

2 Setting the scene: Regional development trends in Croatia

This chapter provides an overview of regional development trends in Croatia at the national, regional and county levels. By analysing a wide range of demographic, economic and well-being indicators, this chapter provides the foundation for the policy assessment and recommendations that will appear in subsequent chapters. Main findings confirm trends such as a rapidly shrinking population, fast economic growth and modest improvements in citizen well-being at the national level but with large disparities across regions and counties. Regional inequalities remain large in Croatia, with residents in Zagreb and coastal counties earning higher incomes than in other parts of the country, for example.

Introduction

Since joining the EU in 2013, substantial improvement has been achieved throughout Croatia. Its economic performance, whether measured by GDP, the unemployment rate or the growth in trade, has been especially encouraging. However, geographic inequalities persist, for example in terms of the quality of life available to Croatian residents and the speed of demographic change. Residents of Zagreb City, and to a lesser extent coastal areas, live longer, and have higher incomes and greater educational attainment, on average, than those living further inland. In contrast, population loss is concentrated in the northeast, with emigration, low birth rates and limited employment opportunities all contributing to population shrinkage. These trends provide the backdrop against which Croatia has designed and implemented its regional development policies, such as the 2017-2020 National Strategy for Regional Development and the National Development Strategy 2030, which include a focus on balanced regional development. The data presented in this chapter can support evidence-informed decision making by the Croatian government as it continues to build institutional, financial and human resource capacity at all levels of government to design, implement, fund and track territorial development policies that seek to address territorial disparities.

This chapter provides a high-level analysis of Croatia's territorial development over the past decade, using data on a variety of governance, economic, demographic and well-being indicators. The analysis provides valuable insights into the development context for which Croatia has set up an elaborate regional development policy framework. The analysis includes evidence at the national, regional and county level, and demonstrates significant successes, areas of stagnation and well-entrenched disparities in outcomes for the residents of different geographic localities.

The first part of this chapter examines national trends, for which the available data are the most in-depth and international comparisons are most instructive. It includes indicators on governance, the economy, demography and well-being, and identifies numerous areas of success. Several indicators (e.g. inequality and democracy) have not changed significantly over the past decade, especially in comparison with neighbouring countries and EU economies comparable with Croatia in terms of their size and geographic location (Box 2.1). However, in absolute terms the general trend is both positive and sustained. The second section of this chapter focuses on Croatia's four TL2 (NUTS 2) areas (statistical regions) and reveals significant territorial disparities between Zagreb City and Adriatic Croatia, on the one hand, and the two inland regions of Pannonian Croatia and Northern Croatia, on the other, with the former demonstrating higher levels of GDP and well-being. The third part of this chapter analyses the relatively small number of indicators available at the county level. Many of these data have only been collected in previous censuses, which are conducted every ten years, the last one in 2021. However, the evidence of disparities at county level is clear, with stark differences in life expectancy, GDP and unemployment. It shows that despite widespread progress throughout Croatia in the past decade, there is still ample opportunity to further reduce territorial disparities.

Box 2.1. International benchmarks and data availability

The analysis of governance, economic, demographic and well-being indicators in Croatia includes comparisons, where available, with a consistent selection of benchmark countries. These include selected neighbouring countries (Hungary, Serbia, and Slovenia), other Eastern European countries (Bulgaria, Lithuania, and Slovak Republic) and a more developed economy (Italy) in close proximity to Croatia. The European Union and OECD averages are also included where possible. The chapter is based on data available in Q1 2023 and is therefore able to isolate the short-term impacts of the COVID-19 pandemic and the subsequent return to the historical trend in most cases. Some data used in this chapter are only available up until 2021, especially at the regional and county levels. In a few instances, 2020 is the last full year available.

National trends in Croatia since joining the EU

The data and analysis contained in this section covers the time period directly following Croatia's accession to the EU and aims to identify any significant changes within the Croatian system of governance, economy, demography and the well-being of its residents. Although these trends, and the absence of change on several indicators, cannot solely be attributed to EU membership, they provide insights into the positive impacts of membership and help identify areas where proactive domestic policies will be required to catch-up with neighbouring economies.

The governance dimension

Croatia is a relatively small country, with a territory of 56 594 km² (comparable to Latvia) (Croatian Bureau of Statistics, 2022^[1]) and a population of 3.8 million inhabitants in 2021 (comparable to Lithuania and New Zealand), 58% of which live in urban areas as defined by the national classification¹.

The 1990 Croatian Constitution declared the country's independence from Yugoslavia and established the Republic of Croatia as a "unitary and indivisible democratic and social state". In 1992, Croatia was admitted as a member of the United Nations, became a member of the European Union in 2013 and joined the Eurozone and Schengen area in January 2023. In 2017, Croatia presented a formal application of accession to the OECD, and in January 2022, the OECD Council agreed to open accession discussions.

Since joining the EU in 2013, Croatia has undertaken several reforms to its governing institutions and territorial divisions. However, its constitution, political system, county structure and international borders remain largely unchanged, and the role of the state in the economy, as reflected in the tax-GDP ratio, has remained steady.

Croatia's territorial-administrative structure has remained stable

Since 1992, Croatia has had a unitary system of government with a directly elected president. In addition, Croatia has a Prime Minister who heads the executive branch of government and is accountable to parliament, which consists of one chamber. Croatia's territorial-administrative structure is composed of two levels of subnational government: regional and local self-governments (Table 2.1). At the regional level, Croatia is divided into 20 counties (or regional self-governments) and Zagreb City, which operates at the county level. Each county, with the exception of Zagreb City, is governed by a prefect and an assembly, both of which are elected by popular vote for four-year mandates. Zagreb City is governed by a mayor and a city assembly. At the local level, Croatia is comprised of 428 municipalities and 127 towns, each with their own mayor and local council, which are also directly elected for four-year terms. Croatia also has four

non-administrative, statistical regions (TL2): Adriatic Croatia, Northern Croatia, Pannonian Croatia and Zagreb City.

Table 2.1. Croatia's territorial-administrative organisation, 2023

Tier/level of subnational government	Administrative unit	Number of units
Second tier	Regional (TL3)	Counties (<i>županije</i>)
		Zagreb City
Third tier	Municipal	428 municipalities (<i>općina</i>)
		127 towns (<i>grad</i>)

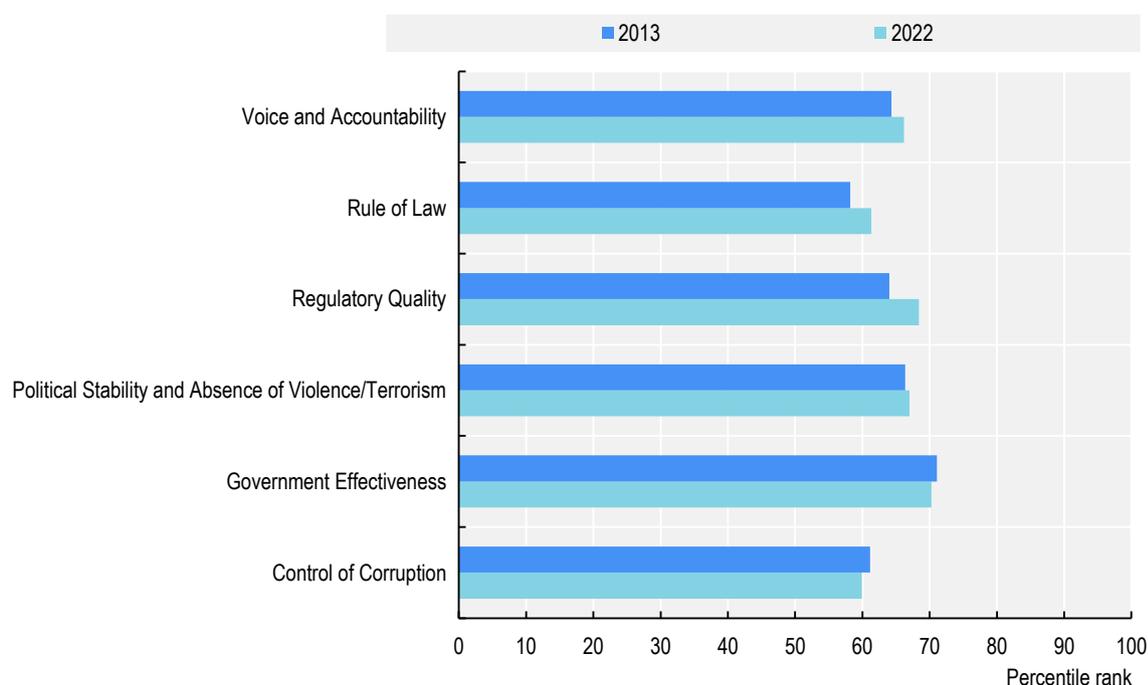
Source: Author's elaboration, based on (Croatian Ministry of Regional Development and EU Funds, 2022^[2]; SNG-WOFI, 2022^[3]).

Progress in governance has been modest since EU accession

The strength of Croatian democracy has held firm, with smooth transfers of power occurring since 2013 and voter turnout for parliamentary and presidential elections averaging around 50%. According to the Economist Democracy Index (The Economist Intelligence Unit, 2022^[4]), in 2022, Croatia ranked 59 out of 167 countries overall, scoring very high on its electoral process and pluralism, but moderately on the functioning of government, political participation and civil liberties.

Croatia's score on the World Bank's Worldwide Governance Indicators (Figure 2.1), which evaluate perceptions of governance quality across six categories in over 200 countries, also suggests moderate progress in a number of areas. Notably, Croatia's rankings in relation to political stability, regulatory quality, rule of law, and voice and accountability moderately improved in 2022 compared to 2013.

Figure 2.1. Worldwide governance indicators in Croatia, 2013 and 2022



Note: The figure shows the rank of Croatia among all countries covered by each aggregate indicator, with 0 corresponding to the lowest rank, and 100 to the highest. The Worldwide Governance Indicators are composite governance indicators based on over 30 underlying data sources. Source: Author's elaboration, based on (Kaufmann and Kraay, 2023^[5]).

On 1 January 2023, Croatia adopted the euro as its official currency and formally joined the Schengen Area. These changes were part of the EU accession process and brought with them the expectation that they would reduce barriers to trade, tourism, skilled migration and investment, all of which would contribute to greater integration with the EU and support economic development. While EU accession in 2013 prompted a spike in emigration, particularly to countries such as Germany and Austria, and increased trade, investment and tourism, the impact of these two developments are yet to be seen. However, due to the kuna's pegging to the euro since 2003, and the high degree of access to EU labour markets already available to Croatian residents, the disruption caused by Schengen membership and the adoption of the euro are both anticipated to be small.

The economic dimension

Croatia's macroeconomic performance since 2013 has been strong, with substantial progress on several indicators. The most significant economic advances include:

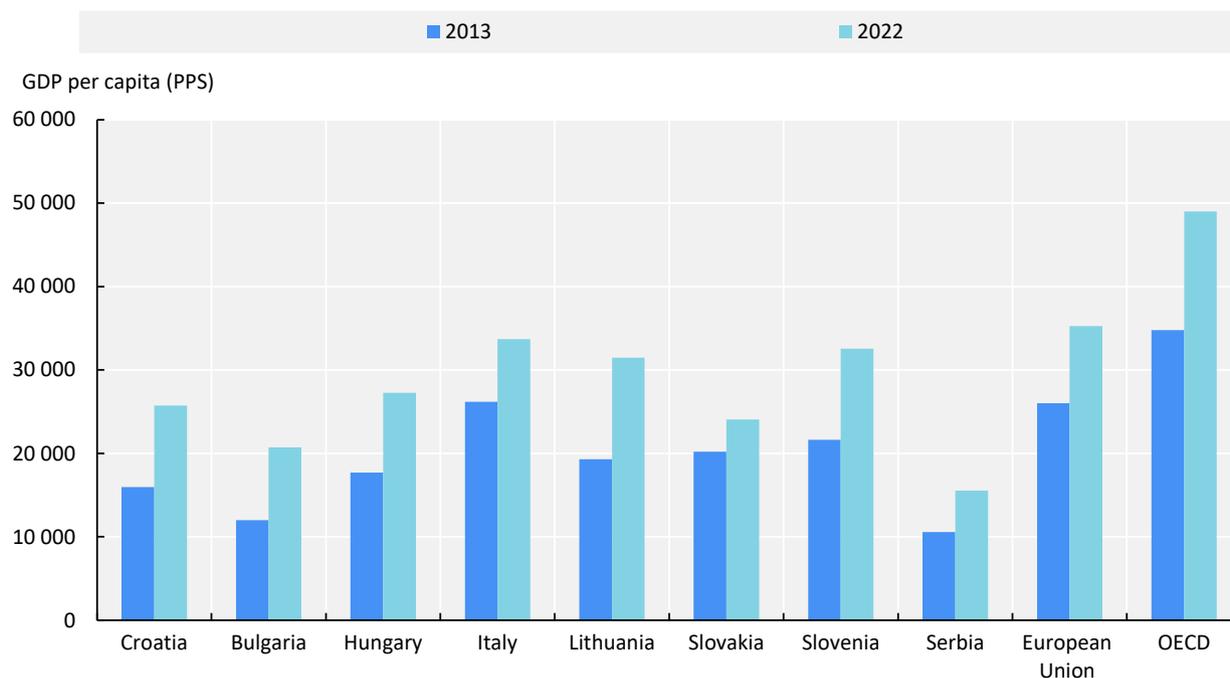
- **Living standards:** GDP per capita (PPS)² increased from EUR 15 978 in 2013 to EUR 25 634 in 2022, averaging 5.4% growth annually, above the EU average of 3.4% and the OECD average of 3.9% (Eurostat, 2023^[6]; World Bank, 2024^[7]).
- **Unemployment:** Long-term unemployment fell from 11.0% in 2013 to 2.4% in 2022. Over the same time period, the average rate of long-term unemployment in the EU fell from 5.4% to 2.4% (Eurostat, 2023^[8]).
- **Inflation:** Croatia successfully maintained price stability, with average inflation rarely exceeding 2% and only narrowly falling below 0% in 2015-16. Between 2013-22, the annual rate of inflation in Croatia averaged 1.9%, slightly below the EU average of 2.0% (Eurostat, 2023^[9]).
- **Productivity:** Real labour productivity per person employed grew at an average annual rate of 1.4% between 2013-21, significantly higher than the EU average of 0.7% (Eurostat, 2023^[10]).

Economic growth has exceeded the EU average

Between 2013 and 2022, Croatian real GDP grew by an average of 2.8%, which was faster than the EU average of 1.7% and the OECD average of 1.9%. The rate of real GDP growth was even more impressive at the per capita level, averaging 3.8%, compared to 1.6% in the EU and 1.3% in the OECD. The Croatian economy's rebound from the COVID-19 pandemic was particularly noteworthy. After shrinking by -8.5% in 2020, real GDP growth was 13.1% in 2021, led by a resurgence in tourism. Further, the latest *OECD Economic Outlook* forecasts that economic growth will remain robust over the near term, with the economy expected to grow 2.1% in 2023 and 2.5% in 2024. Rising wages and employment growth are also predicted, leading to higher real spending by households (OECD, 2023^[11]).

