 11.2% owing primarily to lower birth rates and negative net migration. In the long term, Croatia's population is expected to decline from 3.86 million in 2022 to 3.31 million in 2050 (13.3%) (Eurostat, 2023^[3]). Between 2001 and 2022, and in line with the national average, all Croatian macro-regions (TL2) and almost all counties (TL3) saw their populations contract. On average, between 2011 and 2021, the population of Croatia declined by 9.6% (Croatian Bureau of Statistics, 2022^[4]).

These significant demographic changes, in particular ageing and population decline, pose remarkable challenges, not least for regional development. These can include labour shortages, the shuttering of local businesses, lower property values, and shifting demand for different public services (e.g. shrinking kindergarten and primary school enrolment, increasing elderly care demands). Relatedly, demographic change can also put pressure on public finances, as tax revenues and user charges drop due to decreasing economic activities while spending on elderly medical care rises, among others.

The challenges posed by demographic change play out differently across regions and localities, be they rural, urban or intermediate. For example, rural areas may face declining student numbers and the risk of school closures. For their part, urban areas may need to adjust physical infrastructure to ensure public services are accessible to an increasingly large share of the elderly population and manage the consequences of population growth (e.g. pollution, lack of affordable housing). This calls for the design of place-based policy interventions; that is, policies that are sensitive to how specific regions and localities are affected by population change but also to the tools they have available for preventing further demographic change or adapting to its consequences.

Demographic change, however, presents not just challenges but also opportunities. For example, economic opportunities can arise from increasing consumer expenditure by an ageing population (the silver economy). Moreover, efforts to manage demographic change can encourage policy makers to experiment with innovative governance and public service delivery mechanisms that incorporate sustainability goals and aim for increased efficiency of public spending.

Demographic change raises a series of important questions for Croatian policy makers involved in regional development. For example, what are the consequences of demographic change on territorial development, including economic growth and public service delivery? How can the access to and quality of essential public services (e.g. education, healthcare) be guaranteed across the country, including in regions facing depopulation? What role can subnational governments play in countering population change? How can policy frameworks evolve to not just counter but also adapt and manage the complexities of demographic change?

Drawing on experiences from OECD Member countries, this issues paper seeks to help Croatian national and subnational policy makers find solutions to the aforementioned questions. The paper looks at the

underlying causes and consequences of demographic change. It subsequently focuses on the Croatian context, emphasising the country's efforts to mitigate the impacts of population decline and ageing. This is followed by a section that explores adaptive policies to demographic change in OECD Member countries, offering insights that could be valuable for Croatia as it navigates the challenges of demographic change. Finally, this issues paper presents a brief concluding section, which includes a summary of relevant policy issues for national and subnational governments to reflect upon as they design and implement policies to manage the effects of demographic change.

This policy paper supports the two-day forum “Towards regional resilience to demographic change” planned for 26-27 October 2023 in Opatija, Croatia. The forum, which is organised by the OECD and Croatia's Ministry of Regional Development and EU Funds, will provide national and subnational government officials a platform to discuss how demographic change affects counties, cities and municipalities in Croatia and explore possible solutions, drawing inspiration from international good practices. The forum, is part of the [“Enhanced Strategic Planning at Regional and Local Levels in Croatia”](#) project, funded by Norway Grants.

Drivers and consequences of demographic change – and policy responses

The populations of nearly 30% of OECD regions at the TL3 level shrunk between 2001 and 2022. While demographic change occurs in all types of regions, not all regions seem to experience it equally. While nearly one out of two rural regions and over one third of remote regions in the OECD are shrinking, 15% of urban regions and 12% of metropolitan regions have done so, too. As stated, projections suggest that by 2040 one out of every two EU citizens will live in a shrinking area and, with lower fertility rates and migration to other regions or non-EU countries, total populations are predicted to decline (European Commission, 2022^[2]).

Demographic change, and in particular demographic decline, can be primarily attributed to three main drivers.