In comparison to benchmark countries, Croatia's GDP growth has been less exceptional, with economies such as Bulgaria (4%), Hungary (3.7%) and Lithuania (3.8%) achieving comparable economic growth rates per capita since 2013. Yet in absolute terms, living standards in Croatia have clearly improved. GDP per capita, when adjusted for price differentials, was EUR 25 634 in 2022 compared to EUR 15 978 in 2013 (Figure 2.2). Further, Croatia's GDP per capita was only 27.2% lower than the EU average in 2022, compared to 38.6% lower in 2013, providing further evidence of broadly successful economic policy settings over the last decade (Eurostat, 2023^[6]; World Bank, 2024^[7]).

Figure 2.2. GDP per capita (PPS) in Croatia and benchmark countries, 2013 and 2022

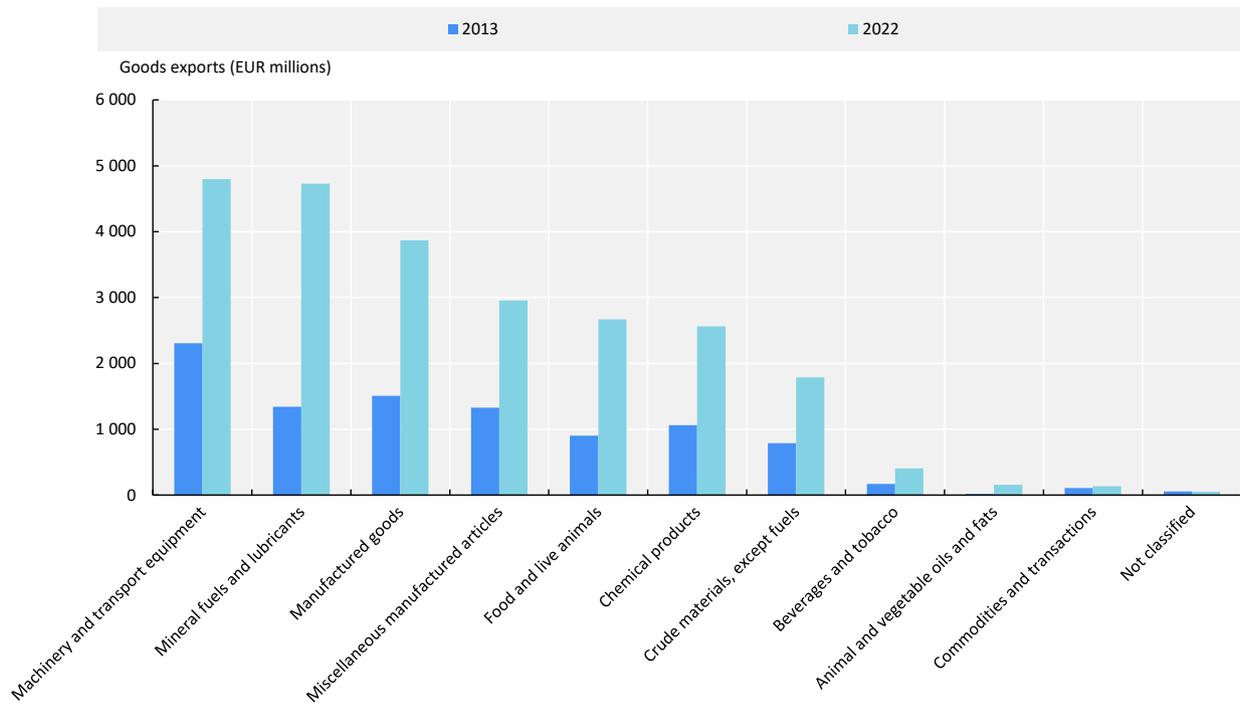


Note: Purchasing Power Standard. OECD estimate derived from Purchasing Power Parity.

Source: Author's elaboration with data from (Eurostat, 2023^[6]; World Bank, 2024^[7]).

One factor contributing to economic growth over the last decade is increased exports. Since Croatia joined the EU in 2013, the value of total goods that have been exported has grown at an average annual rate of 10.8%. This growth has been broadly consistent across Croatia's major export industries and suggests that EU accession did not disproportionately coincide with negative impacts caused by increased competition in industries such as food and live animals, which tend to be concentrated in rural areas (Figure 2.3). In 2022, the three largest export categories were machinery and transport equipment; mineral fuels and lubricants; and manufactured goods.

Figure 2.3. Croatian goods exports, 2013 and 2022



Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[12]).

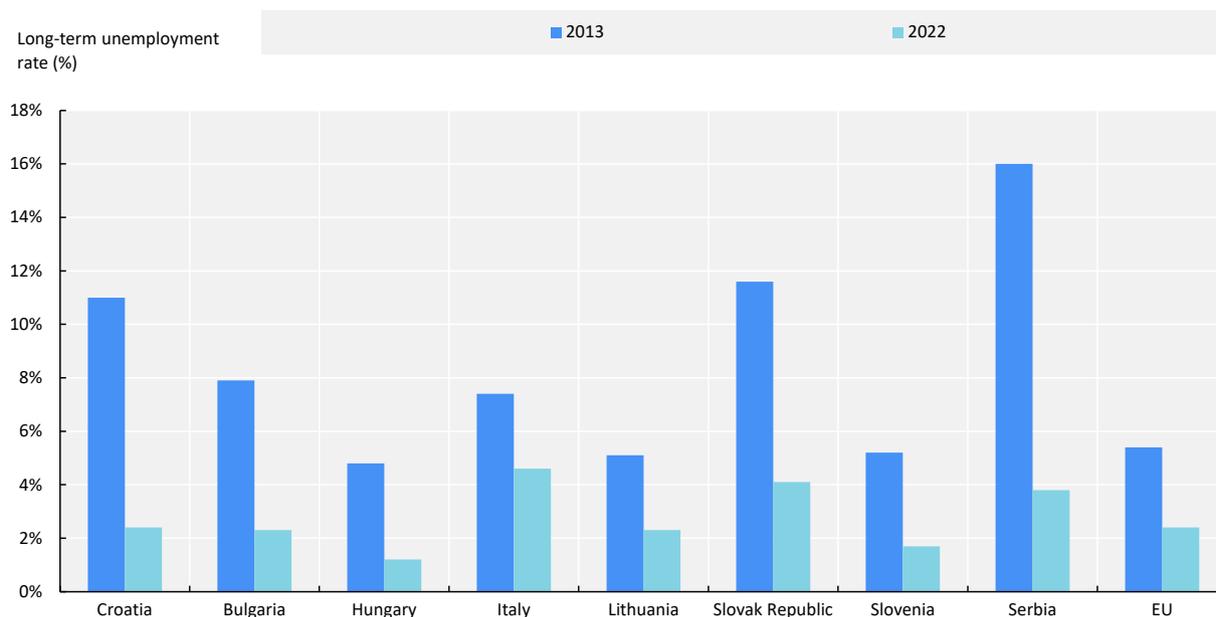
Despite the fast rate of economic growth, prices have remained stable in Croatia throughout the last decade, with an average inflation rate of only 0.9% from 2013-21 (Eurostat, 2023^[9]). The OECD average throughout this period was 1.9% (OECD, n.d.^[13]). In 2022, consumer prices in Croatia rose by 10.7%, in alignment with global developments and at a comparable speed to the EU average of 9.2% and OECD average of 9.6%.

Unemployment has fallen considerably since 2013

The most striking development in the Croatian economy since 2013 has been the rapid and sustained fall in long-term unemployment: from 11.0% to 2.4% between 2013 and 2022 (Eurostat, 2023^[8]). Unlike total unemployment, which rises and falls in response to the business cycle, long-term unemployment (i.e. unemployment exceeding 12 months) reflects a structural imbalance in the labour market. This positive change has been driven by a combination of sustained economic growth and the ongoing development of labour-intensive sectors such as tourism. High rates of emigration to other EU economies, particularly Germany, have also contributed by providing new economic opportunities directly to the long-term unemployed.

The fall in long-term unemployment in Croatia, however, is broadly in line with a downward trend seen across the OECD, EU and benchmark countries (Figure 2.4). In the EU, long-term unemployment fell from 5.4% to 2.4% between 2013 and 2022. Long-term unemployment in Serbia, which was the highest of the benchmark countries in 2013, fell from 16.0% to 3.8% over the same period.

Figure 2.4. Long-term unemployment rate in Croatia and benchmark countries, 2013 and 2022



Note: 15-74 age group, percentage of the labour force.
Source: Author's elaboration with data from (Eurostat, 2023^[8]).

The demographic dimension

Croatia has experienced significant demographic changes in the last decade. Like many countries in southern Europe, fertility rates are low and the average age of its residents continues to increase gradually each year. Although a reversal of this long-term trend is unlikely to be achievable, governments in Croatia will nonetheless be required to make significant reforms in a range of policy areas to adequately adapt to, and ameliorate, some of the negative impacts of demographic changes that are currently affecting the country.

Croatia's population is both shrinking and ageing

Croatia's population has become significantly smaller since 2013, and by 2022 had approximately 399 835 fewer residents (-9.4%). On average, this equates to Croatia losing 1.1% of its population annually during the last nine years. Population decline has been caused by low fertility rates and net outward migration. Over the last decade, the number of births has remained reasonably constant at around 40 000 per year but has been unable to offset the approximately 50 000 deaths recorded annually. This trend was exacerbated by the COVID-19 pandemic, which led to sharp increases in mortality in 2020 and 2021 (Eurostat, 2023^[14]).

In addition to a reduced number of permanent residents, the population of Croatia has also aged significantly. In 2011, only 17.7% of the population were aged 64 or older, but by 2021 this had increased to 22.5%. Croatia's low fertility rate suggests that the proportion of elderly residents will continue to grow in the coming decade (Eurostat, 2023^[14]).

Croatia's low birth rate, relative to mortality rates, is not exceptional for the region. In 2021, Croatia's fertility rate was approximately 1.6 births per woman. Most neighbouring countries and the EU as a whole are also averaging less than 2.1 births per woman, which is the standard threshold required to maintain positive

population growth. In the long term, Croatia's population is forecast to decline from 3.86 million in 2022 to 3.31 million in 2050 (-13.3%) (Eurostat, 2023^[14]).

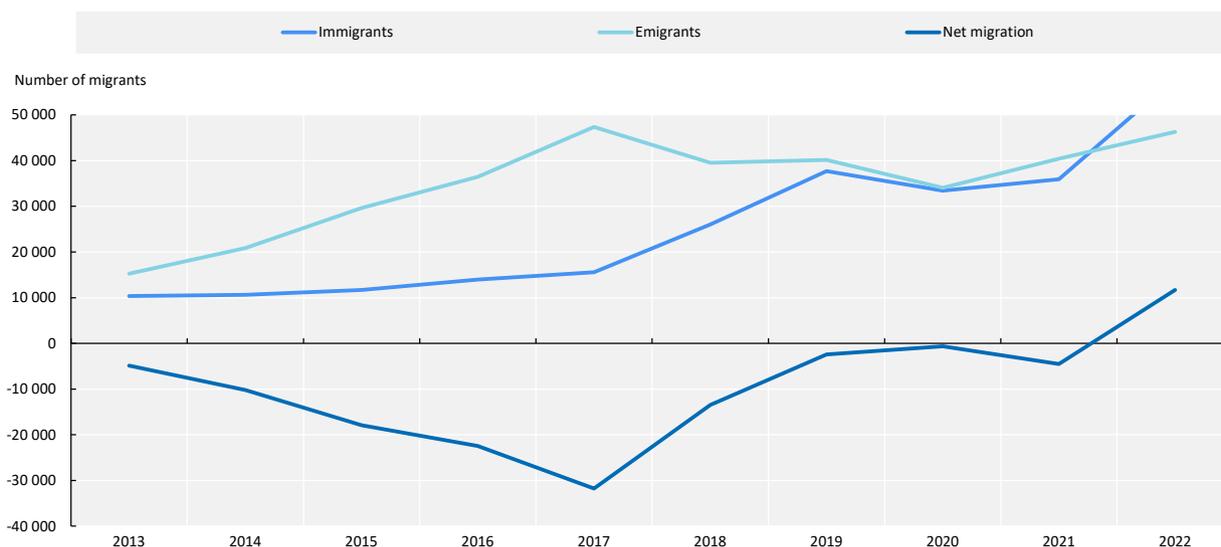
Demographic decline can have wide-ranging effects on public finances, service delivery and socio-economic development, which need to be considered by policy makers. For example, with a diminishing population, the labour force also shrinks, which can lead to labour shortages across the economy. Such shortages, in turn, can affect firm behaviour, and may result in reduced business operations and job losses (Šerý et al., 2018^[15]). Further, 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. The decline in population can also lead to the closure of schools, community centres and other public facilities (e.g. libraries), thus eroding the sense of community and limiting access to essential public services (Šerý et al., 2018^[15]; Beunen, Meijer and de Vries, 2020^[16]).

Migration has contributed significantly to population decline

Croatia's natural population decreases have been compounded by the country's net migration rate, which has been negative every year over the period 2013-21. During this period over 96 000 more people emigrated from Croatia than settled in the country. However, in 2022 Croatia reversed this long-run trend and recorded positive net migration of 11 685 (Croatian Bureau of Statistics, 2023^[17]).

Unlike the number of births and deaths, which have remained broadly consistent over the last ten years, migration patterns have fluctuated significantly in response to evolving international economic conditions and immigration policies. Following Croatia's accession to the EU in July 2013, 14 member countries became more easily accessible to Croatian workers, boosting emigration. However, the 13 remaining EU Member States maintained temporary restrictions. The removal of barriers to the German labour market in mid-2015 was particularly significant, opening up new employment opportunities. This contributed to a more than doubling of the number of annual emigrants in 2016 (Figure 2.5). The final EU member to lift labour market restrictions was Austria, in 2020.

Figure 2.5. Net migration in Croatia, 2013-22



Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[18]).

The vast majority of recorded emigration has been to other European economies, with Germany (44.1%), Bosnia and Herzegovina (12%) and Serbia (9.5%) being the most popular destinations. In recent years, Austria has also become a top emigration destination (Croatian Bureau of Statistics, 2022^[19]). The largest sources of inward migration are also Bosnia and Herzegovina (32.4%), Germany (12.9%) and Serbia (10.8%), suggesting that some emigrants may be returning to Croatia after a period of living abroad (Croatian Bureau of Statistics, 2023^[18]).

Another consequence of low fertility and the outward migration of working-age residents over the past decade are changes to the average age of the Croatian population. Elderly residents now make up 22.5% of the population (up from 15.7% in 2001), placing increasing pressure on government health services and annual pension costs (Table 2.2).