1. **Low fertility rates:** when birth rates consistently fall below the replacement level, which is typically around 2.1 children per woman, there is a direct depopulation effect. Over the long term, low fertility, combined with ageing and negative net migration, may lead to a situation in which deaths exceed births (Johnson and Lichter, 2019^[6]). There are many reasons for lower fertility rates, but among these are social and cultural factors (e.g. delayed marriages, a preference for smaller families) (Coulmas and Lützel, 2011^[7]; UNFPA-UNDP, 2020^[8]).
2. **Longer life expectancy and ageing:** advances in modern medicine and increased life expectancy can contribute to an ageing population, which demands more extensive healthcare services that can be costly. If not accompanied by higher birth rates, the population structure can resemble an inverted pyramid, where the smaller, young population is not in position to bare the overall pressure of the rising pension and healthcare expenditures associated with an increasingly large share of elderly population.
3. **Negative net migration:** the movement of people out of certain regions (out-migration) or out of countries (emigration) plays a significant role in depopulation. Generally, people migrate for two often interlinked reasons: (1) better economic opportunities in areas with stronger job markets (Idu, 2019^[9]) and (2) an improved quality of life, including access to essential services and adequate infrastructure. Poor housing conditions, limited access to essential services like healthcare and education, and inadequate infrastructure (e.g. transportation networks, water supply, waste management) can limit the attractiveness of communities. This can discourage residents from remaining and outsiders from settling. Disparities in economic opportunities and public service

provision across regions within a country can also be a major driver of emigration (Dustmann and Okatenko, 2014^[10]).

Demographic decline can have wide-ranging impacts on societies, which need to be factored in by policy makers. Such consequences include the following:

- **Economic consequences:** With a diminishing population, the labour force also shrinks, which can lead to labour shortages across the economy. Such shortages, in turn, can affect firm behaviour, and may result in reduced business operations and job losses (Šerý et al., 2018^[11]). A shrinking labour force can also constrain economic growth, with fewer consumers and workers being available to drive economic activity. At the same time, an ageing labour force is usually also a less dynamic one (i.e. a labour force where workers are less inclined to change jobs or move), which can have a negative impact on growth (Aiyar, Ebeke and Shao, 2016^[12]).
- **Fiscal and service delivery consequences:** A declining population leads to reduced tax revenue and user charges from public services, which can strain national and subnational government budgets and affect the provision of public services that benefit from economies of scale (e.g. public transport, education, healthcare, water and sewage systems). In the same way, population decline can hinder local government capacity to maintain vital infrastructure. This can be compounded by eroding tax bases, which hinder local government ability to maintain vital infrastructure. Ageing can further exacerbate economic pressures by increasing the elderly dependency ratio – the ratio of elderly individuals to the working-age population. This demographic shift further strains social welfare systems and healthcare infrastructure, as the elderly require additional healthcare services (Lee, 2003^[13]).
- **Governance consequences:** Amidst a heightened strain on public finances, subnational governments may face a lack of policy and service delivery capacity, as well as administrative capacity due to limited staffing (ESPON, 2020^[14]).
- **Social and cultural consequences.** Demographic decline can affect the social fabric of regions. As younger individuals leave in search of better opportunities, there can be a loss of social cohesion and community vitality. The decline in population can also lead to the closure of schools, community centres, and other public facilities (e.g. libraries), further eroding the sense of community and limiting access to essential public services (Šerý et al., 2018^[11]; Beunen, Meijer and de Vries, 2020^[15]).
- **Environmental consequences.** From an environmental perspective, demographic decline can have both positive and negative effects. On the one hand, a decrease in population can alleviate pressure on natural resources and reduce environmental impacts (Gourevitch et al., 2021^[16]). On the other, a decline in population can result in abandoned buildings and vacant land, leading to urban decay (Beunen, Meijer and de Vries, 2020^[15]), negatively affecting the physical environment and contributing to the loss of biodiversity. In rural regions, depopulation can also lead to abandoned agricultural land as farming becomes less viable. By contrast, population growth in urban centres can place additional pressure on available natural resources and lead to higher levels of pollution.

From focusing on countering demographic decline to adapting to its consequences

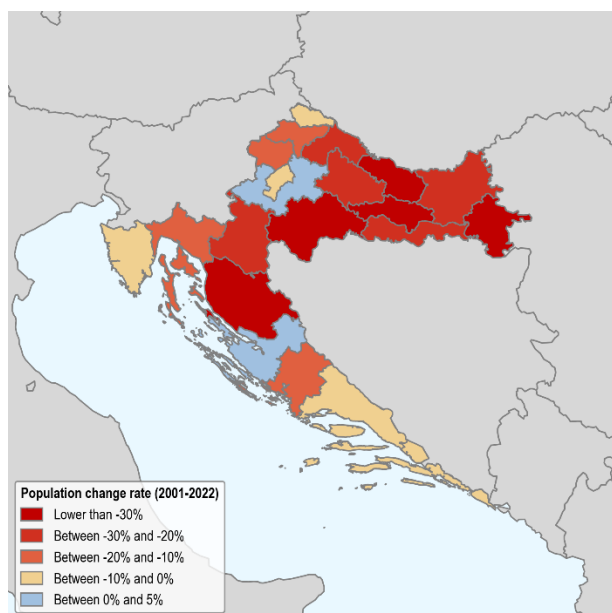
There are a range of policy responses that have been used by policy makers to address the effects of demographic change: (1) maintaining the status quo (e.g. to deny that there is a problem or to recognise the problem but not to respond), (2) to try and reverse the trend of demographic change, or (3) to accept decline and manage its consequences (ESPON, 2020^[14]).