Table 2.2. Croatian population data, 2001, 2011 and 2021

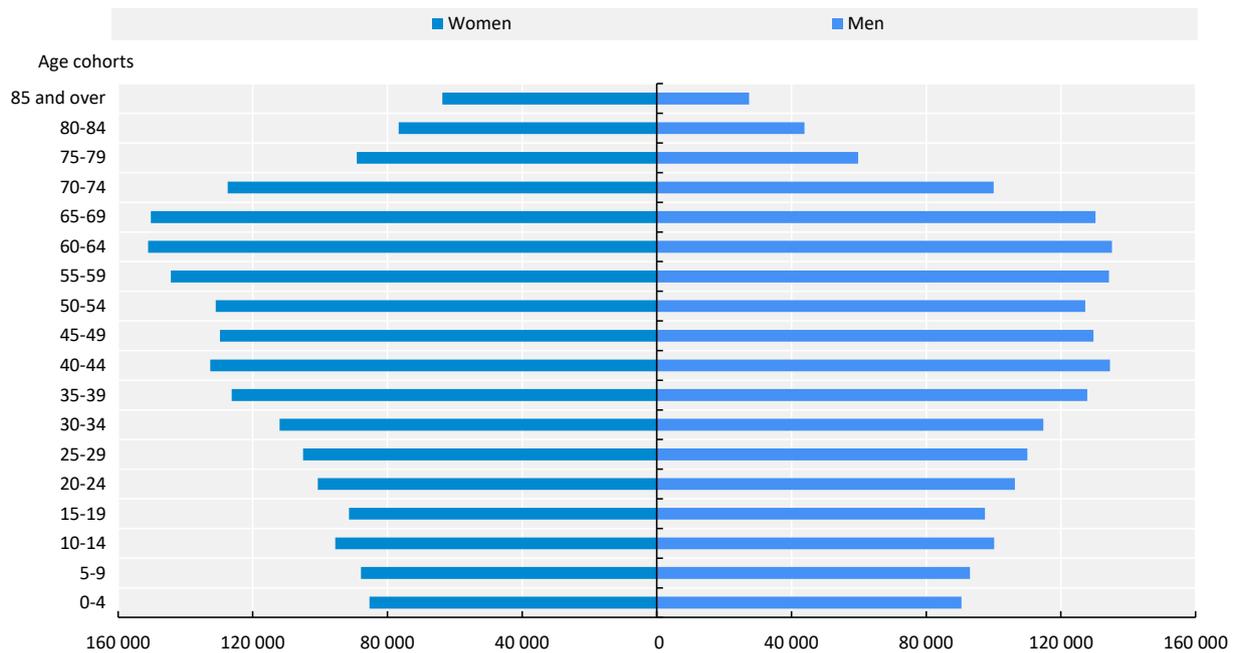
Census	Population	0-14	15-64	65+
2001	4 437 460	17.1%	67.2%	15.7%
2011	4 284 889	15.2%	67.1%	17.7%
2021	3 871 833	14.3%	63.3%	22.5%

Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[20]).

Croatia's ageing population is following a trajectory like in most European countries and poses a significant, but slow-moving, threat to the sustainability of the existing tax and transfer system (Čipin, 2017^[21]). Research estimates that by 2050, the share of the state budget allocated to pensions and elderly healthcare could double (Nejašmić, 2011^[22]). Government programmes and expenditure patterns in Croatia will therefore be required to adapt in the coming decade to accommodate the growing number of elderly residents and the steadily decreasing number of working-age, income-tax paying individuals.

Beyond government revenue and expenditure challenges, low fertility, and the decline in youth as a proportion of the total Croatian population, may have other long-term economic implications. For example, the current cohort of youth (between the ages of 0 and 14) in 2021, which will enter the labour market in the next twenty years, is significantly smaller than earlier generations (Figure 2.6), which could lead to future labour market shortages. Government policies to encourage the return of the Croatian diaspora, or to attract new working-age migrants from other countries, may therefore be required in periods of high employment. The relative decline in the working-age population could also limit future growth in GDP per capita, due to lower rates of participation (Croatian Bureau of Statistics, 2021^[23]).

Figure 2.6. Population pyramid of Croatia, 2021



Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2021^[23]).

The well-being dimension

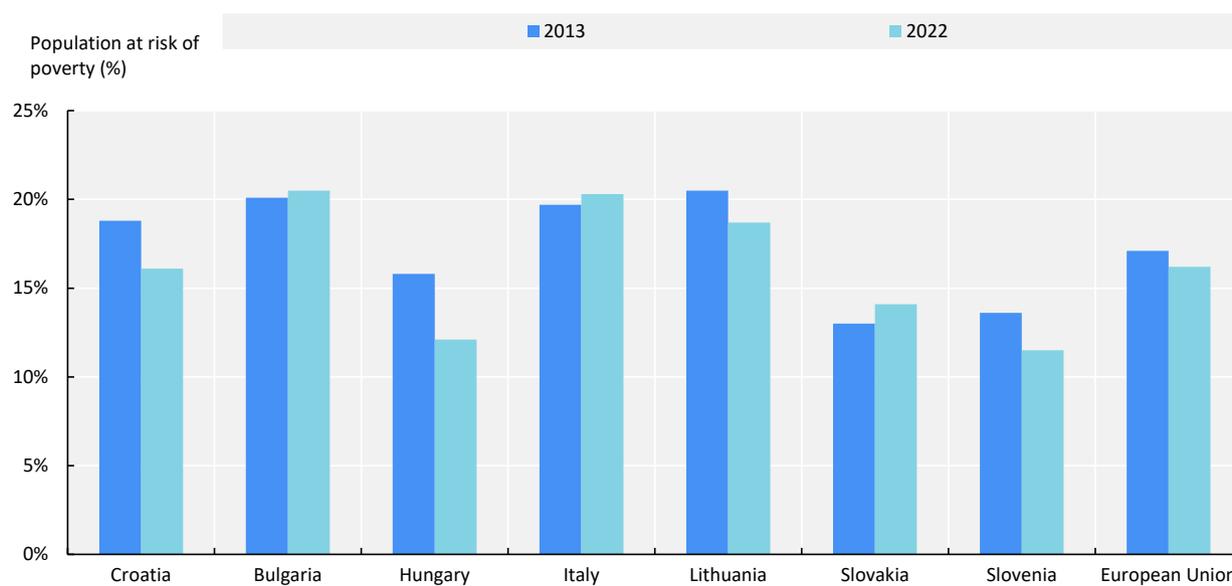
In comparison to economic indicators, progress on well-being has been more modest over the past decade. Since 2013, the rates of inequality and poverty in Croatia have improved marginally, and life expectancy remains largely unchanged and below the EU average.

Inequality, poverty and life expectancy has remained constant

Income inequality, as measured by the Gini coefficient, has not changed significantly over the last ten years. In 2021, Croatia scored 48.5, a slight improvement on the 49.3 recorded in 2013. On this measure, which is based on disposable income and includes pension payments, inequality in Croatia was slightly lower than the EU average (52.2). Of the benchmark countries, only Slovenia (42.8 in 2021) was notably more equal on this measure (Eurostat, 2024^[24]).

The proportion of the population at risk of poverty within Croatia, however, has improved, falling from 18.8% in 2013 to 16.1% in 2022 (-2.7 percentage points) (Eurostat, 2023^[25]). The risk of poverty in the EU and most benchmark countries has remained broadly stable, despite widespread improvements in per capita income, with only Hungary (-3.7 percentage points) among the benchmark countries to make more significant progress on this measure since 2013 (Figure 2.7). In direct comparison with benchmark countries, the 16.1% of the population at risk of poverty in Croatia in 2022 was higher than Slovenia (11.5%), roughly equal to the EU (16.2%) but significantly lower than Bulgaria (20.5%) and Italy (20.3%).

Figure 2.7. Share of the population considered at risk of poverty, 2013 and 2022



Note: Population under the age of 75.

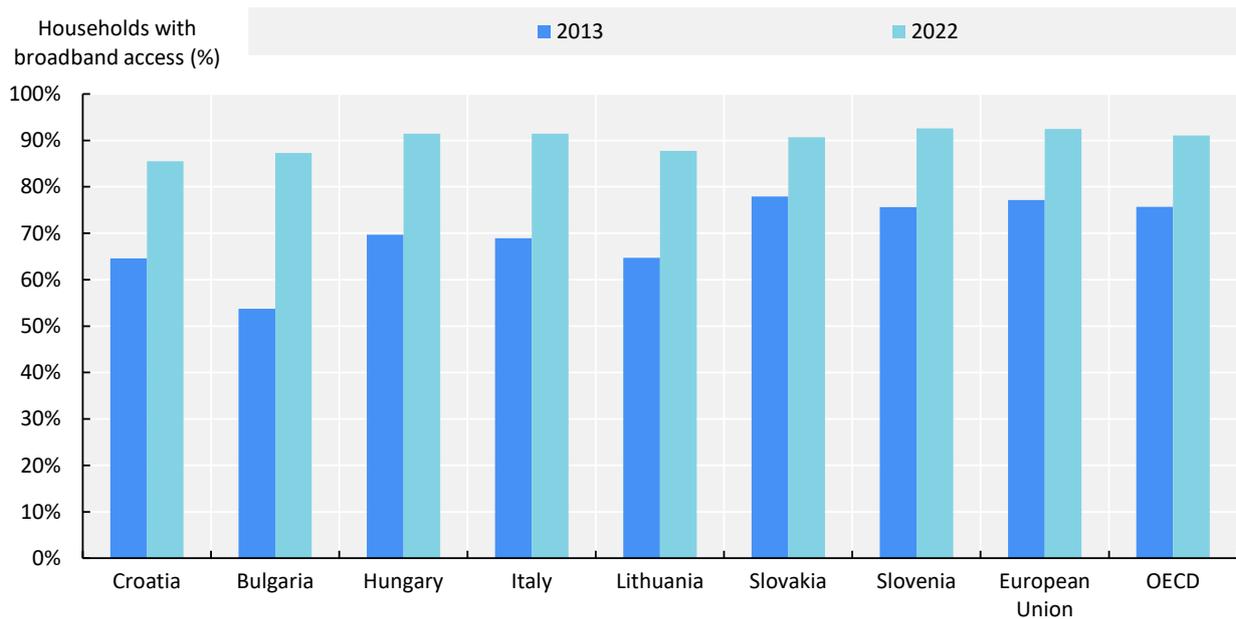
Source: Author's elaboration with data from (Eurostat, 2023^[25]).

Life expectancy at birth in Croatia has also failed to improve significantly. In 2022, the average Croatian could expect to live 77.7 years at birth, a slight decrease compared to the 77.8 estimated in 2013. Relative to benchmark countries, Croatia was near the median but remains significantly lower than the EU average of 80.4. For example, in 2022, life expectancy in Croatia remained lower than Italy (83.0) and Slovenia (81.3) but was higher than Bulgaria (74.3) and Hungary (76.2). Further investment in healthcare services and infrastructure, as well as education, will potentially be needed for life expectancy in Croatia to catch up with the EU average (Eurostat, 2023^[25]).

Household internet access has increased rapidly throughout Croatia

Internet access is one area of substantial improvement, with the proportion of households reporting broadband connections growing by more than 20 percentage points since 2013 (Figure 2.8). Despite this growth, household access to broadband in Croatia remains at 86.1%, below the EU average of 92.3%. It also remains below most other benchmark countries, such as the Slovak Republic (90.0%) and Slovenia (93.0%) (Eurostat, 2023^[26]; OECD, 2024^[27]). Increasing household access to broadband is an important priority for Croatia for both social and economic reasons. Some of the benefits include reduced social isolation, additional flexibility in accessing government services, greater access to educational resources and an enhanced network of potential job opportunities.

Figure 2.8. Household broadband access, 2013 and 2022



Source: Author's elaboration with data from (Eurostat, 2023^[26]; OECD, 2024^[27]).

Regional trends

Croatia's economic and demographic trends since 2013 have not been uniform, with large and sometimes growing disparities clearly identifiable among the country's four statistical (TL2) regions: Adriatic Croatia, Northern Croatia, Pannonian Croatia and Zagreb City (Figure 2.9). The available evidence suggests that Zagreb City and the Adriatic Croatia are more advanced economically and have higher levels of resident well-being, while population loss has been concentrated in Northern Croatia and Pannonian Croatia.

The four statistical regions of Croatia do not have independent political representation or policy-making capacity. They do, however, enable aggregation of the 20 counties and Zagreb City into distinct geographic zones that provide insights and additional depth to the analysis of national and subnational trends. This facilitates the design and implementation of various macro-regional development initiatives (e.g. smart specialisation and industrial transition policy) (see chapter 2).

Figure 2.9. Croatia's four TL2 regions



Source: Author's elaboration, based on (Croatian Bureau of Statistics, n.d.^[28]).

From 2012-21, Croatian statistics were aggregated into only two regions – Adriatic Croatia and Pannonian Croatia – the former consisting of coastal counties and the latter of landlocked counties. The reconfiguration of 2021, which administratively divided Croatia into four separate TL2 regions (Adriatic Croatia, Northern Croatia, Pannonian Croatia and Zagreb City), has therefore created some limitations in the availability of data. For some indicators, which use the new configuration, data are only available from 2021 onwards and comparisons with the past decade are not possible. On others, data are available from 2013-21, but only include the two former TL2 classifications.

Further, several important indicators of governance, economic development and well-being available nationally are not collected or published at the regional level. It is therefore not possible to detect regional variations in the prevalence of inequality, corruption or Internet access. Nonetheless, the available data at the regional level provides valuable insights into how Croatia's territorial disparities have changed over the past decade.

The economic dimension

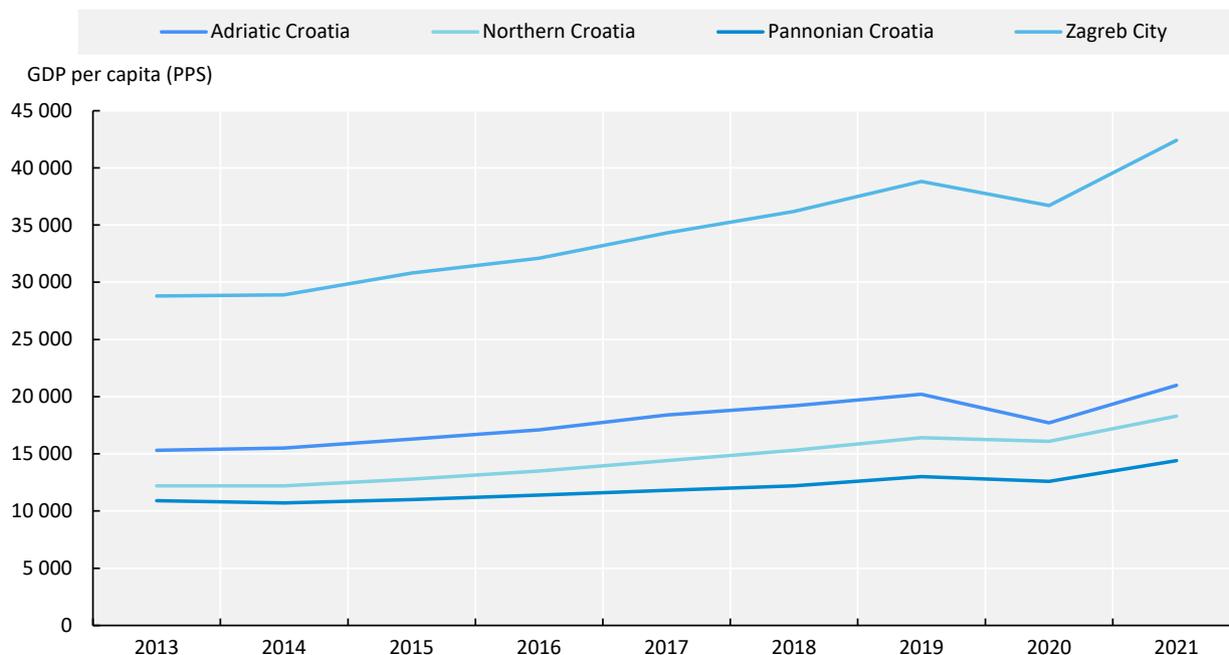
Significant economic disparities exist between Croatia's four TL2 regions, highlighted by the relatively strong performance of Zagreb City on a variety of economic indicators. For example, Zagreb City's productivity, employment and average income were twice as high as all other TL2 regions. Pannonian Croatia, in Croatia's northeast, was the lowest-performing region overall—although unemployment is just as high in Adriatic Croatia.