The traditional policy approach in OECD Member countries has revolved around seeking to identify measures that can counter population decline in affected areas. Over the past decade, however, policy makers have increasingly embraced a “coping with decline” strategy, which is seen as a more pragmatic path forward for regions and municipalities grappling with shrinking populations. This approach, which is also referred to as “smart shrinking” or “smart adaptation”, acknowledges the reality of population shrinkage and instead seeks ways to adapt to its economic and social repercussions (OECD, 2022^[17]; Haase et al., 2014^[18]). For example, remote rural areas in Nordic countries have begun to adapt to shrinkage by aiming to maintain regional attractiveness through investments in the diverse natural and cultural assets that differentiate them from urban areas (Kull et al., 2020^[19]). Although policies to adapt to demographic change have gained pace since the outbreak of the COVID-19 pandemic, Croatia has, so far, mostly prioritised policies that aim to counter demographic decline.

Croatia’s approach to demographic change

As stated, Croatia is facing significant demographic changes, both in terms of depopulation and ageing. Most Croatian counties are experiencing demographic decline (Figure 1). Over the past two decades, the only counties with a positive population growth rate have been Zadar and Zagreb (3.5% and 1.7%, respectively). The decline is most pronounced in the least developed areas of the country, with regions in Pannonian Croatia (TL2) experiencing a significantly greater depopulation rate compared to other areas (e.g. -36.9% in Vukovar-Srijem County).

Figure 1. Population change rate between 2001 and 2022 (%)



Source: Author’s elaboration, based on (OECD, 2023^[4]).

Demographic change has also significantly affected the population size of Croatian cities (*grad*) and municipalities (*općina*) over the past decade (Table 1). For example, between 2011 and 2021, the share of local self-governments (cities and municipalities) with a population below 2 000 inhabitants increased from 29% to 37% of all local self-governments in 2023. This represents a 28% increase and places Croatia well above the OECD average (25% in 2020). The rapid increase in the share of small local self-governments (e.g. with less than 2 000 inhabitants) can have far-reaching consequences, for example

limiting human and financial capacity, as well as reducing their ability to provide basic public services (e.g. heating, street lighting, water and waste management). It can also challenge the ability of higher levels of government (e.g. counties) to provide public services that benefit from economies of scale (e.g. education and healthcare) in very small communities.

Table 1. Distribution of Croatian local self-governments, according to population, 2011 and 2021

Local self-government population	2011		2021		% change 2011-2021
	Number	Share	Number	Share	
Less than 2 000 inhabitants	159	29%	206	37%	+28%
2 000 to 4 999 inhabitants	235	42%	214	39%	-7%
5 000 to 19 999 inhabitants	133	24%	111	20%	-17%
20 000 or more inhabitants	29	5%	25	4%	-20%

Note: Local self-governments include cities (including Zagreb City) and municipalities.

Source: Author's elaboration, based on (Croatian Bureau of State Statistics, 2023^[20]).

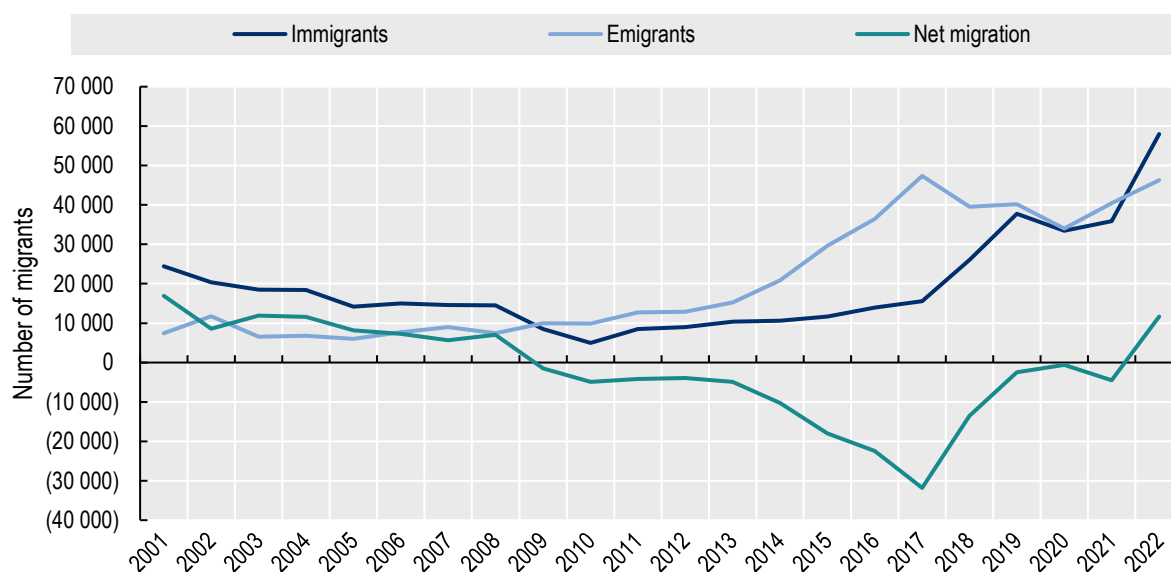
Drivers of demographic change in Croatia

Two main drivers lie behind Croatia's demographic change trends: low fertility rates and emigration. Low fertility rates have been a persistent trend since the 1960s. Croatia's average fertility rate of 1.58 is only marginally above the EU's average of 1.53 in 2021 (Eurostat, 2023^[21]). Low fertility is influenced by an interplay of factors. Economic insecurity, characterised by relatively low wages, high unemployment rates, and job insecurity discourage many Croatians from starting families (Čipin, 2017^[22]). For example, the hourly earnings of the median employee in Croatia is EUR 7.70 compared to the EU average of EUR 12.60 as of 2018, when adjusted for price levels (Eurostat, 2021^[23]).

Emigration, particularly to other EU countries, has been another significant factor contributing to Croatia's population decline. Many Croatians seek better economic prospects and higher living standards in other Croatian regions or EU countries, with the leading EU destinations being Germany (39% of total emigrants in 2021), Austria (10%) and Ireland (2%) (Draženić, Kunovac and Pripužić, 2018^[24]; Croatian Bureau of Statistics, 2022^[25]). This is especially true for young people aged between 20 to 39, who accounted for 44.1% of total migrants in 2021 (Croatian Bureau of Statistics, 2023^[26]). Research shows that individuals that are younger, more educated, and displaying low levels of social and political trust¹ are more likely to seek opportunities abroad (Šelo Šabić, 2022^[27]; Jurić, 2020^[28]). Furthermore, the presence of established social networks abroad facilitates emigration for others, a phenomenon that has become more pronounced following Croatia's accession to the EU (Čipin, 2017^[22]).

The trend of increasing emigration from Croatia has been largely consistent since 2001, although it experienced slight declines between 2017 and 2020 (Figure 2). In 2022, however, Croatia reported a sharp uptick in immigrants, tipping the net migration rate into positive territory for the first time since 2009.

¹ Based on respondents to a survey of 1 200 Croats who emigrated to Germany since the country joined the EU in 2013.

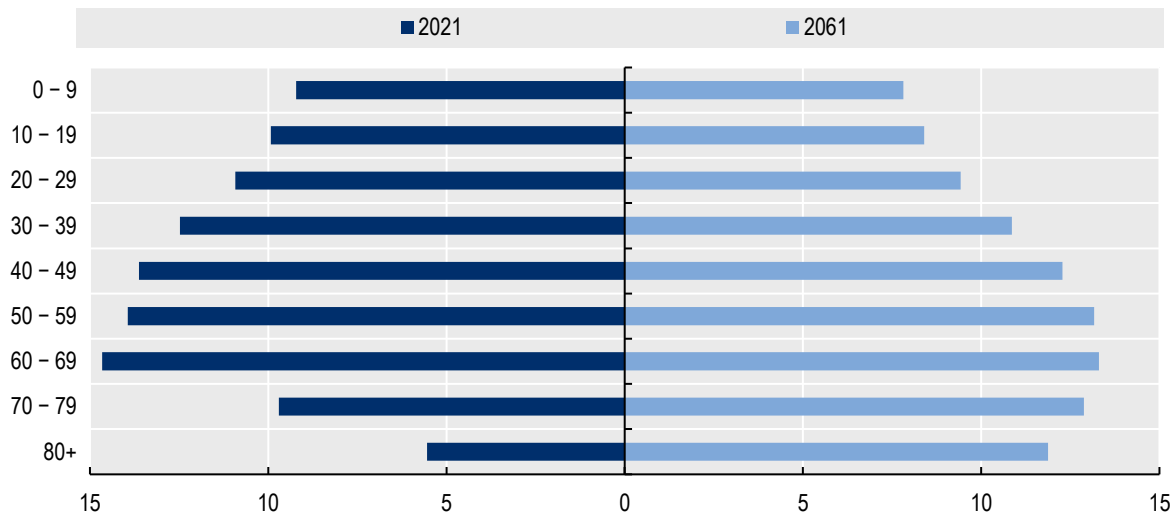
Figure 2. Migration to and from Croatia, 2001-2022

Source: Author's elaboration, based on (Croatian Bureau of Statistics, 2023^[29]).