The regional disparities can be partially explained by several factors. First, Zagreb City is primarily a metropolitan area, while the other three consist of rural, regional and urban settlements. Second, as the seat of the central government, many public functions are concentrated in Zagreb. This adds to regional GDP, despite many of the government tasks being undertaken for the benefit of the entire country. Third, there may be a small measurement error caused by workers residing in Northern Croatia but working in Zagreb City. Such commuting patterns could affect regional per capita GDP estimates, which are calculated by dividing the total amount of regional output by the total number of permanent residents. This may slightly overstate the economic disparities between Northern Croatia and Zagreb City.

Zagreb City's economic dominance has grown, with other regions falling behind

Notwithstanding the above-mentioned considerations, Zagreb City is undeniably the most productive of the four TL2 regions and its residents enjoy a significantly higher standard of living than the national average. Further, the gap between Zagreb City and Pannonian Croatia, the least economically developed region, has widened. In 2013, GDP per capita in Pannonian Croatia was 63% lower than that of Zagreb City. This had increased to 66% by 2021 (Figure 2.10).

Figure 2.10. GDP per capita (PPS) in TL2 regions, 2013-21

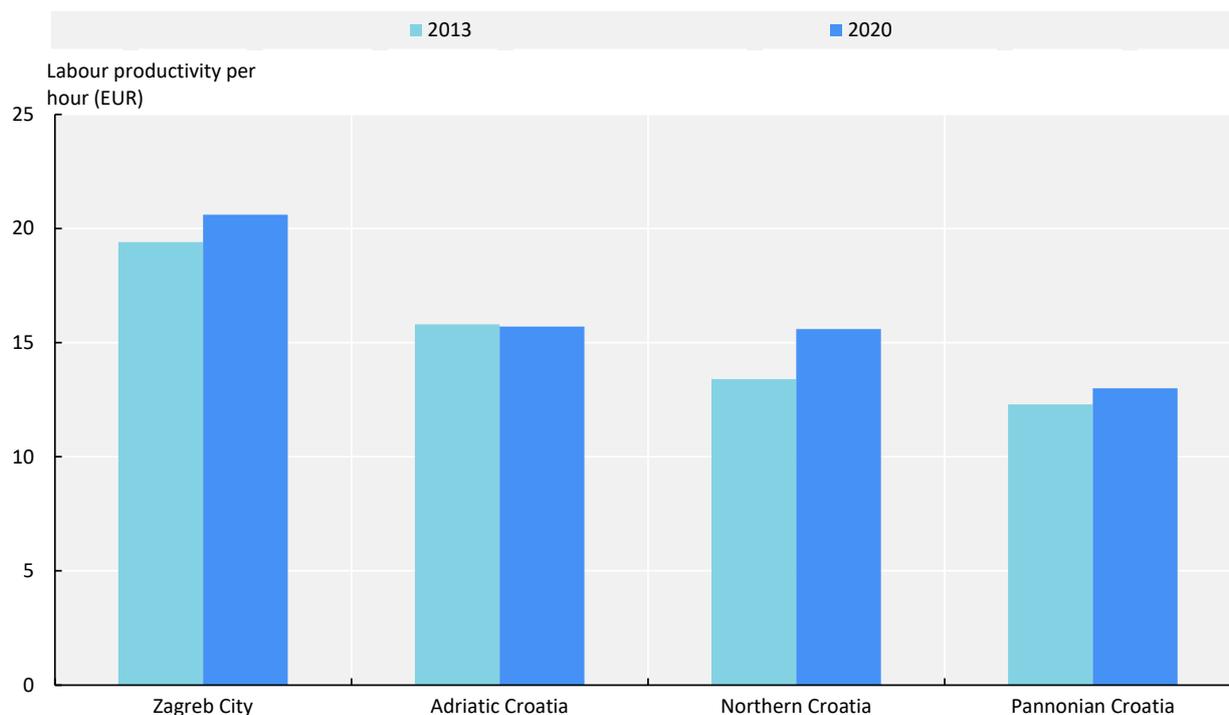


Note: Purchasing power standard.

Source: Author's elaboration with data from (Eurostat, 2023^[29]).

Labour productivity in Croatia also varies significantly at the regional level. In Zagreb City, the average worker was able to produce EUR 20.60 of output, per hour, in 2020, which was significantly higher than in Adriatic Croatia (EUR 15.70), Northern Croatia (EUR 15.60) or Pannonian Croatia (EUR 13.00). Since 2013, labour productivity has increased in all regions except Adriatic Croatia, where it declined, albeit marginally (Figure 2.11).

Figure 2.11. Labour productivity in TL2 regions, 2013 and 2020



Source: Author's elaboration with data from (Eurostat, 2023^[10]).

The distribution of employment and labour force participation across Croatia's four regions follows a similar pattern (Annex Table 2.A.1). While in Zagreb City only 5.2% of the labour force was unemployed in 2023, in Pannonian Croatia unemployment was the highest in the country at 12.4% (Table 2.3). Similarly, in Zagreb City, participation was very high, with 77.2% of the adult population economically active, while in Pannonian Croatia, only 64.8% of the same age cohort were economically active in 2023. Regional disparities in unemployment have remained broadly stable since 2016. Although the rate of unemployment has almost halved in Zagreb City, Adriatic Croatia and Northern Croatia since 2016, in Pannonian Croatia unemployment remains stubbornly high at 12.4%. These persistent disparities, however, do not detract from the rapid falls in unemployment that have been achieved in all of Croatia's TL2 regions in recent years.

Table 2.3. Unemployment in TL2 regions, 2016-23

	Unemployment 2023 (total)	Unemployment 2023 (men)	Unemployment 2023 (women)
Croatia	7.4% (-5.8 pp)	7.3% (-5.3 pp)	7.6% (-6.3 pp)
Adriatic Croatia	6.9% (-7.3 pp)	6.9% (-7.3 pp)	7.0% (-7.3 pp)
Northern Croatia	5.0% (-4.9 pp)	4.7% (-4.0 pp)	5.3% (-5.9 pp)
Pannonian Croatia	12.4% (-5.0 pp)	10.7% (-4.5 pp)	14.4% (-5.8 pp)
Zagreb City	5.2% (-4.5 pp)	6.6% (-4.2 pp)	3.9% (-4.7 pp)

Notes: Unemployed aged between 15-74. Data between parenthesis shows the percentage point [pp] change between 2016-23.

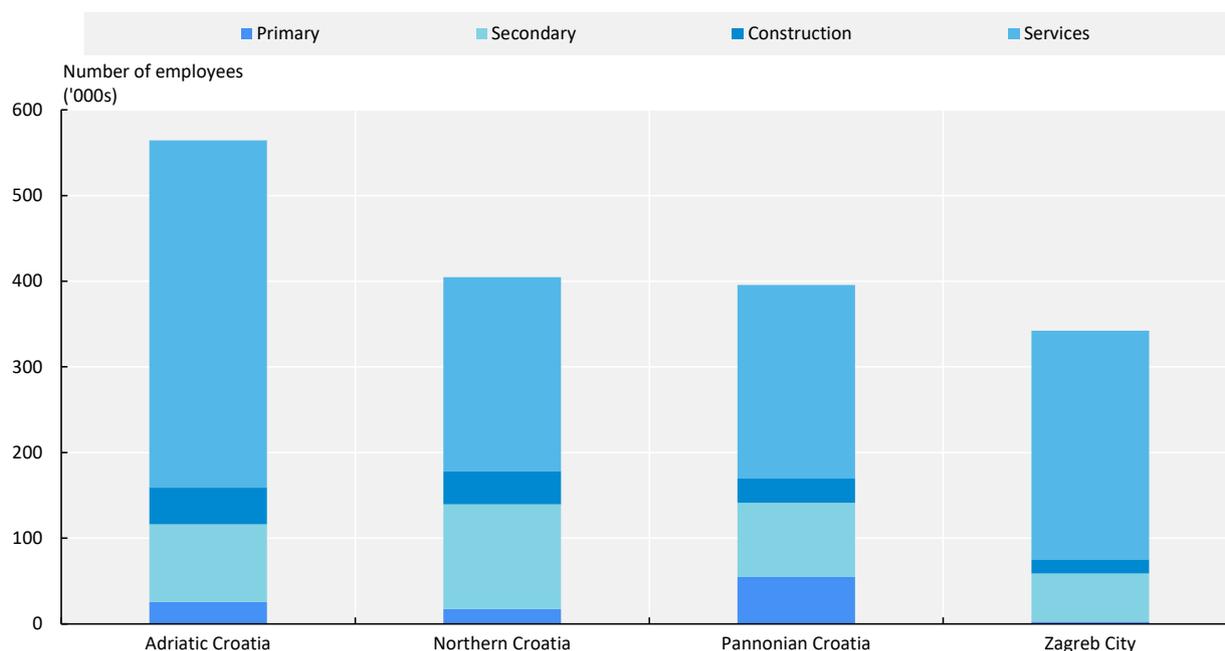
Source: Author's elaboration with data from (Eurostat, 2023^[30]).

Participation rates have increased in all regions, since 2017, but the gap between the most and least economically active regions has increased only slightly. Zagreb City, where labour market participation is highest (77.2%), also experienced the largest increase (4.4 percentage points). The smallest increase was

seen in Northern Croatia, with labour market participation increasing by 1.4 percentage points to 69.7% (Croatian Bureau of Statistics, 2023^[31]).

Significant differences in the type of employment by sector are also evident across TL2 regions and can partially explain the large disparities in income and productivity. The landlocked TL2 regions of Pannonian Croatia and Northern Croatia have proportionally higher numbers of people employed in primary and secondary industries, especially compared to Zagreb City (Figure 2.12). Conversely, the capital region employs a large share of Croatia's finance, information and professional service employees. In fact, in 2022, 47.9% of Croatia's employees working in "high technology sectors" was estimated to be based in Zagreb City (Eurostat, 2023^[32]).

Figure 2.12. Employment by activity type in TL2 regions, 2022



Note: All employees older than 15.

Source: Author's elaboration with data from (Eurostat, 2023^[33]).

A further explanation of the economic disparities between TL2 regions relates to their innovation performance. In 2023, Adriatic Croatia, Northern Croatia and Pannonian Croatia were all classified as "emerging innovators +", the third-lowest ranking out of a possible 12 provided by the EU's Regional Innovation Scoreboard (Regional Innovation Scoreboard, 2023^[34]). Scores on trademark applications, innovative SMEs collaborating, public-private co-publications and international scientific co-publications were below the Croatian average in all three of these regions. Zagreb City, by comparison, was considered a "strong innovator", the third-highest possible grouping, and scored above the EU average overall. Zagreb City scored particularly highly on the following criteria: lifelong learning; employment knowledge-intensive activities; R&D expenditures in the business sector, and international scientific co-publications.

The demographic dimension

The populations of all four of Croatia's TL2 regions are shrinking, ageing and affected by emigration. However, these demographic trends are worse in Pannonian Croatia. Between 2011 and 2022, Pannonian Croatia lost 17.4% of its population, which was an annual rate that was almost double that of the nation as a whole. In fact, Zagreb City only lost 2.9% of its population over the same period (Table 2.4).

Table 2.4. Population change in TL2 regions, 2011-22

	2011	2022	Total change	Average annual change
Croatia	4 275 984	3 854 000	-9.9%	-0.9%
Adriatic Croatia	1 411 935	1 296 210	-8.2%	-0.8%
Northern Croatia	855 837	785 699	-8.2%	-0.8%
Pannonian Croatia	1 227 100	1 013 572	-17.4%	-1.7%
Zagreb City	790 017	766 824	-2.9%	-0.3%

Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[35]).

The high rate of population decline has been caused by the same factors evident at a national level. These include sustained low birth rates, accelerating mortality rates and international emigration. In Pannonian Croatia, between 2012-2021, an estimated 175 051 individuals permanently left the region. Around 68.7% of these emigrants left Croatia entirely, but nearly one third relocated to another region. Of the total number that emigrated to another region within Croatia between 2013-22, the largest share, approximately 30.7%, relocated to Zagreb City. Around 29.0% migrated to Adriatic Croatia, 21.5% to Northern Croatia and only 18.8% to Pannonian Croatia (Croatian Bureau of Statistics, 2023^[35]).

The precipitous population decline in Adriatic Croatia, Northern Croatia and Pannonian Croatia has several important social and economic implications. Of particular concern is the loss of skilled and working-age residents, which could greatly limit the economic potential of these regions and lead to disruptions in essential services due to the low availability of qualified staff. New policies to boost regional attractiveness, such as additional investment in childcare facilities, affordable housing and targeted education programmes to match local residents with the employment needs of the region, have recently been introduced by the Croatian government to slow outward migration and attract new residents. These will require careful monitoring and evaluation to ensure they are appropriately targeted at the specific challenges present in each TL2 region.

The ageing in Croatia's four TL2 regions has occurred in a more consistent manner, with the growth of elderly residents and decline in working-age population broadly consistent with the national trend. However, within that broad demographic shift, the relative youth of Zagreb City is made clear by the nearly 4-year age difference between the average (median) resident compared to Pannonian Croatia (Table 2.5).

Table 2.5. Demographic profile of TL2 regions, 2022

	Median age	Youth	Working age	Elderly
Croatia	45.4	14%	63%	22%
Adriatic Croatia	46.3	14%	62%	24%
Northern Croatia	44.7	15%	64%	21%
Pannonian Croatia	46.9	14%	63%	23%
Zagreb City	43	15%	64%	21%

Note: Youth (0-14), working age (15-64) and elderly (>65)

Source: Author's elaboration with data from (Eurostat, 2023^[36]; Eurostat, 2023^[37]).

The well-being dimension

Regional disparities on well-being indicators echo the stark economic and demographic divergences across the four TL2 regions. In comparison with the national average, the residents of Zagreb City generally enjoy longer and healthier lives than residents in Northern Croatia and Pannonian Croatia, and are significantly less likely to endure poverty than residents in all other TL2 regions (Table 2.6).

Table 2.6. Well-being indicators in TL2 regions, 2021

	Life expectancy	Suicide rate (2020)	Infant mortality	Risk of poverty
Croatia	76.7	13.9	3.8	17.4%
Adriatic Croatia	77.9	12.7	4.2	18.1%
Northern Croatia	75.8	16.5	4.6	18.5%
Pannonian Croatia	75.2	16.3	3.9	27.0%
Zagreb City	77.8	9.5	2.2	11.6%

Note: Suicide rate per 100 000 residents; infant mortality rate per 1 000 births.

Source: Author's elaboration with data from (Eurostat, 2023_[38]; Eurostat, 2023_[39]; Eurostat, 2023_[40]; Eurostat, 2023_[41]).

The available evidence suggests that the well-being of residents in Pannonian Croatia, which is also the region with the lowest GDP per capita and the fastest rate of population decline, is considerably lower than other regions. Residents in Pannonian Croatia, on average, have lower life expectancy, are at significantly higher risk of poverty, and suffer rates of suicide and infant mortality above the national average (Eurostat, 2023_[38]; Eurostat, 2023_[39]; Eurostat, 2023_[40]; Eurostat, 2023_[41]). Taken together, and in recognition of the interrelationship between well-being and economic development, the case for direct, well-resourced, and region-specific policy intervention in the north-east of Croatia is compelling.

In Zagreb City, 42.7% of working-age adults had completed a tertiary qualification compared to only 17.6% in Pannonian Croatia in 2021 (Eurostat, 2023_[42]). These statistics are based on the current population, so are likely to be a combination of both higher rates of study from existing residents and the long-term accumulation of migrating university graduates drawn to Zagreb City in pursuit of employment opportunities.

Conversely, working-age adults with very little education are concentrated in the landlocked TL2 regions (Table 2.7). An estimated 17.5% percent of adults in Pannonian Croatia and 15.6% of those in Northern Croatia have not progressed beyond lower secondary school, greatly limiting their employment prospects. Fortunately, these rates have declined in all regions since 2017, but relative inequities between regions have remained broadly similar. The concentration of highly-educated individuals in Zagreb City, and the relatively high rates of adults with limited education in Northern Croatia and Pannonian Croatia is a significant barrier to balanced regional development. Most critically, the professional skills and capacity of residents and employees in less educated regions are likely to be lower, which will in turn limit the effectiveness of local government, healthcare, education and other essential public services. Furthermore, future investment and entrepreneurial activity, which requires skilled labour, is likely to be drawn to regions with large numbers of educated workers and could therefore reinforce existing regional inequalities.

Table 2.7. Distribution of education attainment in TL2 regions, 2017-2022

	Tertiary Education (2022)	Completed only Lower Secondary or below (2022)
Croatia	25.4% (+1.7pp)	12.1% (-4.1pp)
Adriatic Croatia	24.9% (+1.2pp)	9.2% (-2.2pp)
Northern Croatia	20.3% (+2.3pp)	15.6% (-6.2pp)
Pannonian Croatia	17.2% (+2.1pp)	17.5% (-6.7pp)
Zagreb City	43.8% (+2.6pp)	5.3% (-2.4pp)

Note: 25-64 age group. Data between parenthesis shows the percentage point [pp] change between 2017-22.

Source: Author's elaboration with data from (Eurostat, 2023^[42]).

County trends

Croatia's county structure has been in place since 1992, with few major changes to governance arrangements or territorial boundaries being made in the last decade (Table 2.8).

Table 2.8. Map of Croatia's TL3 regions

	TL3 code	Counties and Zagreb City
	HR021	Bjelovar-Bilogora
	HR022	Virovitica-Podravina
	HR023	Požega-Slavonia
	HR024	Slavonski Brod-Posavina
	HR025	Osijek-Baranja
	HR026	Vukovar-Srijem
	HR027	Karlovac
	HR028	Sisak-Moslavina
	HR031	Primorje-Gorski Kotar
	HR032	Lika-Senj
	HR033	Zadar
	HR034	Šibenik-Knin
	HR035	Split-Dalmatia
	HR036	Istria
	HR037	Dubrovnik-Neretva
	HR050	Zagreb City
	HR061	Međimurje
	HR062	Varaždin
	HR063	Koprivnica-Križevci
	HR064	Krapina-Zagorje
HR065	Zagreb (county)	

Source: Author's elaboration, based on (Croatian Bureau of Statistics, n.d.^[28]).

Of the 20 counties and Zagreb City, several have exceptional characteristics that warrant particular attention. Zagreb City, with by far the largest population (767 131 inhabitants) and highest population density (1 197 per km²), is almost entirely urban. In contrast, Lika-Senj has a population of only 42 748 and is almost entirely rural. It is also the largest county, with an area of 5 353 km², over eight times larger than Zagreb City (just 641 km²) and more than seven times larger than Međimurje (729 km²). The remaining counties are broadly comparable to one another in terms of geographic area and population density, with a balance of both rural and urban areas within their borders (Table 2.9).

Table 2.9. Basic characteristics of Croatia's 20 counties and Zagreb City, 2021

County	Km ²	Population	Pop/km ²	Cities	Municipalities	Classification*
Bjelovar-Bilogora	2 640	101 879	39	5	18	Predominantly rural
Dubrovnik-Neretva	1 781	115 564	65	5	17	Intermediate
Istria	2 813	195 237	69	10	31	Predominantly rural
Karlovac	3 626	112 195	31	5	17	Predominantly rural
Koprivnica-Križevci	1 748	101 221	58	3	22	Predominantly rural
Krapina-Zagorje	1 229	120 702	98	7	25	Predominantly rural
Lika-Senj	5 353	42 748	8	4	8	Predominantly rural
Međimurje	729	105 250	144	3	22	Predominantly rural
Osijek-Baranja	4 155	258 026	62	7	35	Intermediate
Požega-Slavonia	1 823	64 084	35	5	5	Predominantly rural
Primorje-Gorski Kotar	3 588	265 419	74	14	22	Intermediate
Šibenik-Knin	2 984	96 381	32	5	15	Intermediate
Sisak-Moslavina	4 468	139 603	31	7	12	Predominantly rural
Slavonski Brod-Posavina	2 030	130 267	64	2	26	Intermediate
Split-Dalmatia	4 540	423 407	93	16	39	Intermediate
Varaždin	1 262	159 487	126	6	22	Intermediate
Virovitica-Podravina	2 024	70 368	35	3	13	Predominantly rural
Vukovar-Srijem	2 454	143 113	58	5	16	Predominantly rural
Zadar	3 646	159 766	44	6	28	Predominantly rural
Zagreb (county)	3 060	299 985	98	9	25	Predominantly rural
Zagreb City	641	767 131	1 197	1	0	Predominantly urban

Note: *Classification applied by the Croatian Bureau of Statistics based upon population density and continuity and in adherence with TL3 urban-rural typology.

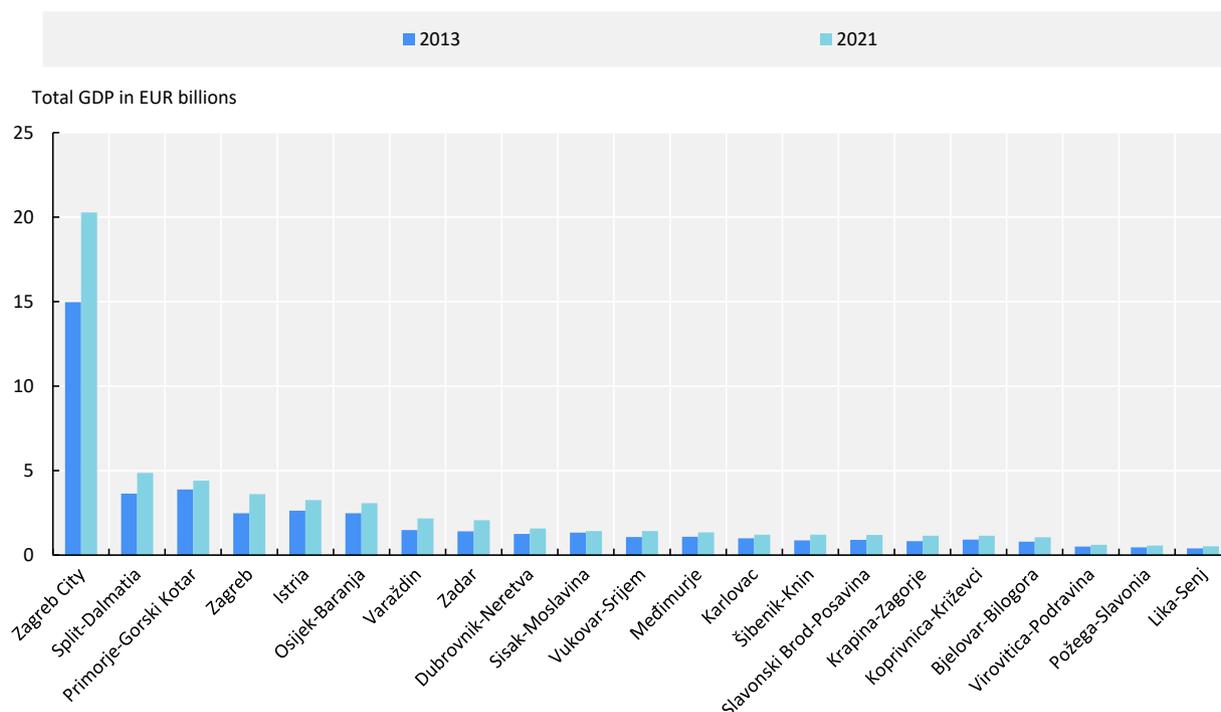
Source: Author's elaboration, based on (Croatian Bureau of Statistics, 2024^[43]; Eurostat, 2018^[44]).

Economic changes at county level

As alluded to in the previous section on Croatia's TL2 regions, the country's economy is highly dependent on a single TL3 region, namely Zagreb City. Its economic output in 2021 was more than four times greater than Split-Dalmatia, the second-largest county economy (Eurostat, 2023^[45]). Compared to Lika-Senj, which has the smallest economy at the county level, the GDP of Zagreb City is over 100 times larger (Figure 2.13). The share of national GDP concentrated in Zagreb City has also grown over the past decade. In 2013, its share of national GDP was 33.7%, but in 2021 this had risen to 34.8%.

The concentration of economic activity within Zagreb City is further demonstrated by the wide range of financial, cultural, industrial and educational institutions that are based there, not to mention the vast majority of Croatian ministries, government agencies and civil servants. Despite being only one of 21 TL3 regions in Croatia, approximately one-third (31.8%) of the country's entire workforce in 2022 was employed in Zagreb City (Croatian Bureau of Statistics, 2023^[46]).

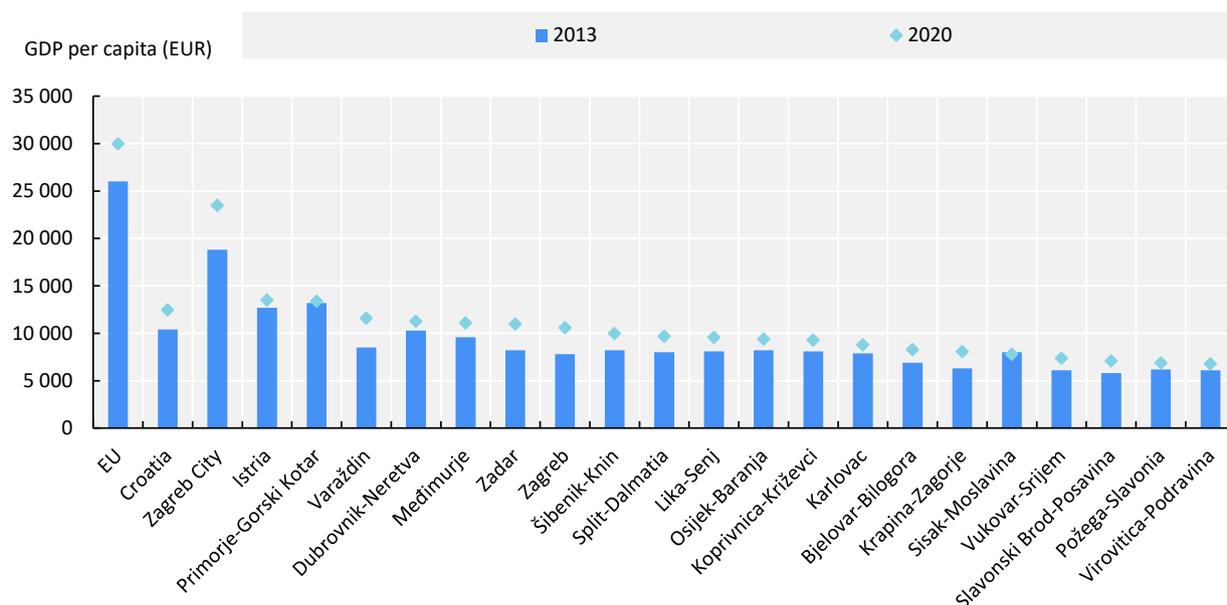
Figure 2.13. Total GDP by county, 2013 and 2021



Source: Author's elaboration with data from (Eurostat, 2023^[47]).

On a per capita basis, the GDP of Zagreb City remains by far the highest in Croatia (Figure 2.14). In 2020, GDP per capita was EUR 23 500 in Zagreb City, significantly higher than the Croatian average of EUR 12 500, but still well below the EU average of EUR 30 000 (Eurostat, 2023^[48]). Based on this measure, an average resident in Zagreb City is able to obtain living standards up to three times greater than those residing in the bottom five (by GDP per capita) counties: Sisak-Moslavina, Vukovar-Srijem, Slavonski Brod-Posavina, Požega-Slavonia and Virovitica-Podravina. Notably, these five low-income counties are all landlocked, and are all located within Pannonian Croatia, in the country's north-east. Virovitica-Podravina, with GDP per capita of EUR 6 800, has the lowest standard of living among all 20 Croatian counties and Zagreb City. The average incomes of its residents, based on this metric, were equal to only approximately 54.4% of the Croatian average and only 22.7% of the EU average in 2020.

Figure 2.14. GDP per capita by county, 2013 and 2020



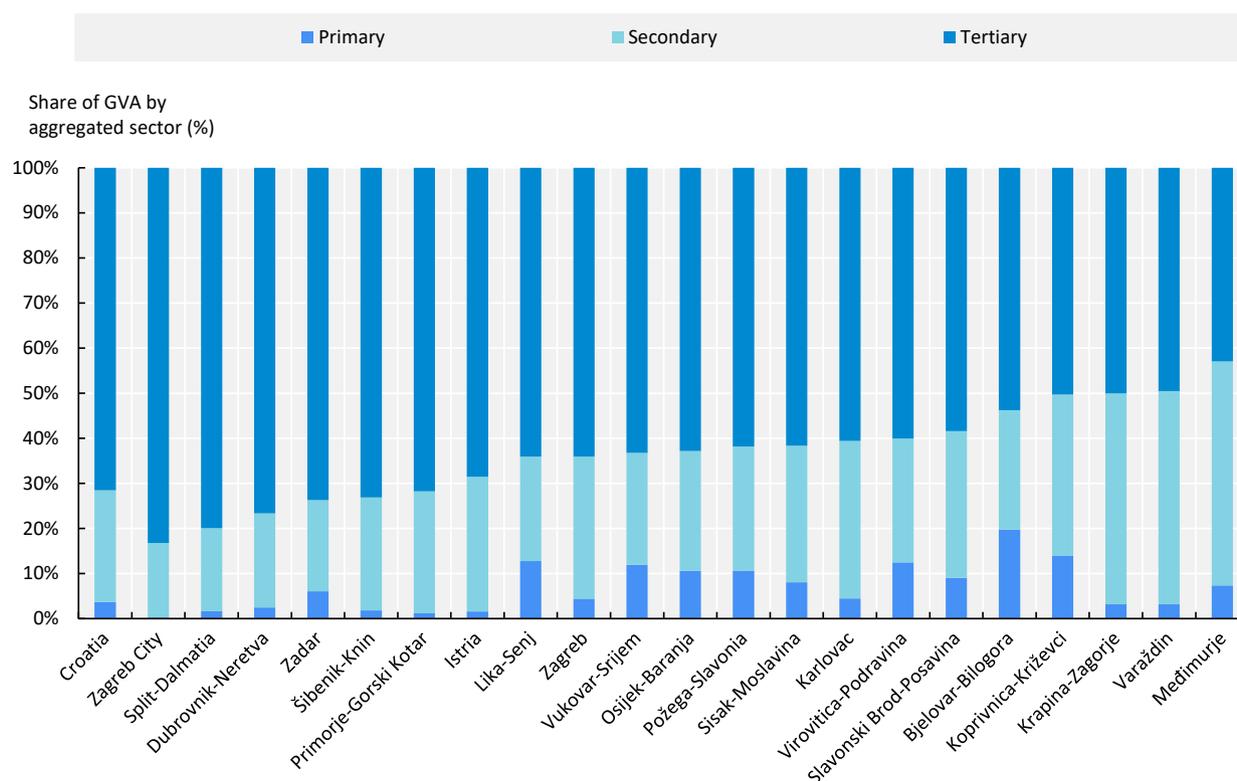
Source: Author's elaboration with data from (Eurostat, 2023^[48]).