Emigration stands out as a more prominent force behind Croatia's dwindling population than low fertility rates. The macro-regions of Pannonian Croatia and Northern Croatia, which have higher fertility rates and younger median ages for women at childbirth than the national average also report the strongest population declines. This suggests that, at least in those regions, emigration is a substantial driver in these demographic changes.

Consequences of demographic change in Croatia

In line with trends observed in other OECD Member countries, demographic shifts in Croatia—most notably depopulation—have multiple repercussions, including for regional development. First and foremost, the dwindling number of younger inhabitants is projected to invert the population pyramid over the long term. As [Figure 3](#) illustrates, the cohort of individuals aged 80 and above is forecast to more than double between 2021 and 2061, while individuals over the age of 60 will make up almost 40% of the total population. As a consequence, the country faces the prospect of a shrinking workforce and consumer base, which would negatively affect economic growth (Nejašmić, 2011^[30]). For instance, the population segment aged 20 to 59 – historically the backbone of the labour force – is expected to shrink by 27.5% between 2021 and 2061, and represents only 45.7% of the total population at the end of that period. Loss of human capital due to the emigration of young, educated individuals, together with an ageing population are anticipated to adversely affect productivity, and thus curtail economic potential (Buterin, Fajdetic and Mrvčić, 2022^[31]; European Commission, 2023^[32]; Kim and Dougherty, 2020^[33]).

Figure 3. Population by age as a percentage of total population

Source: Census data: (Croatian Bureau of Statistics, 2021^[5]) OECD projections for 2061: (OECD, 2023^[34])

Depopulation is also expected to put pressure on Croatia's public finances (Čipin, 2017^[22]). With a shrinking working-age population and an expanding elderly population, a surge in pension and healthcare spending is anticipated. Research estimates that by 2050, the share of the state budget allocated to pensions and elderly healthcare could double (Nejašmić, 2011^[30]). This demographic transformation would also lead to changing skills requirements in the labour market, with reduced demand for certain professions such as teaching, and a heightened need for reskilling programmes to mitigate future unemployment risks (Nejašmić, 2011^[30]; Čipin, 2017^[22]).

Not all subnational governments are equally affected by demographic change. The differentiated impact of demographic change across regions and local governments can potentially exacerbate territorial economic and social disparities. Economically, fiscal disparities could widen between regions that face depopulation and those that are either stable or experiencing growth. As mentioned above, demographic decline may limit the fiscal capacity of subnational governments by reducing revenue from taxes while increasing the per-capita cost to deliver services and maintain infrastructure. The importance of designing effective inter-governmental transfers becomes increasingly critical (Hayashi, 2019^[35]). On the social side, rural areas face pronounced challenges due to an ageing population, leading to an elevated risk of social isolation and loneliness.

Subnational governments may also have to recalibrate the portfolio of public services and infrastructure they can offer. For example, depopulated regions often confront the closure of schools owing to dwindling student numbers. According to some estimates, population decline lead to a reduction of approximately 7 000 primary and 4 200 secondary school classes by 2031, putting pressure on the viability of educational facilities, estimating (Nejašmić, 2011^[30]). This usually requires enhanced transport networks to bring students to the remaining schools. Moreover, compared to 2011, the school-aged population (for primary and secondary education) is expected to decrease in all local self-governments. However, the decrease is expected to be more pronounced in small and rural municipalities than in cities (OECD/EC-JRC, 2021^[36]).

On a more positive note, the presence of Croatian citizens abroad yields benefits such as remittances. Since 2013, when Croatia joined the EU, remittances have increased from EUR 2.6 billion to EUR 5 billion in 2022, representing 7.6% of GDP (World Bank, 2022^[37]). Those abroad may also own properties in Croatia and continue paying property taxes. Yet, while remittances may provide a significant source of income for some regions, sustaining balanced economic development in the long run requires addressing

underlying economic challenges and promoting structural transformation (Matuzeviciute and Butkus, 2016^[38]).