Since 2013, there has been limited evidence of economic convergence among the Croatian counties. The relative positions of Primorje-Gorski Kotar and Sisak-Moslavina, for example, have declined slightly since 2013. The counties of Varaždin and Krapina-Zagorje, in contrast, improved their position in the same period. Yet the overall distribution of GDP per capita remains largely unchanged, with very high levels in Zagreb City, above or around the Croatian average in coastal areas and below the national average for inland regions.

GVA is concentrated around Zagreb and coastal counties

The total value of output produced in Zagreb City, as measured by gross value added (GVA), is just as lopsided as GDP. Alongside Zagreb City, the counties of Split-Dalmatia, Primorje-Gorski Kotar and Zagreb (county) produced approximately 57% of national GVA in 2021. The industrial composition of each county, as measured by GVA, provides some insights into the underlying disparities across counties (Figure 2.15). The best-performing counties, on both GDP and GVA, exhibit higher shares of tertiary industries compared to primary industries, such as agriculture and forestry. In Zagreb City, for example, approximately 83% of GVA can be attributed to tertiary sectors, compared to only 43% in Međimurje (Croatian Bureau of Statistics, 2023^[49]).

Figure 2.15. Sectoral composition of GVA by county, 2020



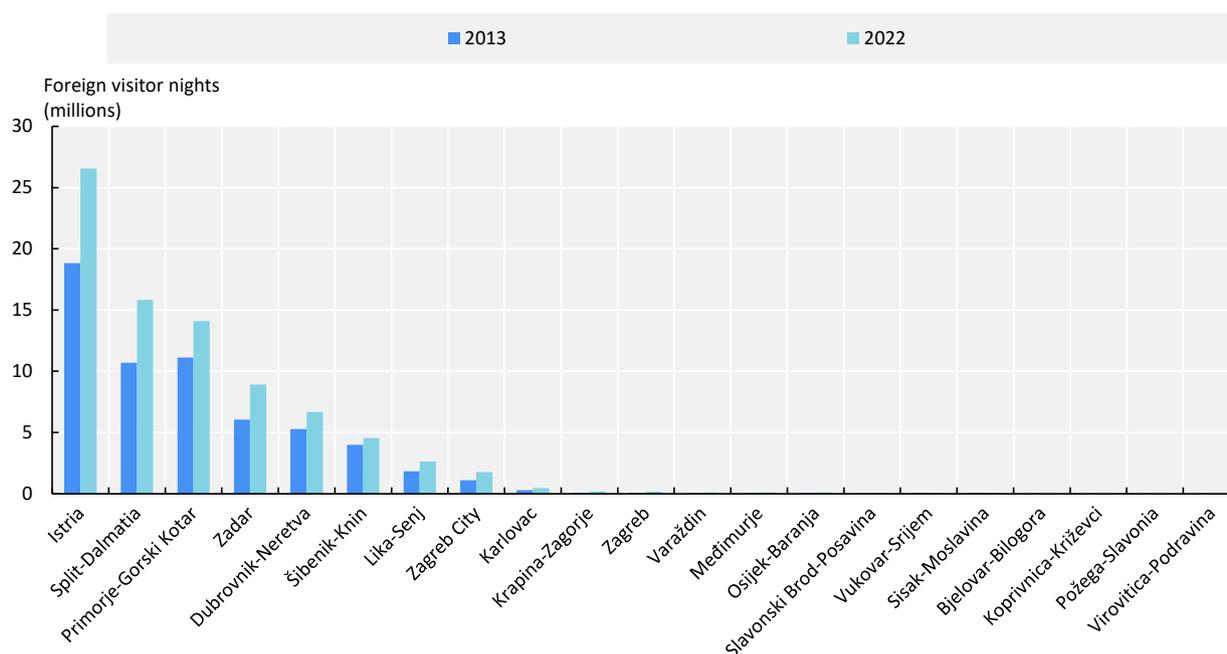
Note: Aggregates of primary (A), secondary (B-F) and tertiary (G-U) are estimated using the National Classification of Activities 2007.
Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[49]).

The distribution of employment also varies significantly at the TL3 level (Eurostat, 2023^[50]). In counties with high per capita GDP, such as Zagreb City and Istria, employment is concentrated in service industries (e.g. wholesale trade, retail, accommodation, hospitality, transportation and information technology). In low-income counties, such as Virovitica-Podravina and Požega-Slavonia, employment is much more evenly spread, with primary industries such as agriculture and forestry making up a relatively high share of total employment.

Tourism is booming but only in coastal areas

One of the most significant factors driving these sectoral differences is the concentration of tourism, one of Croatia's most important industries, within coastal localities. From the more than 82 million overnight stays from foreign visitors in 2022, of the landlocked counties only Zagreb City was able to attract more than one million (Figure 2.16). The concentration of tourists in coastal areas has both social and economic implications. Despite the employment, investment and tax revenue that the tourism sector has generated in recent years, some coastal localities have begun implementing strategies to help reduce the number of visitors to their areas, aiming to ease the congestion, environmental degradation and social disruption sometimes associated with mass tourism. For landlocked counties, which have generally achieved growth in tourist visits since 2013 (although tourists volumes were very low at that time), capitalising on Croatia's growing popularity as a holiday destination is a high priority and forms a key goal of the Strategy for Sustainable Tourism Development 2030 (Ministry of Tourism and Sport, 2024^[51]).

Figure 2.16. Annual foreign visitor nights by county, 2013 and 2022



Note: In commercial establishments only.

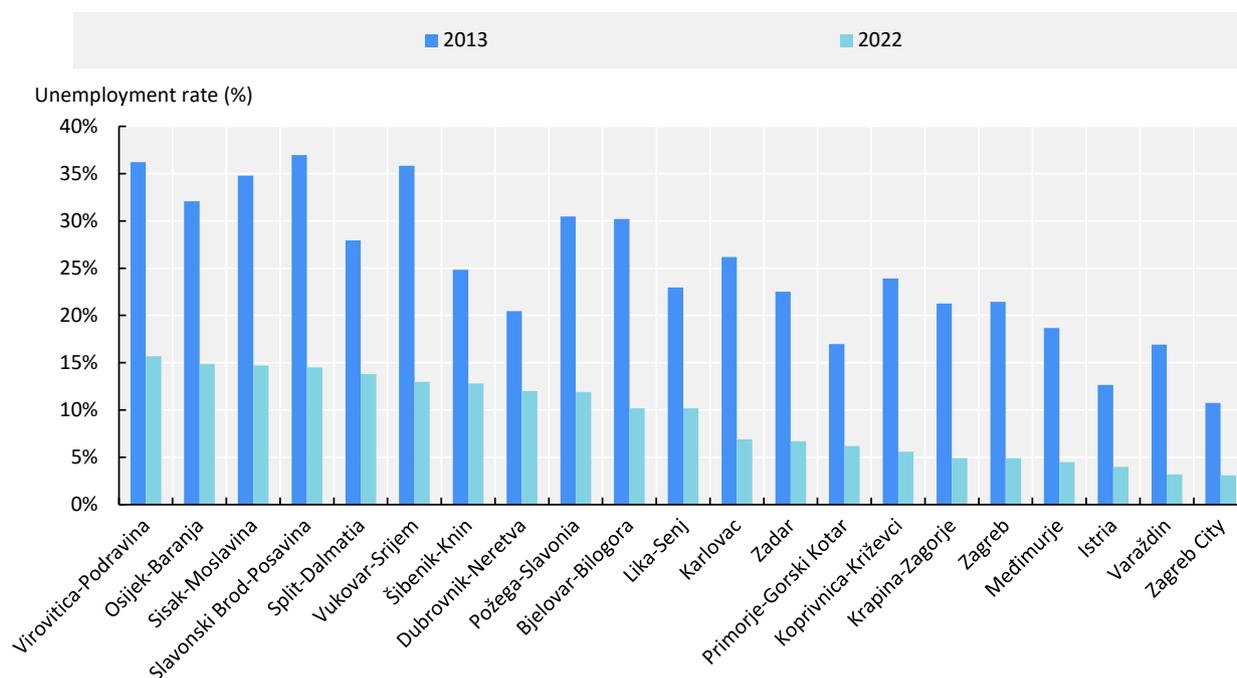
Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2022^[52]).

Long-term unemployment has fallen rapidly in all counties and Zagreb City

The rapid decline in Croatia's long-term unemployment rate from 11% to 2.4% has been achieved through consistent improvement across all counties, both coastal and landlocked. On average, the absolute number of long-term unemployed in each county fell by 66.1% over the past decade (Croatian Bureau of Statistics, 2023^[53]). This reduction, which represents a significant improvement in personal circumstances for some of the most disadvantaged individuals in each county, as well as reduced government costs for unemployment support, has been driven by a combination of factors. These factors include consistent economic growth, an ageing population and the ongoing expansion of the tourism industry that has increased demand for labour since 2013 and provided new employment opportunities.

Unemployment rates have fallen at a slower rate than long-term unemployment and are, in 2022, more varied at the county level. Eastern counties, and coastal counties with large urban centres, generally have unemployment rates above the national average of 7% and in many cases in excess of 10% (Figure 2.17). Zagreb City and the counties of the northwest were generally the best performers, with unemployment around only 4% in 2022. Despite these disparities, Croatia's rising economic tide has lifted all boats: unemployment rates have fallen dramatically in all counties since 2013. Nevertheless, it does indicate that the labour markets in some counties are less dynamic than others, and more targeted interventions will be required to address the geographic imbalance in unemployment.

Figure 2.17. Unemployment rate by county, 2013 and 2022



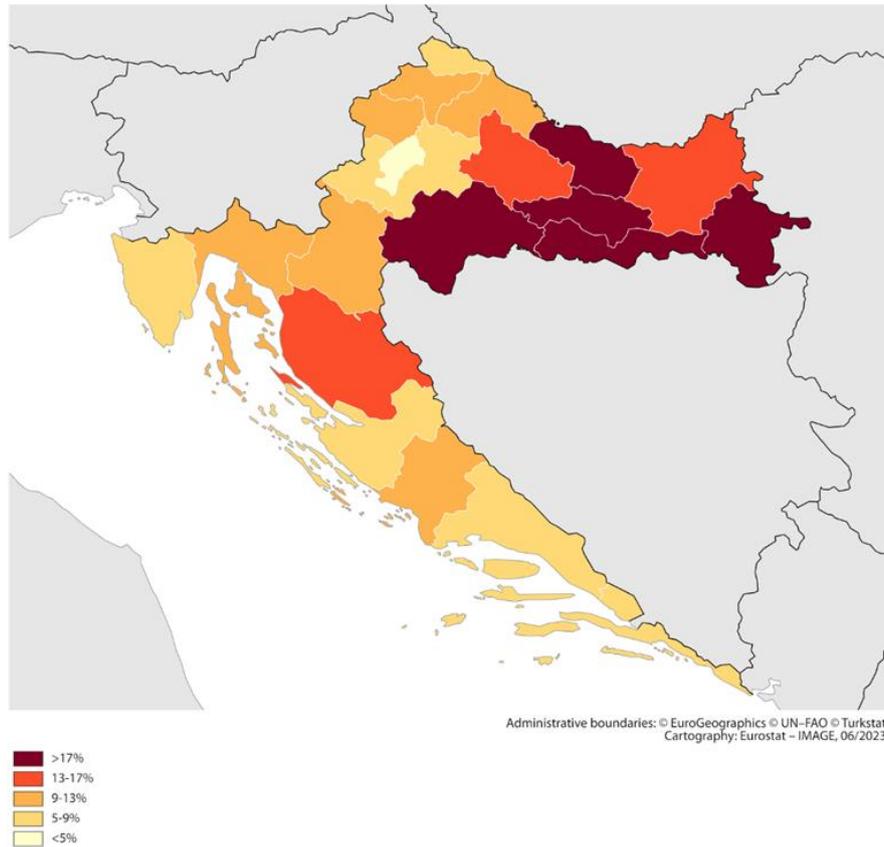
Note: Registered unemployment on 31 March.

Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[53]).

Demographic changes at the county level

The rapid population decline in Croatia over the last decade has been unevenly distributed, with landlocked counties shrinking at a much faster rate than those on the coast. However, population decline has still occurred in all TL3 regions (Figure 2.18). Zagreb City, which reported the smallest decline, lost approximately 2.9% of its population between 2011-2021. In contrast, Vukovar-Srijem lost 20.3% of its population over the same period (Croatian Bureau of Statistics, 2023^[20]).

Figure 2.18. Cumulative population decline by county, 2011-2021

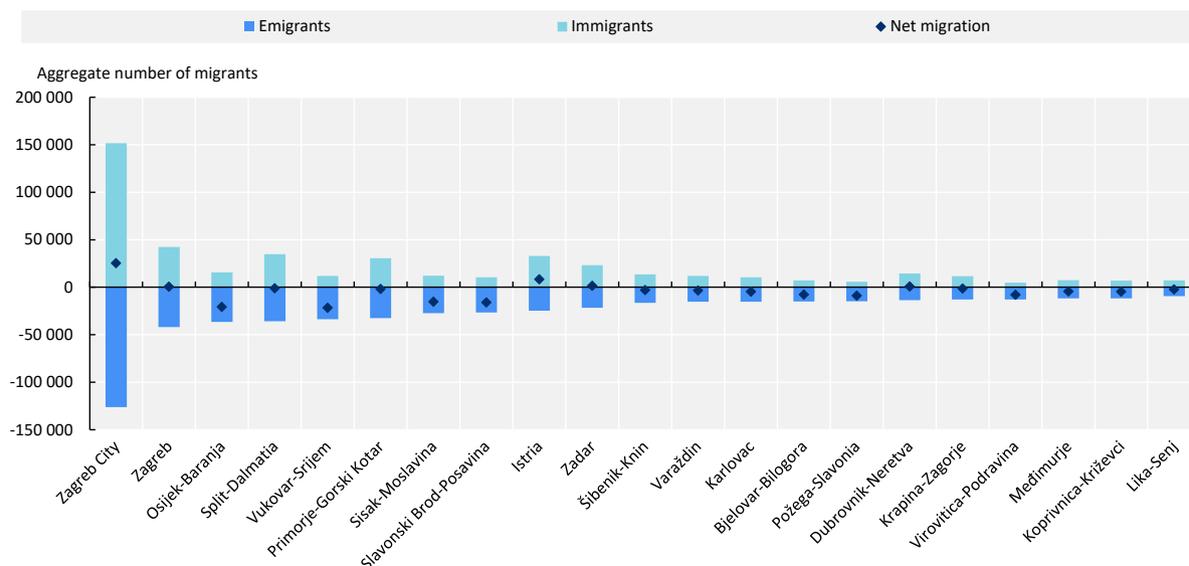


Source: (Croatian Bureau of Statistics, 2023^[20]).