Croatia's response so far: a strong focus on countering demographic change

Croatia is well aware of the challenges it faces in terms of demographic change and, in recent years, has primarily focused on policy interventions aimed at countering population decline. Central to these efforts is the National Development Strategy 2030, which targets a fertility rate of 1.8 by 2030, up from 1.47 in 2018 (Government of Croatia, 2020^[39]). Co-ordination across various departments on the topic of demographic change is achieved through the National Council for Demographic Revitalisation, established in 2017 (Government of Croatia, n.d.^[40]). Moreover, the Government Office for Croats Outside Croatia has initiated several programmes, such as “I choose Croatia,” to attract Croatian citizens living abroad to return and start businesses in the country, for example by providing financial incentives (Šelo Šabić, 2022^[27]). This office also maintains the Pilot Registry of Croatian Entities Abroad to engage the diaspora and strengthen ties with Croatian emigrants (Croatian Central State Office for Croats Abroad, 2022^[41]).

Strategies seeking to counter demographic change exist in many OECD Member countries. Portugal's “Regressar” programme is an example. It seeks to encourage emigrants and their descendants to return to Portugal by offering a more favourable tax regime, financial assistance to settle in Portugal and find a job, and a line of credit to encourage entrepreneurship. Portugal is also developing an initiative to create Emigrant Support Offices in each of the country's municipalities in order to facilitate the return of Portuguese emigrants to the country. By June 2023, almost 65% of Portuguese municipalities had signed agreements to establish such support offices (Programa Regressar, 2020^[42]).

Croatia's efforts are not confined to the national level. Regional and local policies on fertility are widespread and vary across subnational governments. This can be seen in the case of financial incentives for childbearing across counties, cities and municipalities. In 2023, the average financial support from counties for the birth of a first child is EUR 139, EUR 430 in the case of cities and EUR 472 in the case of municipalities (Croatian Central State Office for Demography and Youth, 2023^[43]). Similarly, local governments often subsidise nursery and preschool programmes, with variations in costs and availability.

In some Croatian counties, demographic change features prominently in their regional development plans. For instance, Splitsko-Dalmatinska County's development plan 2022-2027 focuses on creating better conditions for young families by providing financing for the purchase of land, house construction and building renovations (Regional development agency of the Split-dalmatian county, 2022^[44]). For its part, Virovitica-Podravina County aims to prevent emigration and attract Croatia's diaspora with a comprehensive strategy involving social housing and youth development programmes. For example, its regional development plan 2021-2027 proposes programmes and investments for family and youth, such as the creation of a sports centre with facilities for children, child allowances, and co-funding of school workbooks, school meals and student transportation (Regional development agency of the Virovitičko-podravnska county, 2022^[45]). Gathering adequate data to assess the effectiveness of national and subnational policies to counter demographic change is crucial and may help to fine-tune policies.

Croatia is currently in the final stages of developing a strategy on how to manage demographic change. Its success will depend on a clear, national-level framework for how the strategy will be funded and financed, and implemented. Moreover, the role of subnational governments in the implementation of the strategy will need to be well-defined, especially if the strategy identifies specific territories that are, or will be, particularly affected by demographic change. This is the case for the National Strategy for Inner Areas carried out by Italy's central government, in which a series of remote regions are targeted specifically with the purpose of revitalising the local economy and ensuring the provision of public services and infrastructure (Italian Territorial Cohesion Agency, n.d.^[46]).

Limitations of subnational policy interventions seeking to counter population decline

It is essential for subnational governments to understand how they are affected by demographic change and adopt measures specific to their local context to manage its effects. However, policy interventions aimed at countering demographic decline, for example, may be more effective when implemented at the national level. For instance, policy interventions by individual cities or municipalities (e.g. financial support for childbearing) might inadvertently encourage internal migration, possibly exacerbating the demographic challenges for some communities.

Even with successful fertility policies and policies for migrants to return, it seems unlikely that population decline will be fully reversed. For example, of all 27 EU Member States, Croatia is expected to have the fourth largest drop in population between 2021 and 2100 (-26%) (Eurostat, 2023^[47]). Thus, while countering strategies have merit, a critical question for subnational policy makers is how Croatian national and subnational governments can successfully adapt to demographic change.

Adapting to demographic change to ensure continued quality of public service delivery

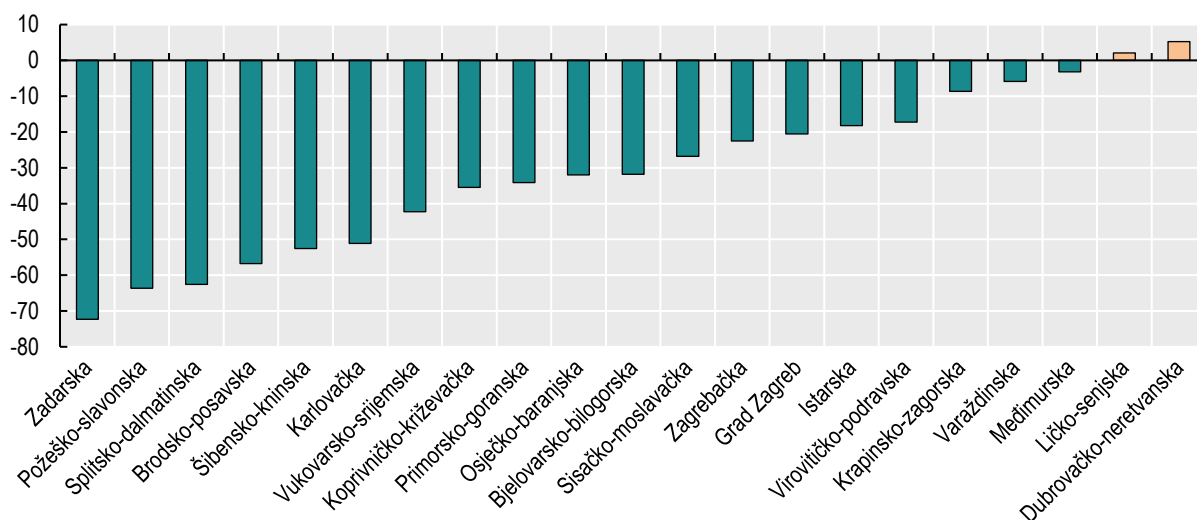
Slowing or reversing demographic decline is not easy. Despite its strategies to prevent or reverse demographic shrinkage, as highlighted above, Croatia's population is projected to continue shrinking over the next decades. As such, in addition to policies aimed to counter population, it is imperative for policy makers to consider interventions that seeks to manage the effects of demographic change. This can be achieved by implementing adaptation strategies that may generate a better quality of life for the existing residents who choose to remain, rather than concentrating solely on encouraging re-population.

Demographic change influences the demand for and financial burden stemming from public services. Among the key public services most affected by demographic trends are education, healthcare, and public transport services, which are crucial for well-being. Subnational governments across the OECD are responsible for delivering high-quality, essential public services and infrastructure, accounting for 37% of total public expenditure and 55% of total public investment (OECD, 2023^[48]), compared to 26% and 34% respectively for subnational governments in Croatia.

Regarding education, demographic decline reduces the number of students, resulting in school closures and a reduction in educational resources, especially in rural and remote areas, thereby limiting opportunities for students and future growth (OECD, 2021^[49]; Narayana, 2018^[50]). With regards to healthcare, demographic decline can strain healthcare systems as an ageing population requires more medical services and care. At the same time, there are fewer working-age healthcare professionals able to care for them. This risks leading to longer wait times and reduced access to healthcare services. Finally, public transport services can also be affected by demographic decline. A decrease in population may lead to a lower demand for public transportation, resulting in decreased availability of public services. This can make it more difficult for individuals, especially those without access to private transportation, to commute to work, access essential services, and participate in social activities.

Taking the example of education, [Figure 4](#) displays a downward trend in the student-to-school ratio across 19 of Croatia's 21 counties, which are generally responsible for primary and secondary education. This dwindling trend translates into a decline in the number of students per school. The reduction in student-to-school ratio is especially pronounced in Zadarska, Požeško-Slavonska, and Splitsko-Dalmatinska counties.

Figure 4. Student-to-school ratio change rate, 2005-2022



Note: The graph only includes data on primary schools only.

Source: Author's elaboration, based on (Croatian Bureau of Statistics, 2023^[51]).

Examples of initiatives to adapt public service delivery to demographic change

OECD regions facing demographic decline and ageing have adopted a series of adaptation policies. First and foremost, inter-municipal co-operation is practised in many service areas, from water and waste management to healthcare and education (OECD, 2017^[52]). For example, in Germany, inter-municipal co-operation is strongly encouraged by the *Länder* (federal states) in their respective municipalities for the management of waste, sewage, water and public transport services. The Czech Republic, moreover, has promoted voluntary municipal associations and micro-regions in education, social care, healthcare, culture, environment and tourism. In Finland, municipalities in North Karelia and in other shrinking regions co-operate extensively to provide education and healthcare, as well as social and regional planning services (OECD, 2022^[17]). The Association of Finnish Municipalities is also testing the creation of territorial education networks under the auspices of its Comprehensive School Network project (2022-2024) in ten regions across the country. As part of this initiative, the Association is investing in strengthening the skills of education staff, as well as diversifying the supply of teaching methods (Finnish Association of Municipalities, 2023^[53]).