The uneven distribution of decline in population across Croatian counties and Zagreb City has been caused by two major factors—large variations in natural population decline and inconsistent migration patterns. Although natural population decline and emigration have affected all Croatian counties and Zagreb City to some degree, these national trends have occurred at vastly different rates. For example, between 2011 and 2021, the natural decrease of population, as a proportion of its 2011 population, was -10.9% in Lika-Senj. In Međimurje, the county with the smallest natural decline over the same period, the change was only -0.8% of the 2011 population (Croatian Bureau of Statistics, 2023^[54]).

The range of net migration outcomes across counties between 2011 and 2021 is of a similar magnitude to the wide differences in natural population growth. In 15 out of Croatia's 21 counties, the total number of emigrants, including both international and inter-county, exceeded the total number of immigrants (Figure 2.19). Yet in Zagreb City, and in Dubrovnik-Neretva, Istria, Zadar and Zagreb counties, the total number of immigrants exceeded the number of emigrants. While the absolute numbers of net international migrants are small in some counties, as a proportion of 2011 populations, their impact can be significant. Ranging from a 3.8% increase in Zagreb City, to a 4.0% decrease in Vukovar-Srijem, net migration patterns have significantly accelerated population decline in some regions while slowing overall population decline in others (Croatian Bureau of Statistics, 2023^[54]).

Figure 2.19. Aggregate international and inter-county migration, 2011-21

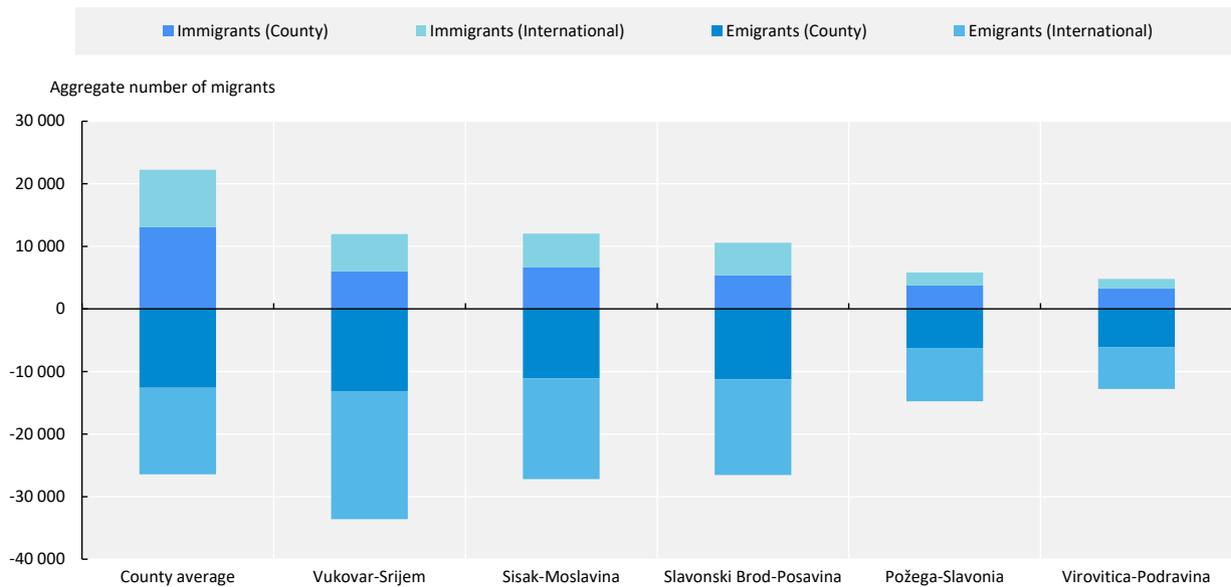


Note: Aggregate is the total number of emigrants and immigrants recorded in each county between 2011 and 2021.

Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[54]).

In the five most rapidly shrinking counties, international migration has had a larger impact than inter-county migration, but both contributed significantly to population decreases between 2011-2021 (Figure 2.20). The average for all 20 counties and Zagreb City over the same period is more balanced, with migration flows—both inward and outward—following a similar trajectory for both county and international migration. This trend suggests that national and regional policy makers should tailor their demographic change and regional attractiveness strategies to the unique migration patterns of their counties. In counties experiencing rapid shrinkage, policies might focus on attracting and retaining residents, including through a combination of economic incentives, investment in affordable housing and connectivity (digital and by car, bus and train).

Figure 2.20. Aggregate net migration, fastest-shrinking counties, 2011-21

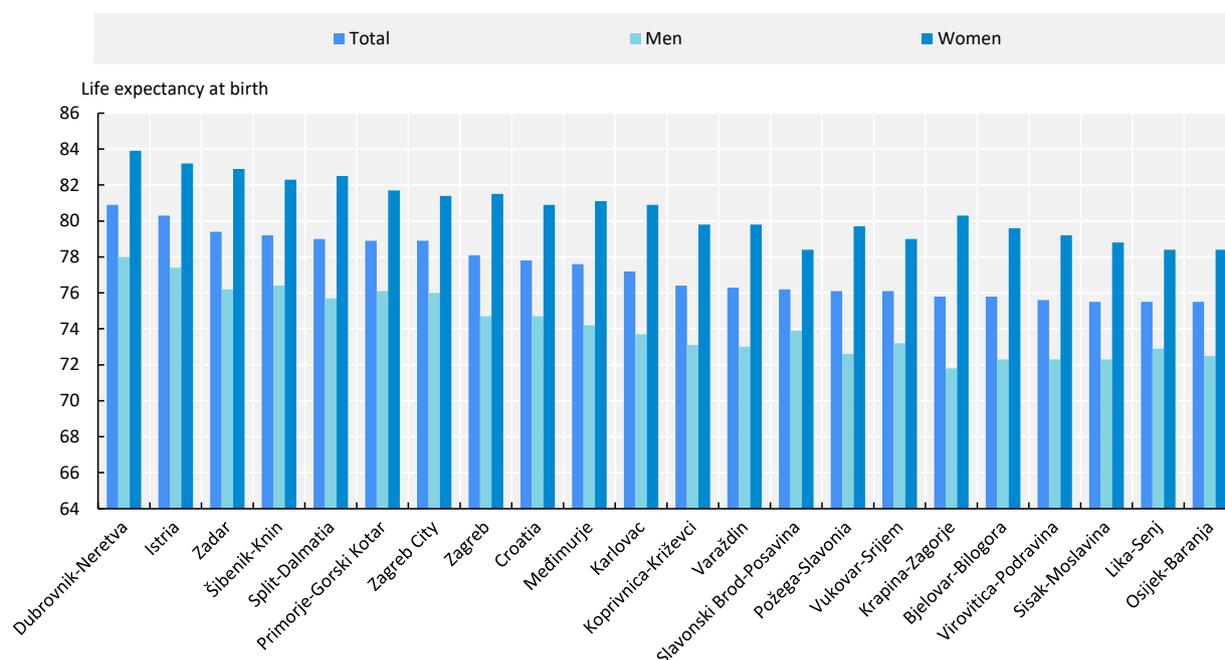


Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[54]).

Well-being changes at the county level

The quality of life in Croatia has improved in the past decade, but large geographic disparities remain in several important indicators. For life expectancy at birth, the residents of coastal counties can generally expect to live 4-5 years longer, on average, than those in the landlocked locations (Figure 2.21). For the total population, Dubrovnik-Neretva recorded the highest life expectancy at birth in 2020, with 80.9 years. In contrast, Osijek-Baranja, the lowest-scoring county, recorded only 75.5 years. In every TL3 region, women are expected to live significantly longer than men. This gap is largest in Krapina-Zagorje, at 8.5 years, and smallest in Slavonski Brod-Posavina, at 4.5 years (Croatian Bureau of Statistics, 2022^[55]). But the consistent divergence in health outcomes between men and women across all counties and Zagreb City suggests that further targeted programmes are needed to help improve the health outcomes of men throughout Croatia.

Figure 2.21. Life expectancy at birth by county, 2020

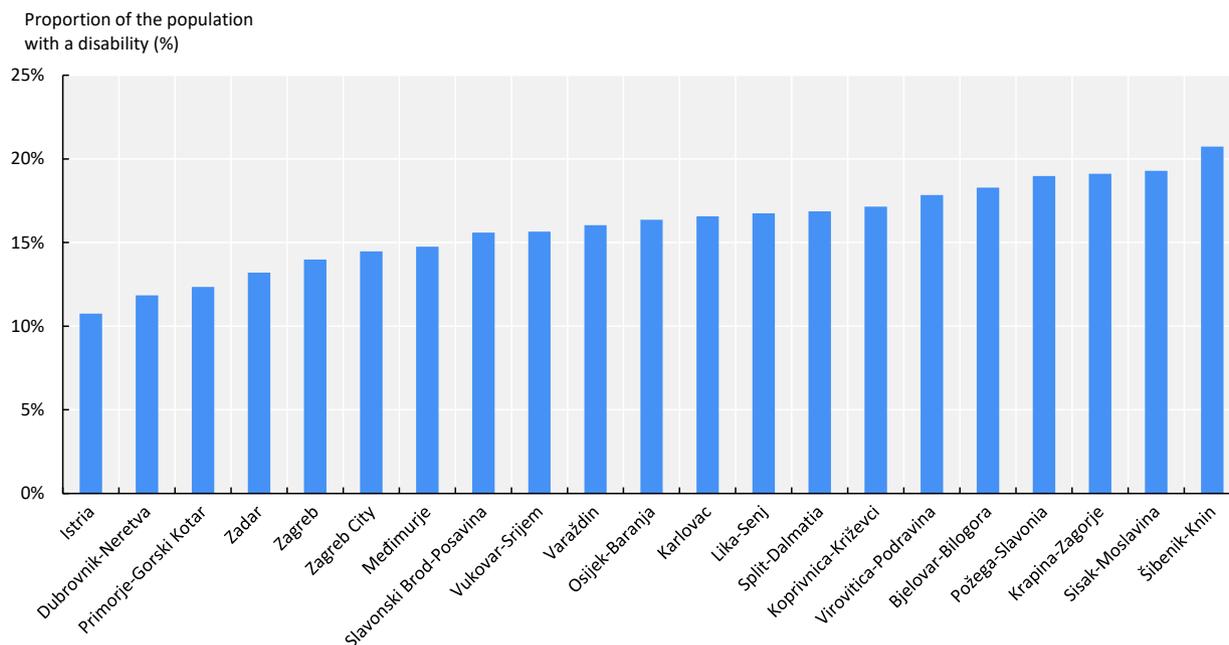


Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2022^[55]).

Health outcomes are highly uneven across counties and Zagreb City

The prevalence of disability, as defined by the Croatian Bureau of Statistics is unevenly distributed across counties, with Zagreb, Zagreb City and some coastal regions reporting significantly lower rates than landlocked counties in 2021 (Figure 2.22). The county with the lowest rate of disability was Istria, with only 10.8%, compared to 20.8% in Šibenik-Knin, the county with the highest rate of disability (Croatian Institute of Public Health, 2022^[56]). Because the demographic profiles of Croatian counties are broadly comparable, with a similar proportion of elderly and working-age residents, these results are unlikely to be the direct result of variations in population characteristics. Lower population density, and a higher concentration of employment in primary industries, both of which could lead to a higher rate of accidents, and less developed health infrastructure, may partially explain the wide divergence. Lower average incomes, lower rates of education, higher rates of unemployment and other social factors may also be contributing to the regional disparities in terms of the disability rate. International and inter-county migration is also likely to have exacerbated these disparities, as individuals with a disability, for both health and economic reasons, are less likely to relocate to another country or county.

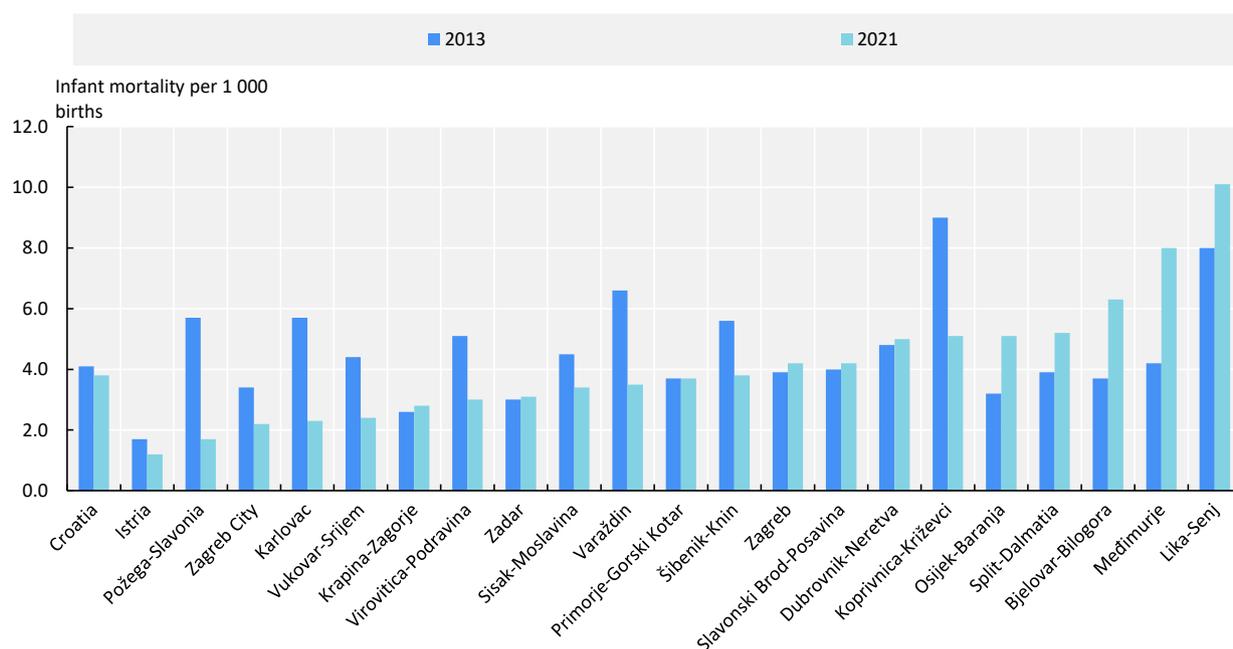
Figure 2.22. Percentage of the population with a disability by county, 2021



Source: Author's elaboration with data from (Croatian Institute of Public Health, 2022^[56]).

Infant mortality rates across counties are also disparate, but do not align neatly with the high-income or coastal area narrative (Figure 2.23). Counties encompassing coastal areas, including Split-Dalmatia and Dubrovnik-Neretva, score relatively poorly, while Požega-Slavonia, in the north-east, has one of the lowest infant mortality rates in the country. Overall, Istria achieved the lowest infant mortality rate in 2021, with only 1.2 deaths per 1 000 births. Lika-Senj, the largest and most sparsely populated county, had the highest rate, at 10.1. Notably, infant mortality rates in the five worst-performing counties on this measure have increased since 2013, suggesting additional investment in medical services and infrastructure may be required in those localities (Croatian Bureau of Statistics, 2022^[55]).