Innovative approaches can help subnational governments adapt to the pressures of demographic change. For example, in Portugal the Intermunicipal community of *Terras de Trás-os-Montes* (a territorial administrative body that comprises different municipalities) established mobile helpdesks to improve access to administrative services in isolated, depopulating and ageing rural mountainous communities. The helpdesks consist of small buses with computer equipment, internet access, and support for close to 300 online administrative procedures (Euromontana, 2023^[54]). They drive to different communities to provide residents with easy access to different administrative services.

The private sector can also be leveraged to contribute to public service delivery, such as transportation. For example, a small enterprise in Austria developed the Ummadum app in 2017 to facilitate car sharing among commuters. Contrary to other car sharing apps, Ummadum proposes a more integrated approach that includes rewards for users and involves both municipalities and private companies. Rewards for using the app (and thereby reducing greenhouse emissions) can be used in over 300 shops in the country (Euromontana, 2023^[54]; Ummadum, 2023^[55]).

Owing to their pivotal role in public service delivery, subnational governments need to reflect on how to best tailor their policies to address the impact of demographic change on the access to and quality of services, such as education and healthcare. This may involve encouraging inter-municipal or inter-regional co-operation to benefit from economies of scale, as well as engaging in partnerships with the private sector for more innovative policy solutions. Digital or in-person platforms for dialogue (e.g. compendiums, knowledge-sharing fora) could provide the space for these actors to collaborate and share their knowledge on how to adapt to demographic change.

Creating room for regional and local governments to test policy interventions aimed at managing the effects of demographic change, particularly in different public service delivery areas, can be a cost-efficient way to identify what interventions work and can potentially be scaled. When properly designed and executed, policy experimentation can be a useful instrument for testing a new public policy, policy tool or delivery model before rolling it out more widely. However, experimentation requires an openness to learning from policy failures and making adjustments to implementation when they are needed to ensure greater success. Learning from successes and failures is best achieved when there is a system in place to monitor and evaluate the experiments through timely data collection and analysis of relevant information (OECD, 2023^[56]). In addition to sufficient human and financial resources, this implies defining very clear, and ideally quantifiable, objectives, and evaluation criteria, and consider independent evaluation.

Conclusion

OECD Member countries are undergoing significant demographic shifts marked by both overall and region-specific population declines, particularly in rural and remote areas. Meanwhile, urban populations are often growing. The age composition of OECD Member countries is also skewing older, with projections indicating that these trends are likely to persist in the coming decades.

Croatia exemplifies these demographic challenges, having experienced a substantial population decrease over the past two decades, with particularly sharp declines in specific regions. These demographic changes raise critical questions for policy makers, particularly in the context of regional development and the sustainability of public service delivery.

In recent years, Croatia has primarily adopted policy measures to counter population outflow and increase fertility rates. This has been done both at the national and the subnational levels, for example by providing fiscal incentives, including child allowances or by improving facilities for parents and children (e.g. creation of sport centres and flexible working hour arrangements). However, countering demographic change has its limitations, especially when designed and implemented by individual subnational governments.

As demographic decline is unlikely to reverse over the next decades, adaptation strategies are needed that seek to sustain or even enhance the quality of life for existing residents. This can, in turn, encourage residents to stay and outsiders to settle. To do so, the national government should ensure that subnational governments are involved in the design and implementation of any new national policies that seek to promote adaptation to demographic change. Such policies should reflect the fact that demographic change affects regions and cities differently, and propose policy responses that are sensitive to their specific needs and capacities, as per the example of Italy's National Strategy for Inner Areas. Subnational governments may also need to further horizontal co-operation to ensure that even in the face of shrinking population, the access to and quality of public services such as education, healthcare and housing can be met, and critical infrastructure (e.g. roads) can be maintained. Local policy experiments designed by OECD Member countries (e.g. Finland and Portugal) on how to continue basic public service delivery in the face of population decline could serve as inspiration to Croatian policy makers.

Implementing adaptive policies for demographic change would strongly benefit from experimenting with innovative pilots, involving the private sector and civil society too. Finally, vertical co-ordination and co-

operation among different levels of government is essential, for example to ensure the availability of frequently updated data on demographic change at the subnational level to determine what works best to respond to the challenges posed by population change.

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