Figure 2.23. Infant mortality by county, 2013 and 2021

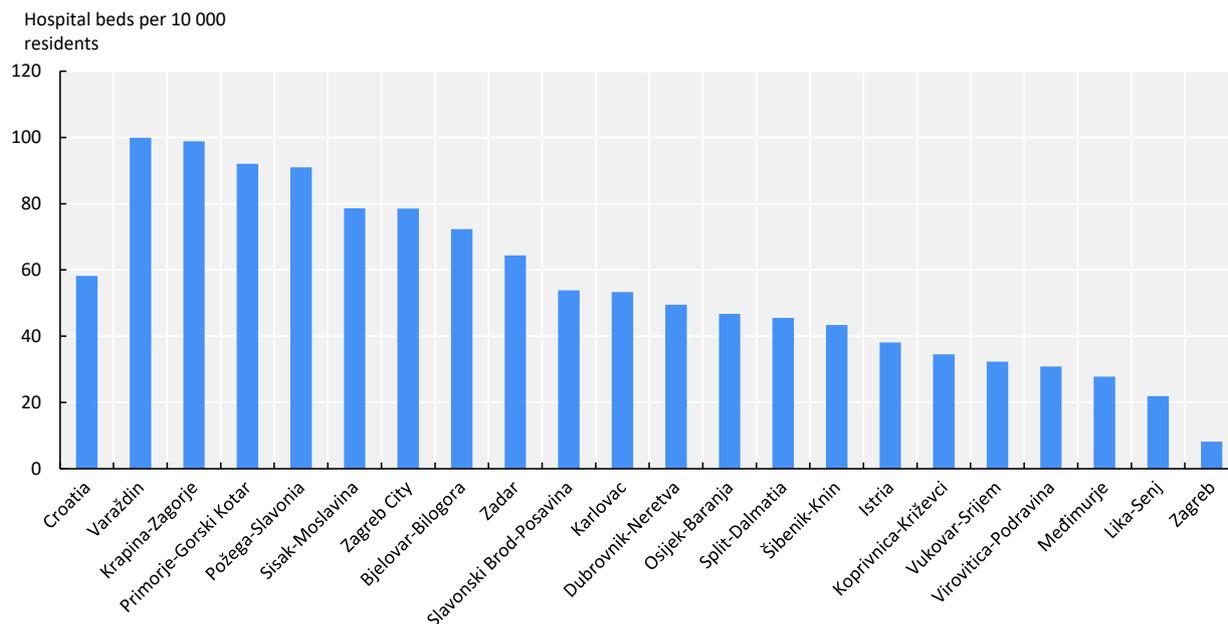


Note: Per 1 000 births.

Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2022^[65]).

One available indicator of medical facilities at the county level is the number of hospital beds per 10 000 residents. On this measure, there is significant variation on the distribution across counties, suggesting some unevenness in the provision of medical infrastructure (Figure 2.24). This variation, however, does not appear to correlate strongly with other health outcome indicators. Nonetheless, it highlights the potential challenges of accessing health services for some residents and the need for medical infrastructure to expand and evolve in line with demographic changes to ensure equity.

Figure 2.24. Hospital beds per 10 000 residents by county, 2021



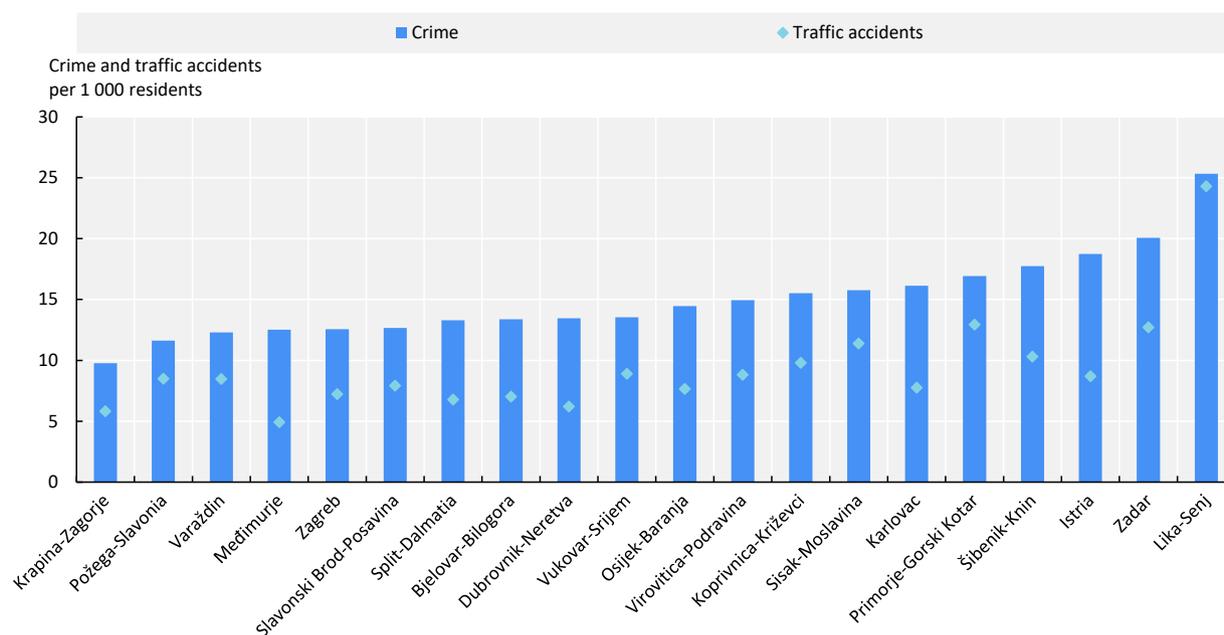
Note: Includes general hospitals, clinics, infirmaries and special hospitals.

Source: Author's elaboration with data from (Croatian Institute of Public Health, 2023^[57]).

Crime rates vary across counties, but with no clear geographic pattern

Crime and traffic accidents, another indicator of well-being, also vary across Croatia, with residents in more remote and sparsely populated counties generally experiencing higher rates than others. When measured on a per capita basis, crime and traffic accidents are positively correlated, with Lika-Senj reporting the highest rates on both metrics (Figure 2.25). Interestingly, several high-income counties including Zadar and Istria have recorded relatively high rates of crime and traffic accidents. However, these statistics include crimes and accidents affecting non-permanent residents and tourists, so the actual impact on the average permanent resident may be smaller than these indicators suggest in coastal areas (Ministry of the Interior, 2022^[58]; Ministry of the Interior, 2023^[59]).

Figure 2.25. Reported crime and traffic accidents per capita by county, 2022



Note: Crime and traffic accident statistics for Zagreb City are included in Zagreb. Per capita estimates include the population of both. Source: Author's elaboration with data from (Ministry of the Interior, 2022^[58]; Ministry of the Interior, 2023^[59]).

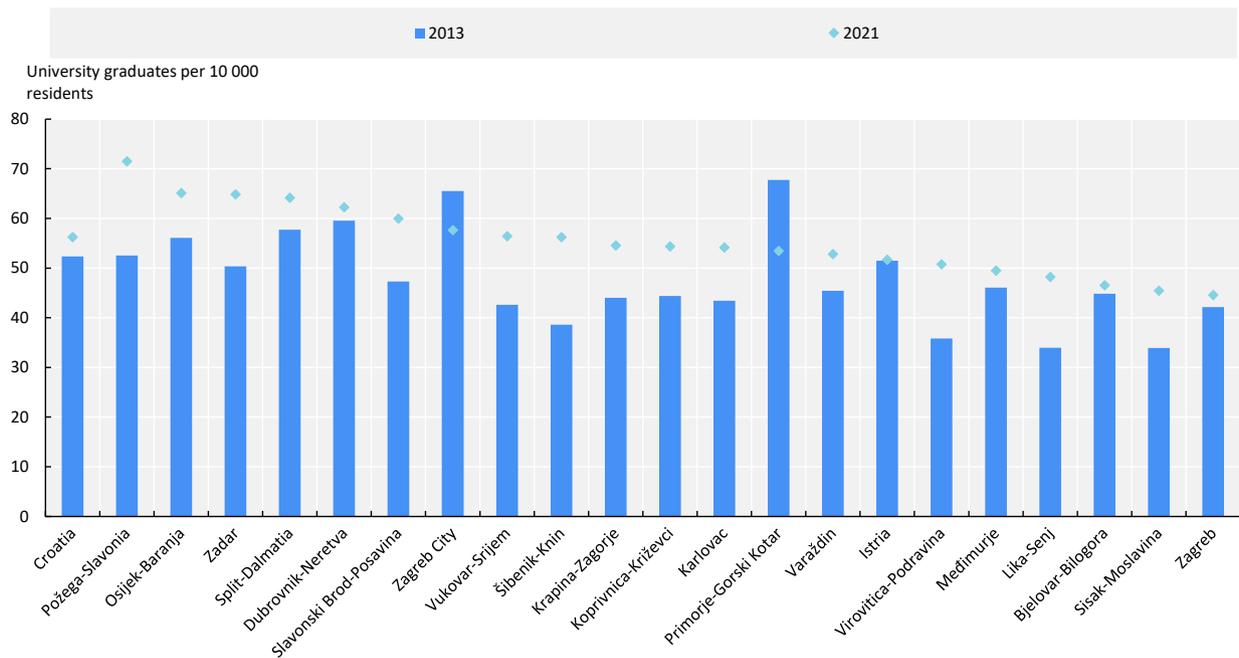
Internet speeds vary significantly across counties

Internet access is another indicator of well-being that is highly uneven across counties and Zagreb City. Although data for broadband access in the home is not available at the county level, the national rate of connection is 85.5%, suggesting widespread availability. Nonetheless, average download and upload speeds vary significantly, greatly limiting the practical use of an Internet connection in some localities. The average download speed available in Zagreb City in 2022, for example, was 124.8 megabytes per second (mbps), almost five times faster than the 25.3 available in Krapinsko-Zagorska (Ookla, n.d.^[60]). These disparities can affect economic productivity, as areas with faster connectivity are more likely to attract and retain businesses. Furthermore, communities with limited Internet capabilities may face challenges in accessing government services and educational resources online. Further, low-speed Internet access could also hamper the overall attractiveness of a county, thus negatively affecting investment and tourism, among other impacts.

University graduation rates are broadly consistent across counties

Education levels across Croatian counties are difficult to measure due to insufficient data on the average number of years of schooling, or the total number of individuals holding different levels of qualification. The Croatian Bureau of Statistics does record the number of new university graduates each year, based on the county of permanent residence (Figure 2.26). These statistics may be slightly misleading, because recent graduates are highly mobile and may relocate shortly after completing university and entering the workforce. Therefore, the skills and educational attainment of the adult population actually residing within each county might be more unequal. But from an equity and upward mobility perspective, there is clear evidence that young people across all of Croatia are accessing, and graduating, from university at comparable rates (Croatian Bureau of Statistics, 2023^[54]).

Figure 2.26. Number of university graduates per 10 000 residents in 20 counties and Zagreb City, 2013 and 2021



Source: Author's elaboration with data from (Croatian Bureau of Statistics, 2023^[54]).

Conclusion

Croatia's performance overall since 2013 has been positive, with significant progress clearly evident on a number of indicators (e.g. reduced unemployment and higher GDP per capita) and modest improvements on several others (e.g. reduced risk of poverty and increased life expectancy). Long-term population decline remains an ongoing challenge, but Croatia's demographic profile is on par with many of its neighbours and does not pose an immediate threat to economic growth, well-being or the provision of government services. Regional inequalities remain large in Croatia, with residents in Zagreb and coastal counties earning higher incomes and experiencing a higher quality of life than landlocked areas. However, the fundamental conditions of all regions and counties are improving, and the additional level of investment and prioritisation required by the national and subnational governments to accelerate regional development and reduce inequality is unmistakably achievable.

In addition to well-targeted policies to address these inequalities, broader data collection and their more regular publication is also needed to help identify geographical disparities and measure progress to reduce them. Limited data, particularly at the county level, undermines efforts to identify such issues, set appropriate targets for improvement, develop suitable policy responses and measure the effectiveness of government programmes and interventions. Significant delays in the publication of data is also a concern in Croatia. Releasing data on key indicators on a more regular basis would enable policy makers to monitor the effectiveness of their strategies and plans more rapidly and allocate resources more effectively. It would also strengthen accountability, both at the county and national levels of government, while helping to support the case for renewed focus and investment in regional development.

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Annex 2.A. Employment by sector and county

Annex Table 2.A.1. Employment by sector and county, 2013-22

Largest employment sector per NUTS 3 region as a share of total regional employment

NUTS 3 region	2013		2022	
	Largest employment sector	Share of total employment	Largest employment sector	Share of total employment
Bjelovar-Bilogora	Manufacturing	27.4%	Manufacturing	24.1%
Dubrovnik-Neretva	Wholesale and retail trade	13.6%	Accommodation and food service activities	15.3%
Istria	Manufacturing	20.1%	Accommodation and food service activities	15.0%
Karlovac	Manufacturing	25.4%	Manufacturing	27.3%
Koprivnica-Križevci	Manufacturing	32.9%	Manufacturing	33.4%
Krapina-Zagorje	Manufacturing	32.6%	Manufacturing	33.3%
Lika-Senj	Public administration and defence	19.2%	Public administration and defence	16.0%
Međimurje	Manufacturing	41.6%	Manufacturing	43.2%
Osijek-Baranja	Manufacturing	17.7%	Manufacturing	16.4%
Požega-Slavonia	Manufacturing	26.6%	Manufacturing	22.4%
Primorje-Gorski Kotar	Wholesale and retail trade	15.8%	Wholesale and retail trade	15.5%
Šibenik-Knin	Manufacturing	14.8%	Wholesale and retail trade	13.7%
Sisak-Moslavina	Manufacturing	26.3%	Manufacturing	22.0%
Slavonski Brod-Posavina	Manufacturing	27.1%	Manufacturing	28.6%
Split-Dalmatia	Wholesale and retail trade	18.6%	Wholesale and retail trade	17.7%
Varaždin	Manufacturing	40.5%	Manufacturing	38.4%
Virovitica-Podravina	Manufacturing	24.2%	Manufacturing	27.5%
Vukovar-Srijem	Manufacturing	15.2%	Manufacturing	17.4%
Zadar	Wholesale and retail trade	16.6%	Wholesale and retail trade	16.6%
Zagreb (County)	Manufacturing	23.7%	Manufacturing	22.8%
Zagreb City	Wholesale and retail trade	18.5%	Wholesale and retail trade	17.3%

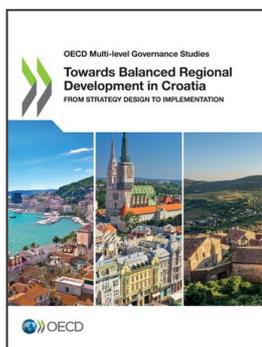
Note: Paid employment in legal entities as of 31 March 2022.

Source: Author's elaboration with data provided by (Croatian Bureau of Statistics, 2014^[61]; Croatian Bureau of Statistics, 2023^[62])

Notes

¹ Predominantly urban regions are those where more than 80% of the population lives in 'urban clusters' or contains a city of more than 500 000 inhabitants representing at least 25% of the region's total population. The classification is estimated at the NUTS 3 level.

² Purchasing power standard is an artificial currency unit developed by Eurostat to enable comparisons of national accounts aggregates. It is calculated by multiplying aggregate production, in the local currency, by purchasing power parities, which are indicators of price level differences across countries.



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